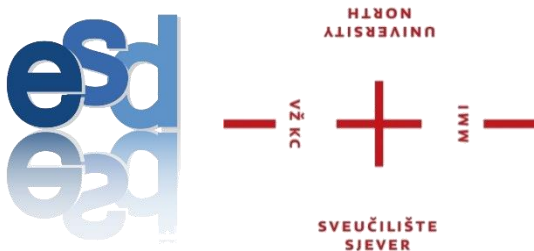**Varazdin Development and Entrepreneurship Agency**
in cooperation with
University North

Editors:
Ilko Vrankic, Daniel Tomic

Economic and Social Development

13th International Scientific Conference on Economic and Social Development

Book of Proceedings

Barcelona, 14-16 April 2016

Varazdin Development and Entrepreneurship Agency
in cooperation with

Editors:
Ilko Vrankic, Daniel Tomic

Economic and Social Development

13th International Scientific Conference on Economic and Social Development

Book of Proceedings

Barcelona, 14-16 April 2016

CONTENTS

Globalization and Challenges of the Modern World

Enterprise in Turbulent Environment

Entrepreneurship Caught Between Creativity and Bureaucracy

1

Globalization and Challenges of the Modern World

IMPACT OF OIL PRICE ON TURKISH MACROECONOMIC VARIABLES

Esra Balli
Cukurova University, FEAS, Department of Economics, Adana, Turkey
esraballi@cu.edu.tr

Mehmet Fatih Tras
Cukurova University, FEAS, Department of Econometrics, Adana, Turkey
mftras@cu.edu.tr

Ciler Sigeze
Cukurova University, FEAS, Department of Econometrics, Adana, Turkey
csigeze@cu.edu.tr

ABSTRACT

Turkish economy is heavily dependent on oil and natural gas, as the latest figures from International Energy Agency (IEA) show that Turkey imports 90% of its total liquid fuels. Therefore a more volatile oil price can have consequences on macroeconomic variables in Turkey. It is empirically evident that an increase in oil prices followed by deterioration in macro economic variables while a decrease in oil price has relatively lower expansionary effect on macro economic variables. This paper analyzes the economic effects of oil price on the major Turkish macro economic variables, including Gross Domestic Product (GDP), Consumer Price Index (CPI) and Real Effective Exchange Rate (REER) on the basis of quarterly data from 2003Q1 to 2015Q3. Firstly, ADF, KPSS, PP unit root tests and Zivot-Andrews, Lumsdaine Papell unit root tests allowing for structural breaks are used to characterize the time series. Additionally, Granger causality test is performed to give a clearer picture of how these variables are related. The results show that Gross Domestic Product, Oil Price and Consumer Price Index are stationary, while Real Effective Exchange Rate have unit root in Turkey. Test results indicate that, there is a casual relationship from oil price to GDP and to CPI. Furthermore, there exist a bidirectional causality between GDP and CPI in Turkey.
Keywords: Causality, consumer price index, oil price, real effective exchange rate, Turkey

1. INTRODUCTION

Turkish economy is heavily dependent on oil and natural gas, as the latest figures from International Energy Agency (IEA, 2015) show that Turkey imports 90% of its total liquid fuels. Therefore a more volatile oil price can have consequences on macroeconomic variables in Turkey. It is empirically evident that an increase in oil prices followed by deterioration in macroeconomic variables additionally, from the theoretical point of view, it is important to examine the impact of oil prices on economic growth and the relationship between oil price and macroeconomic variables. Many scholars studied the relationship between oil price and macroeconomic variables such as Gross Domestic Product (GDP), Consumer Price Index, interest rate, unemployment, stock price, and etc. The results differed from each other due to methodologies, variables, and data. This study examines the economic effects of oil price on the major Turkish macroeconomic variables, including Gross Domestic Product (GDP), Consumer Price Index and Real Effective Exchange Rate from the period of 2003Q1 to 2015Q3. Firstly, ADF, KPSS, PP unit root tests and Zivot-Andrews unit root test allowing for structural breaks are utilized to characterize the time series.

Additionally, Granger and Toda Yamamoto causality tests are performed to give a clearer picture of how these variables are related. The rest of the paper is organized as follows. The second section presents the literature review. The third section presents the data. The fourth section shows the methodology and empirical results. The fifth concludes.

2. LITERATURE REVIEW

There is vast empirical literature on the relationship between oil prices and exchange rate. Amano and Van Norden (1998) investigate the relationship exists between oil price shocks and the US real effective exchange rate for the period of 1972M2-1993M1 for US. The results show that oil prices may explain the real exchange rate shocks during this period. Camarero and Tamarit (2002) test the determination of the equilibrium real exchange rate of the peseta bilateral real exchange rate vis-à-vis a group of EU countries and found that oil price is among of important determinants of Spanish exchange rate. Chen and Chen (2007) examine the long-run relationship between real oil prices and real exchange rates utilizing panel tests for the period of 1972M1- 2005M10 for G7 countries. They found that real oil prices deeply affect real exchange rate movements. Additionally, there exist relationship between real oil prices and real exchange rates. Akram (2004) investigate the probability of a non-linear relationship between oil prices and the Norwegian exchange rate for the period 1971M2–2000M4. They found significant evidence of a non-linear negative relationship between Norwegian exchange rate and oil price. Huang and Feng (2007) investigate the impact of oil price shock on China's real exchange over the period of 1990M1- 2005M10 using structural VAR model. They found that oil price shocks caused a relatively modest appreciation of the real exchange rate in the long run. Cifarelli and Paladino (2010) test the relationship between oil prices, stock prices and US dollar exchange rate utilizing a behavioral ICAPM approach for the period of 6 October 1992 to 24 June 2008 for US. The results present that oil prices cause stock price and exchange rate changes negatively.

Lizardo and Mollick (2010) investigate the effects of oil price shocks in determining the value of the USD. They found that while an increase in real oil prices lead to a significant depreciation of the USD against net oil exporter currencies, such as Canada, Mexico, and Russia, the currencies of oil importers, such as Japan, depreciate relative to the USD when the real oil price rises. Chaudhuri and Daniel (1998) test the real oil price behavior to the nonstationary behavior of real US dollar for 16 OECD countries over the post-Bretton Woods period applying cointegration and causality tests. They found that oil price behavior is the cause of the nonstationary behavior of US dollar real exchange rates. Issa, Lafrance and Murray (2008) investigate the relationship between the Canadian-US dollar real exchange rate and real energy prices over the 1973Q1–2005Q4 sample period. They found an evidence of a negative relationship between the Canadian real exchange rate and real energy prices.

Habib and Kalamova (2007) examines the impact of real oil price has an impact on the real exchange rates on Norway, Russia and Saudi Arabia. While they found a a positive long-run relationship between the real oil price and the real exchange rate for Russia, in the cases of Norway and Saudi Arabia they hardly find any evidence in favor of the impact of the real oil price on the real exchange rates of Norway and Saudi Arabia.Basher, Haug and Sadorsky (2016) examines the impact of oil shocks on real exchange rates for a sample of oil exporting and oil importing countries utilizing Markov-switching models They found evidence that oil supply shocks influence exchange rates. They provide evidence in the existence of regime switching for the effects of oil shocks on real exchange rates. Turhan, Hacihasanoglu and Soytas(2013) examines the impact of oil prices on exchange rates using daily data series from January 3, 2003 to June 2, 2010 for selected emerging countries' including Turkey. The results

show that an increase in oil prices makes a significant appreciation of emerging economies' currencies.

Jayaraman and Choong (2009) examine the effects of oil price on economic growth for Pacific Island countries (Samoa, Solomon Islands, Tonga and Vanuatu) utilizing the ARDL bounds testing methodology. The empirical results reveal that oil price, gross domestic product and international reserve are interrelated in these countries. Additionally, they found that there exists a uni-directional relationship from oil price and international reserves to economic growth. Hanabusa (2009) examines the relationship between oil price and economic growth from the period of 2000 to 2008 utilizing an exponential generalized autoregressive conditional heteroskedasticity (EGARCH) model for Japan. The results show that the economic growth rate Granger-causes oil price changes.

Prasad, Narayan and Narayan (2007) investigate the relationship between real GDP and oil prices over the 1970–2005 sample period. The results exhibit that an increase in oil price has a positive, inelastic, effect on real GDP, inconsistent with the literature.

Darrat, Gilley and Meyer (1996) examine the presence of causality between oil prices, oil consumption, real output using VAR model for the period of 1960 to 1993 for USA. The results show that there exist mixed results between variables, additionally; the oil price changes are not a major cause of U.S. business cycles. Lardic and Mignon (2008) investigate the long-term relationship between oil prices and GDP utilizing asymmetric cointegration for the period of 1970M1 to 2004M3 for U.S., G7, Europe and Euro area countries. They provide evidence for asymmetric cointegration between oil prices and GDP. Aydın and Acar (2011) investigated the effect of oil price changes under three scenarios utilizing TurGEM-D. The simulation results show that in both low and high oil prices have an important effect on Turkish macroeconomic indicators.

3. DATA

Data used in this study extracted from different sources. Turkish Consumer Price Index (CPI), and seasonally adjusted Gross Domestic Product (GDP) in 1998 prices and Reel Effective Exchange Rate of Turkish Lira obtained from Central Bank of Turkey, while crude oil prices is extracted from International Energy Agency. An increase in REER implies an appreciation of the Turkish Lira. Furthermore, all variables are converted into natural logarithms. All series are shown in Figure 1. The shaded areas in the figures denote 2007-2009 Housing Bubble and Financial Economic Crisis.

Figure following on the next page
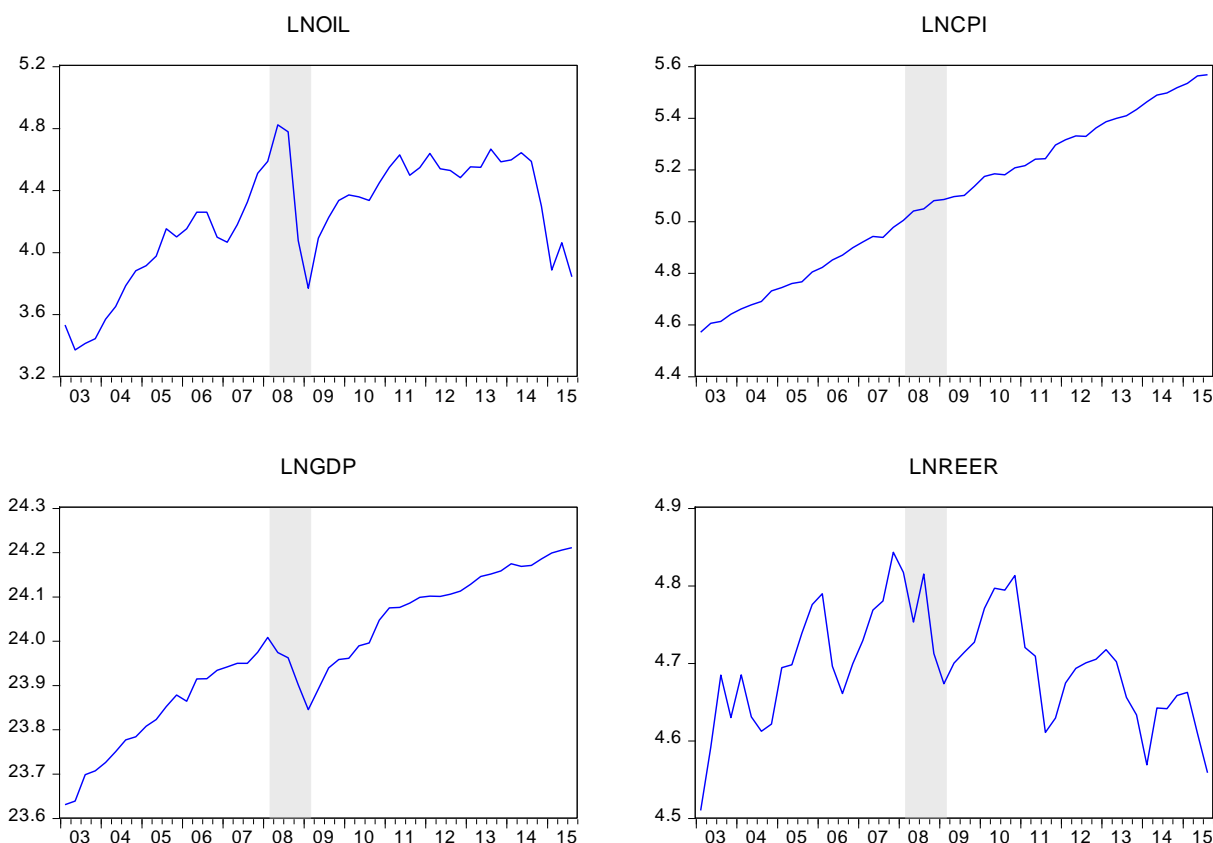
Figure 1 - Series used in the analysis

4. METHODOLOGY AND EMPIRICAL RESULTS

Firstly, we utilize Augmented Dickey Fuller (ADF), Kwiatkowski-Shin-Philips-Schmidt (KPSS), Phillips-Perron (PP) unit root tests and Zivot-Andrews (ZA) unit root test allowing for structural breaks to characterize the time series. Additionally, Granger and Toda Yamamoto causality tests are performed to give a clearer picture of how these variables are related. In ADF unit root test we follow methodology outlined in Enders (2008). Accordingly, in ADF test we evaluate the integration order of the series based on the models,

Model A: $\Delta Y_t = \phi_1 + \delta Y_{t-1} + \phi_3 t + \sum_{i=1}^{m} \alpha_i \Delta Y_{t-i} + u_t$

Model B: $\Delta Y_t = \phi_1 + \delta Y_{t-1} + \sum_{i=1}^{m} \alpha_i \Delta Y_{t-i} + u_t$

Model C: $\Delta Y_t = \delta Y_{t-1} + \sum_{i=1}^{m} \alpha_i \Delta Y_{t-i} + u_t$

Table 1 - ADF test results

	ADF							
	Model A			Model B			Model C	
Series	k	t	ϕ_3	k	t	ϕ_1	k	t
lnoil	1	-2.228484	3.961071	1	-2.805419***	3.985523*	1	0.072719
lngdp	1	-3.071.266	5.366045	1	-1.823992**	5.244421**	0	3.631602
lncpi	1	-2.718195	3.863197	6	-1.875327**	30.35135***	8	1.339916
lnreer	1	-2.713092	4.673401	1	-2.523179	3.188781	1	-0.131903

5

In the light of the unit root test methodology chosen, our ADF test results are given in Table 1. ADF test results show that lnoil exhibits a level stationary nature as we can reject the null of unit root with 90% confidence. Furthermore, lngdp and lncpi series show similar characteristics with that of lnoil, since we can reject unit root hypothesis at 5% and 1% significance levels in Model B, respectively. On the other hand, lnreer is found to be nonstationary in both three models. Therefore, ADF test results indicate that lnoil, lngdp, lncpi and lnreer are I(0), I(0), I(0), and I(1), respectively.

Table 2 - PP and KPSS test results

| | PP | | | | | | KPSS | |
| | Model A | | Model B | | Model C | | | |
Series	Bandwith	t	Bandwith	t	Bandwith	t	η_τ	η_μ
lnoil	5	-1.042345	4	-2.036741	5	0.097547	0.189612**	0.579762**
lngdp	1	-2.554098	0	-1.813214	1	3.334884	0.089031	0.916341***
lncpi	7	-3.759155**	14	-1.894993	18	15.49929	0.221855***	0.958121***
lnreer	0	-3.089515	1	-3.018443**	2	0.098191	0.238879***	0.257900

PP and KPSS test results are presented in Table 2. PP and KPSS unit root tests give mixed results compared to ADF test results. In particular, PP and KPSS test results show that lnoil and lngdp are integrated order of 1. Because the period 2003-2015 witnessed serious global economic crisis and structural changes, to have a better idea on the characteristics of the series we apply Zivot Andrews (ZA) unit root test allowing single endogenous structural break in level, trend, and both in level and trend. The result of ZA unit root test are shown in Table 3. According to ZA test result we can reject the null of unit root hypothesis for lngdp and lncpi, giving rise to the conclusion that both series are integrated order of zero. Besides, corresponding break dates in level and in both level and trend for lngdp series are 2008, coinciding with the Housing Bubble and Financial Economic Crisis. On the other hand, unit root test results show that lnoil and lnreer series are still integrated order of one, even after considering single endogenous break in the series. However, because we focus on a period in which more than one endogenous break might have occurred, we apply another unit root test which considers two endogenous structural breaks in the series. Therefore, Lumsdaine Papell (LP) unit root test is used. Table 4 exhibits the LP test results.

Table 3 - Zivot Andrews unit root test results

| | **Zivot Andrews** | | | | | |
| Model | Level | | Trend | | Both | |
Series	Statistics	Time of Break	Statistics	Time of Break	Statistics	Time of Break
lnoil	*-3.03147*	2013:04	-4.00242	2013:04	-3.97151	2013:03
lngdp	*-13.2042****	2008:04	-9.99705***	2005:04	-15.8460***	2008:04
lncpi	*-4.27474*	2006:02	-5.01487***	2008:03	-5.33212**	2009:02
lnreer	*-3.77383*	2005:03	-4.38402	2008:01	-4.48159	2008:04

Considering two structural breaks gives totally different picture regarding the characteristics of the series. Accordingly, we find that all the series are integrated order of degree zero with the exception of lnreer, which is found to be I(1). It is noteworthy that the results of LP unit root test are highly in parallel with ADF test results. Hence we conclude that lnoil, lngdp and lncpi are I(0), while lnreer is I(1).

Table 4 - LP unit root test results

Model	**Lumsdaine Papell**					
	Level		Trend		Both	
Series	Statistics	Time of Break	Statistics	Time of Break	Statistics	Time of Break
lnoil	3.7851	2008:03 2013:03	-4.7975	2005:04 2013:04	-8.1504**	2008:03 2013:04
lngdp	-17.2331***	2008:03 2013:03	-15.1302***	2007:04 2009:03	-21.4490***	2008:03 2011:01
lncpi	-6.1714**	2006:01 2010:02	-6.0689	2009:01 2011:02	-6.6481	2008:01 2011:03
lnreer	-4.8391	2010:04 2013:02	-4.2034	2008:01 2010:04	-5.5048	2008:03 2010:04

After determining the integration degrees of the variable, we proceed to unearth the casual relationships between these variables. To this end, we utilize Granger causality test. The lag structure of the model is determined by Akaike Information Criteria (AIC) as 4. Granger causality test results are shown in Table 5. According to the results, there is a unidirectional Granger causality from oil prices to GDP at 5% significance level. As expected, we reject the null hypothesis that oil price does not Granger causes CPI with 95% confidence. On the other hand, according to the results, we observe a bidirectional Granger casual relationship between CPI and GDP at 10% significance level.

Table 5 Granger causality test results

Null Hypothesis:	Lag	F-Statistic	Prob.
LNGDP does not Granger Cause LNOIL	4	2.07461	0.1033
LNOIL does not Granger Cause LNGDP		3.71442**	0.0120
LNCPI does not Granger Cause LNOIL	4	0.91937	0.4627
LNOIL does not Granger Cause LNCPI		2.90390**	0.0343
DLNREER does not Granger Cause LNOIL	4	0.65542	0.6268
LNOIL does not Granger Cause DLNREER		1.10871	0.3670
LNCPI does not Granger Cause LNGDP	4	2.24944*	0.0818
LNGDP does not Granger Cause LNCPI		2.48387*	0.0598
DLNREER does not Granger Cause LNGDP	4	0.75522	0.5610
LNGDP does not Granger Cause DLNREER		1.00010	0.4198
DLNREER does not Granger Cause LNCPI	4	0.30919	0.8700
LNCPI does not Granger Cause DLNREER		0.60240	0.6633

5. CONCLUSION

This paper examines the economic impact of oil price on the major Turkish macroeconomic variables, including Gross Domestic Product (GDP), Consumer Price Index (CPI) and Real Effective Exchange Rate (REER) for the period of 2003Q1 to 2015Q3. Firstly, ADF, KPSS, PP unit root tests and Zivot-Andrews, Lumsdaine Papell unit root tests allowing for structural breaks are used to characterize the time series. In addition, Granger causality test is performed to give a clearer picture of how these variables are related. The results show that Gross Domestic Product, Oil Price and Consumer Price Index are stationary, while Real Effective Exchange Rate have unit root in Turkey. The test results indicate that there is a unidirectional Granger causality from oil prices to GDP at 5% significance level. As expected, we reject the null hypothesis that oil price does not Granger causes CPI with 95% confidence. On the other hand, according to the results, we observe a bidirectional Granger casual relationship between CPI and GDP at 10% significance level.

LITERATURE

1. Akram, Q. F. (2004). Oil prices and exchange rates: Norwegian evidence. the econometrics Journal, 7(2), 476-504.
2. Aydın, L., & Acar, M. (2011). Economic impact of oil price shocks on the Turkish economy in the coming decades: A dynamic CGE analysis. Energy Policy, 39(3), 1722-1731.
3. Amano, R. A., & Van Norden, S. (1998). Oil prices and the rise and fall of the US real exchange rate. *Journal of international Money and finance*, *17*(2), 299-316.
4. Basher, Haug and Sadorsky (2016). The impact of oil shocks on exchange rates: A Markov-switching approach. Energy Economics, 54, 11-23.
5. Brown, S. P., & Yücel, M. K. (2002). Energy prices and aggregate economic activity: an interpretative survey. The Quarterly Review of Economics and Finance, 42(2), 193-208.
6. Chen, S. S., & Chen, H. C. (2007). Oil prices and real exchange rates. Energy Economics, 29(3), 390-404.
7. Cifarelli, G., & Paladino, G. (2010). Oil price dynamics and speculation: A multivariate financial approach. Energy Economics, 32(2), 363-372.
8. Camarero, M., & Tamarit, C. (2002). Oil prices and Spanish competitiveness: A cointegrated panel analysis. *Journal of Policy Modeling*, *24*(6), 591-605.
9. Chaudhuri, K., & Daniel, B. C. (1998). Long-run equilibrium real exchange rates and oil prices. Economics Letters, 58(2), 231-238.
10. Darrat, A. F., Gilley, O. W., & Meyer, D. J. (1996). US oil consumption, oil prices, and the macroeconomy. Empirical Economics, 21(3), 317-334.
11. Enders, W. (2008). Applied econometric time series. John Wiley & Sons.
12. Habib, M. M., & Kalamova, M. M. (2007). Are there oil currencies? The real exchange rate of oil exporting countries. European Central Bank Working Paper 839.
13. Hanabusa, K. (2009). Causality relationship between the price of oil and economic growth in Japan. Energy Policy, 37(5), 1953-1957.
14. Huang, Y., & Feng, G. U. O. (2007). The role of oil price shocks on China's real exchange rate. China Economic Review, 18(4), 403-416.
15. Issa, R., Lafrance, R., & Murray, J. (2008). The turning black tide: energy prices and the Canadian dollar. Canadian Journal of Economics/Revue canadienne d'économique, 41(3), 737-759.
16. Jayaraman, T. K., & Choong, C. K. (2009). Growth and oil price: A study of causal relationships in small Pacific Island countries. Energy Policy, 37(6), 2182-2189.
17. Jiménez-Rodríguez*, R., & Sánchez, M. (2005). Oil price shocks and real GDP growth: empirical evidence for some OECD countries. Applied economics, 37(2), 201-228.

18. Lardic, S., & Mignon, V. (2008). Oil prices and economic activity: An asymmetric cointegration approach. Energy Economics, 30(3), 847-855.
19. Lizardo, R. A., & Mollick, A. V. (2010). Oil price fluctuations and US dollar exchange rates. Energy Economics, 32(2), 399-408.
20. Prasad, A., Narayan, P. K., & Narayan, J. (2007). Exploring the oil price and real GDP nexus for a small island economy, the Fiji Islands. Energy Policy, 35(12), 6506-6513.
21. Turhan, I., Hacihasanoglu, E., & Soytas, U. (2013). Oil prices and emerging market exchange rates. Emerging Markets Finance and Trade, 49(sup1), 21-36.

THE ASSESSMENT OF THE CONSTITUTIONALISM OF COUNTRIES WITH THE HELP OF THE INTEGRAL INDEX

Samson Davoyan
Armenian State University of Economics Gyumri Branch, Armenia
samsondavoyan2014@gmail.com

Armen Ktoyan
Armenian State University of Economics Gyumri Branch, Armenia
armen_ktoyan@mail.ru

Ani Khachatryan
Armenian State University of Economics Gyumri Branch, Armenia
ani.kh88@mail.ru, anikhachatryansamveli@gmail.com

ABSTRACT
It is known that many international organizations and foreign experts study different directions of constitutional economics in order to reveal legislative preconditions of the economic development. There is no doubt that one of the important ingredients of the development and empiric implementation of the program of the constitutional regulation of social-economic relationships is the assessment of the constitutional level of the economy. In order to solve the above-mentioned problem we suggest to use the tools of factor analysis, a method of data reductions. In this article we have improved the Rule of Law Index by World Justice Project and create more integral index in order to estimate the progress of countries in this area. We have suggested the methodology that helps us to define scale coefficients of that express the comparative significance of the above-mentioned index. In addition, we measure and analyze the integral index of the constitutional level for 102 countries. Moreover, the above-mentioned methodological approach will also help to find out gaps of the constitutional development, provide the guideline for the constitutional development policy of the economy and fulfill them with high efficiency.
Keywords: Constitutionalism, regulation, assessment, rule of law, justice, methodology, factor analysis, development, economy, comparative, policy, efficiency

1. INTRODUCTION
The assessment of the constitutional level of the economy through the integral index provides guidance for countries to reveal the problems of the constitutional and legislative regulation of economic relationships, develop and apply the programs of their solutions (Buchanan, James M., (1990) *The Domain of Constitutional Economics, Constitutional Political Economy*, Vol. 1, No. 1, p. 49).

With the help of that index it will be possible to measure the constitutional level of the economy, make cross-countries comparisons and make dynamic researches *(Harutyunyan G., (2016)Constitutional Monitoring, Yerevan, Njar, p. 108)*. Moreover, the index will give an opportunity to implement econometric analysis to assess the correlation between the constitutionalism of the economy and its parameters as a part of the development of the entire system.

2. METHODOLOGY

Nowadays, the Rule of Law index by World Justice Project is broadly used to measure the legislative regulation of public relationships and its efficiency. The index is calculated as an average of 44 indicators of 8 areas and scores range from 0 to1 (with 1 indicating strongest adherence to the rule of law, the effective legislative regulation of public relationships .

However, it has also some disadvantages that are typical for such indexes. Particularly, all indicators are simply averaging that means that they all have the same significance, that is the main shortcoming of this methodology. In this context, it is vital to develop the integral index of the constitutional level of the economy based on the scales derived from their comparative significance.

To solve the above-mentioned problem we propose to use the tools of factor analyses. We have made factor analysis for 44 ingredients of the Rule of Law index by WJP organization for 102 countries. As a result of the analysis considering the comparative significance of each ingredient, we obtained scale coefficients and based on them created the index that measure the constitutional level of the economy. The countries considered in our research are listed below.

Table 1. The countries included in the research

Afghanistan	Canada	Georgia	Kyrgyzstan	Norway	Sri Lanka
Albania	Chile	Germany	Lebanon	Pakistan	Sweden
Argentina	China	Ghana	Liberia	Panama	Tanzania
Australia	Colombia	Greece	Macedonia	Peru	Thailand
Austria	Costa Rica	Guatemala	Madagascar	Philippines	Tunisia
Bangladesh	Cote d'Ivoire	Honduras	Malawi	Poland	Turkey
Belarus	Croatia	Hong Kong	Malaysia	Portugal	Uganda
Belgium	Czech Rep.	Hungary	Mexico	Rep. of Korea	Ukraine
Belize	Denmark	India	Moldova	Romania	UAE
Bolivia	Dominican Rep.	Indonesia	Mongolia	Russia	United Kingdom
Bosnia & Herz.	Ecuador	Iran	Morocco	Senegal	United States
Botswana	Egypt	Italy	Myanmar	Serbia	Uruguay
Brazil	El Salvador	Jamaica	Nepal	Sierra Leone	Uzbekistan
Bulgaria	Estonia	Japan	Netherlands	Singapore	Venezuela
Burkina Faso	Ethiopia	Jordan	New Zealand	Slovenia	Vietnam
Cambodia	Finland	Kazakhstan	Nicaragua	South Africa	Zambia
Cameroon	France	Kenya	Nigeria	Spain	Zimbabwe

11

In our analysis we have considered all 44 indicators that capture the adherence to the rule of law in 9 areas:

1. Constraints on Government Powers,
2. Absence of Corruption,
3. Open Government,
4. Fundamental Rights,
5. Order and Security,
6. Regulatory Enforcement,
7. Civil Justice,
8. Criminal Justice,
9. Informal Justice *(World Justice Project, Rule of Law Index 2015, http://worldjusticeproject.org/sites/default/files/roli_2015_0.pdf).*

We conducted factor analysis with the help of SPSS program. The extraction of the factors was based on the Principal Component method. As a result Initial Eigenvalues for the first 4 Principal components are more than 1 and 4 components are retained to describe of the behaviour of all 44 indicators. Moreover, those 4 components define 81.4 percent of the change of cumulative variance.

Later in our research we tried to describe the each factor considering the strcuture of each factor and it participation. The table below presents factors with initial indicators that have greatest impact in the integrity.

Table 2. The structure of factors by more significant initial indicators
(Continues on the next Page)

Factor	Initial Indicators by significance	Scale-coefficient
Factor 1	8.2 Criminal adjudication system is timely and effective	0,87
	8.3 Correctional system is effective in reducing criminal behavior	0,829
	7.5 Civil justice is not subject to unreasonable delays	0,816
	5.3 People do not resort to violence to redress personal grievances	0,805
	8.1 Criminal investigation system is effective	0,79
	5.1 Crime is effectively controlled	0,773
	1.4 Government officials are sanctioned for misconduct	0,731
	2.4 Government officials in the legislative branch do not use public office for private gain	0,714
	6.3 Administrative proceedings are conducted without unreasonable delay	0,704
Factor 2	4.7 Freedom of assembly and association is effectively guaranteed	0,954
	4.4 Freedom of opinion and expression is effectively guaranteed	0,949
	1.5 Government powers are subject to non-governmental checks	0,946
	3.3 Civic participation	0,935
	1.6 Transition of power is subject to the law	0,816
	1.1 Government powers are effectively limited by the legislature	0,809
	4.5 Freedom of belief and religion is effectively guaranteed	0,717
	4.6 Freedom from arbitrary interference with privacy is effectively guaranteed	0,716
Factor 3	6.2 Government regulations are applied and enforced without improper influence	0,609
	8.5 Criminal system is free of corruption	0,585

Factor	Initial Indicators by significance	Scale-coefficient
	7.3 Civil justice is free of corruption	0,58
	2.1 Government officials in the executive branch do not use public office for private gain	0,574
	2.2 Government officials in the judicial branch do not use public office for private gain	0,551
	2.3 Government officials in the police and the military do not use public office for private gain	0,537
	6.5 The Government does not expropriate without adequate compensation	0,523
Factor 4	5.2 Civil conflict is effectively limited	0,657
	7.2 Civil justice is free of discrimination	0,637
	4.1 Equal treatment and absence of discrimination	0,589
	7.1 People have access to affordable civil justice	0,585
	4.8 Fundamental labor rights are effectively guaranteed	0,579
	4.2 The right to life and security of the person is effectively guaranteed	0,544

In Table 2 we can see that indicators that describe 5-8th areas play important role in Factor 1, in Factor 2 the indicators of forth area prevail, it also includes 3,3 and 1,5 indicators that measure the level of civil participation in decision making process and non-governmental checks of government powers. Factor 3 mostly contains the indicators that describe the level of corruption in different areas of public and Factor 4 is constructed based on civil conflict, civil justice discrimination, equal treatment and absence discrimination indicators.

Considering the above-mentioned discrimination we can name those 4 factors:

Factor 1.Effectivecriminal adjudication system and government regulation,

Factor 2. Civil freedom and participation in desicion making process of government powers

Factor 3. Struggling again corruption,

Factor 4. Civil consensus.

3. RESULTS

In tables below the countries with higher values of each factor are presented. Considering the description for each factor we can compare countries according to the results of the analysis, assess the progress and gaps for each sector. As a result we have the rating of countries by the constitutional level of the regulation of social-economic relationships for each sector.

Table 3. The countries with higher values by the first factor

Country	Value	Country	Value	Country	Value
Singapore	2,476	United Kingdom	1,256	Kazakhstan	0,952
UAE	2,129	Japan	1,215	Canada	0,829
Uzbekistan	1,949	Germany	1,177	Estonia	0,793
Hong Kong	1,852	Sweden	1,131	United States	0,692
Norway	1,760	China	1,125	Poland	0,684
Austria	1,655	Netherlands	1,103	France	0,583
Finland	1,646	Belarus	1,102	Czech Republic	0,553
Republic of Korea	1,625	Australia	1,075	Myanmar	0,454
Denmark	1,432	Malaysia	1,037	Georgia	0,448
New Zealand	1,293	Vietnam	1,024	Jordan	0,416

Table 4. The countries with higher values by the second factor

Country	Value	Country	Value	Country	Value
Norway	1,382	Liberia	1,080	Poland	0,859
Denmark	1,354	Belgium	1,079	Nepal	0,855
Sweden	1,352	Netherlands	1,075	Italy	0,831
Germany	1,271	United States	1,068	Jamaica	0,824
Austria	1,247	New Zealand	0,977	Uruguay	0,819
Ghana	1,225	Chile	0,950	Malawi	0,806
Finland	1,215	India	0,938	Indonesia	0,755
Costa Rica	1,204	Canada	0,935	Czech Republic	0,748
Australia	1,171	France	0,935	Estonia	0,747
Portugal	1,107	United Kingdom	0,896	Senegal	0,703

Table 5. The countries with higher values by the third factor

Country	Value	Country	Value	Country	Value
Iran	2,492	United States	1,148	Netherlands	0,915
UAE	1,655	New Zealand	1,085	South Africa	0,857
Colombia	1,643	Canada	1,083	Sweden	0,849
Turkey	1,619	Costa Rica	1,041	Ecuador	0,823
Botswana	1,378	China	1,039	Egypt	0,812
Honduras	1,343	Brazil	0,999	United Kingdom	0,811
Uruguay	1,281	Malaysia	0,974	Singapore	0,781
Japan	1,240	Rep. of Korea	0,973	Greece	0,780
Australia	1,223	Hong Kong	0,954	Belgium	0,778
Chile	1,210	Belize	0,922	Guatemala	0,658

Table 6. The countries with higher values by the forth factor

Country	Value	Country	Value	Country	Value
Venezuela	2,057	Uruguay	1,047	Belgium	0,789
Argentina	1,919	Croatia	1,040	Costa Rica	0,782
Slovenia	1,827	Macedonia	1,037	Bolivia	0,772
Spain	1,462	Panama	1,011	Denmark	0,707
Belarus	1,412	Dominican Rep.	0,988	Netherlands	0,699
Portugal	1,280	Romania	0,941	Serbia	0,657
Czech Republic	1,201	Bosnia and Herz.	0,861	Finland	0,655
Bulgaria	1,170	Estonia	0,855	Italy	0,638
Hungary	1,129	Vietnam	0,854	Georgia	0,634
Ecuador	1,056	Greece	0,833	Uzbekistan	0,622

Table Communalities included contains important results for factor analysis. It defines the extent of dispersion of variables to which the model explains. In Table Column Initial presents initial communalities that are equal 1 and Extraction Column includes extracted communalities. The higher the values, the more important role plays the initial indicator in the factor system, and reverse, the lower is the values the less important role plays the indicator in the structure of the model.

Hence, we can consider the values of Column Extraction to attain the scale coefficients of indicators and create the Integral Index of the Constitutional Level.

Normalizing the values of Extraction presented in Table Communalities we can obtain the scale-coefficients of comparative significance of each indicator (Table 7).

Table 7. The scale –coefficients of the ingredients of the Integral Index of the Constitutional level

Indicator	Scale-coefficient
4.4 Freedom of opinion and expression is effectively guaranteed	0,02690
1.5 Government powers are subject to non-governmental checks	0,02687
4.7 Freedom of assembly and association is effectively guaranteed	0,02664
3.3 Civic participation	0,02639
8.5 Criminal system is free of corruption	0,02610
1.2 Government powers are effectively limited by the judiciary	0,02570
8.7. Due process of law and rights of the accused	0,02565
4.3 Due process of law and rights of the accused	0,02565
7.4 Civil justice is free of improper government influence	0,02553
2.2 Government officials in the judicial branch do not use public office for private gain	0,02543
2.1 Government officials in the executive branch do not use public office for private gain	0,02526
2.3 Government officials in the police and the military do not use public office for private gain	0,02518
7.3 Civil justice is free of corruption	0,02516
1.4 Government officials are sanctioned for misconduct	0,02514
1.6 Transition of power is subject to the law	0,02494
6.2 Government regulations are applied and enforced without improper influence	0,02452
4.2 The right to life and security of the person is effectively guaranteed	0,02434
8.3 Correctional system is effective in reducing criminal behavior	0,02411
8.2 Criminal adjudication system is timely and effective	0,02363
1.1 Government powers are effectively limited by the legislature	0,02346
6.1 Government regulations are effectively enforced	0,02337
8.6 Criminal system is free of improper government influence	0,02316
4.6 Freedom from arbitrary interference with privacy is effectively guaranteed	0,02291
6.5 The Government does not expropriate without adequate compensation	0,02268
3.4 Complaint mechanisms	0,02264
4.1 Equal treatment and absence of discrimination	0,02259
4.8 Fundamental labor rights are effectively guaranteed	0,02236
6.4 Due process is respected in administrative proceedings	0,02187
2.4 Government officials in the legislative branch do not use public office for private gain	0,02172
5.3 People do not resort to violence to redress personal grievances	0,02124
4.5 Freedom of belief and religion is effectively guaranteed	0,02101
3.1. Publicized laws and government data	0,02097
3.2 Right to Information	0,02035
8.4 Criminal system is free of discrimination	0,02029
8.1 Criminal investigation system is effective	0,02011
7.7 ADRs are accessible, impartial, and effective	0,02010
6.3 Administrative proceedings are conducted without unreasonable delay	0,01996
7.2 Civil justice is free of discrimination	0,01983
1.3 Government powers are effectively limited by independent auditing and review	0,01957
7.5 Civil justice is not subject to unreasonable delays	0,01897
7.1 People have access to affordable civil justice	0,01859
5.1 Crime is effectively controlled	0,01847
7.6. Civil justice is effectively enforced	0,01803
5.2 Civil conflict is effectively limited	0,01261

Multiplying the scale-coefficients presented in Table 7 with appropriate values of the indicators and summarizing the results we can have the integral index, that can be considered as the index of the constitutional level. The scores of the Integral Index of the Constitutional Level are represented in Table 8.

Table 8. The ranking of countries by the Integral Index of the Constitutionalism

Rank	Country	Score	Rank	Country	Score	Rank	Country	Score
1	Denmark	0,874	35	Croatia	0,590	69	Belize	0,466
2	Norway	0,871	36	South Africa	0,575	70	Kazakhstan	0,465
3	Finland	0,852	37	Jamaica	0,563	71	Mexico	0,462
4	Sweden	0,851	38	Hungary	0,562	72	Cote d'Ivoire	0,460
5	Netherlands	0,834	39	Senegal	0,560	73	Burkina Faso	0,456
6	Austria	0,828	40	Bosnia & Herzeg.	0,560	74	Moldova	0,454
7	New Zealand	0,826	41	Jordan	0,548	75	Kyrgyzstan	0,452
8	Germany	0,818	42	Tunisia	0,545	76	Russia	0,451
9	Australia	0,802	43	Malaysia	0,542	77	Ecuador	0,450
10	Singapore	0,797	44	Bulgaria	0,538	78	Zambia	0,449
11	UK	0,783	45	Brazil	0,532	79	Liberia	0,447
12	Rep. of Korea	0,777	46	Macedonia	0,526	80	Kenya	0,443
13	Japan	0,773	47	Mongolia	0,523	81	China	0,440
14	Estonia	0,771	48	Argentina	0,517	82	Guatemala	0,435
15	Canada	0,771	49	Nepal	0,516	83	Turkey	0,433
16	Belgium	0,767	50	Panama	0,516	84	Sierra Leone	0,432
17	Hong Kong	0,748	51	Philippines	0,510	85	Nigeria	0,425
18	France	0,737	52	Albania	0,507	86	Madagascar	0,425
19	United States	0,723	53	India	0,507	87	Uzbekistan	0,420
20	Czech Rep.	0,716	54	Malawi	0,506	88	Egypt	0,411
21	Poland	0,715	55	Indonesia	0,502	89	Iran	0,404
22	Uruguay	0,710	56	El Salvador	0,499	90	Honduras	0,402
23	Portugal	0,708	57	Belarus	0,498	91	Nicaragua	0,401
24	Costa Rica	0,686	58	Thailand	0,495	92	Bolivia	0,397
25	Spain	0,682	59	Colombia	0,493	93	Bangladesh	0,394
26	Chile	0,674	60	Peru	0,491	94	Cameroon	0,393
27	Slovenia	0,658	61	Morocco	0,490	95	Pakistan	0,391
28	Italy	0,649	62	Serbia	0,488	96	Uganda	0,391
29	UAE	0,644	63	Sri Lanka	0,488	97	Ethiopia	0,383
30	Georgia	0,636	64	Dominican Rep.	0,481	98	Myanmar	0,381
31	Botswana	0,625	65	Ukraine	0,476	99	Afghanistan	0,349
32	Romania	0,620	66	Lebanon	0,475	100	Cambodia	0,342
33	Ghana	0,600	67	Vietnam	0,473	101	Zimbabwe	0,339
34	Greece	0,595	68	Tanzania	0,466	102	Venezuela	0,292

4. CONCLUSION

To sum up, our methodological approach that be describe above, give us an opportunity to assess the constitutional level of the regulation of economic relationships through the Integral Index. The main feature of the method is that scale-coefficients of the ingredients of the Integral Index are obtained based on the factor analysis and reveal the comparative importance and significance of each ingredient. Furthermore, the method broadens the framework of the indicators of the index including more indicators that assess the constitutional level of the regulation of the economic relationships.

LITERATURE
1. Buchanan, James M., (1990) The Domain of Constitutional Economics, Constitutional Political Economy, Vol. 1, No. 1.
2. Harutyunyan G., (2016)Constitutional Monitoring, Yerevan, Njar.
3. World Justice Project (2015) , Rule of Law Index 2015, http://worldjusticeproject.org/sites/default/files/roli_2015_0.pdf.

FACTORS AFFECTING THE STUDENTS' HEALTH FROM USING SMART PHONES IN THAILAND

Rungsan Suwannahong
Department on Information Systems, Business Administration Faculty
Rajamangala University of Technology Thanyaburi,
Thanyaburi, Klong 6, Pathumthani, 12120, Thailand
rungsan_s@rmutt.ac.th

ABSTRACT
This research purposes are aim to study the characteristics of using smart phone and relationship between characteristics of using smart phone and students' health both physical and mental health. The sample group is university' student around Bangkok in Thailand that using smart phone regularly. A questionnaire was completed by 400 respondents and analyzed by Descriptive statistics and inferential statistics (Independent t-test, One-way ANOVA). The study found that respondents' health problem in eyes and finger related to the number of using hours per day and the duration of continues use. The more using smart phone the more health problems. For the mental problems found that respondents are trending to have mental problem by bored when working with smart phone.
Keywords: *Health problem, Smart phone, Illness due to using phone*

1. INTRODUCTION
Smart Phone Is currently being developed to be more efficient. Smart phones can be connected to the Internet, watch movies, listen to music, play games, take pictures, and document management. Although there is no evidence to conclude that phones cause cancer or affect the brain. But there is evidence that the use of mobile phones cause more accidents and the phone wave can interfere with medical equipment. These technologies allow users to see the screen more. It is interesting that to study the relationship of using smart phones and student' health for example eye, neck and hand muscles. Or, smart phone using can cause a state of stress on physically and mentally or not. This research was conducted to determine the factors that affect the health of the smart phone. As well as to educate those who are interested to guide further protection.

1.1 Objective or the study
1. To study the use of mobile smart phones.
2. To study the relationship between factors related to the use of mobile smart phones and discomfort, physical or mental.
3. To study the use of the health effects of using mobile smart phone.

1.2 Benefit of the study
1. The public can use the smart phone without diseases due to the use of a smart phone the wrong way.
2. Guidelines on the use of mobile smart phones safely.
3. The public can reduce medical expenses due to the use of a smart phone the wrong way.
4. The government can reduce the costs to be incurred to maintain health insurance system.

1.3 Literature Review

Smart phone is capable of the mobile phone that not acts just received and dialed calls but smart phones have been seen as a small portable computer that can function in a mobile phone. Smart phone has a system of wireless connectivity with Bluetooth, 3G, WIFI Port and Mini USB. Smart phone can play multimedia such as movie and music. Smart phone also has a camera as well. Smart phone users can install applications to increase the phone's ability to meet the needs of more users. The format of applications added that based on the platform of the device and the operating system installed. The illness was caused by the use of mobile smart phones that has seen both physically and mentally. Physically illness, Dr. Yutthana (2014) said that the eye symptom of the computer usage (Computer Vision Syndrome, CVS) is a symptom of looking the computer screen for a long time. Patients will have eye pain, eye strain, tired eye, ocular surface problems, blurred vision and the problems of double vision. Symptom maybe spread to the muscle, neck and back bone. The level of visibility, Dr. Vasu (2014) said that people with eye disease or with any other symptoms will has level of visibility decreasingly. Which was not corrected by glasses. They are visible when an object is large enough, good contrast and brightness. Therefore, who are use mobile phones with a smaller font size, small screen and a bit contrast might focus more on screen to seeing objects. It can cause headaches and eye strain. Psychological, using smart phones have impacted negatively on user's mental health for example Anxiety when not playing, feel sad without knowing why, relationships with peers down (Nattayaporn, 2013, Sungkom and Dusadee, 2010). Dr. Suchat et al (2013) said that in future the technology will be more important everyone can access information from anywhere any time. Using mobile technology inappropriately make more interaction between the individual and less may cause to social problems both public and private. Education about the illness from the mobile phone usage most of them are found in Europe. Peter (2015) points that children in England have emotional problems increasingly as a result of the use of mobile smart phones, as well as Lee (2012) have discussed the plenty use of using smart phone in Korea, smart-phone addicts, and referred to Dr. Lee. Mark D. Griffiths, a professor of psychology at Nottingham Trent University in England, that the psychological problems of smart phone users is increased continuously. For Thailand, Health Information System Development Office (HISO) (2012) point that the impact of the use of smart phones can affect the body and mind of the user, if users use smart phone for a long time. It's supported by Nattayaporn (2013) that the use of the Internet, Facebook or social network for a long time can pose a threat to the social and psychological impact of users. It's supported by Dr. Suchat et al (2013) that In the future there will be new diseases due to the use of technology.

1.4 Conceptual Framework
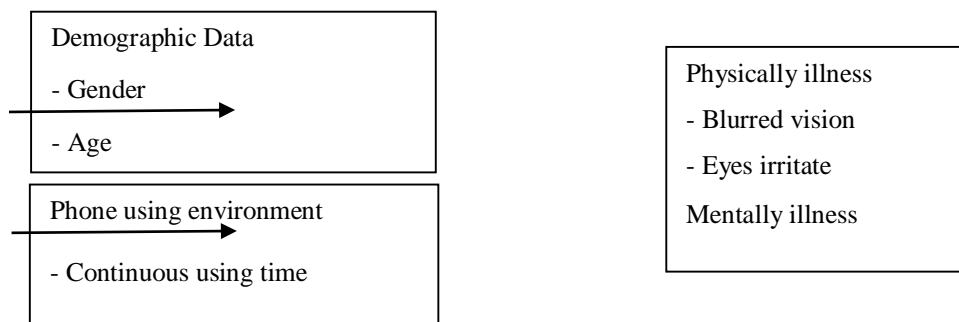
Demographic Data
- Gender
- Age

Phone using environment
- Continuous using time

Physically illness
- Blurred vision
- Eyes irritate
Mentally illness

Hypothesis: The first hypothesis is the differences in gender will vary with the illness. The second hypothesis is the differences in hours of phone using will vary with illness.

In the research data collected from under graduate student in Bangkok, Thailand. The study group consists of 400 students. The equation from Cochran (Glenn D. Israel, 1992) will be used for populations those are large because the research purpose select only the student who using smart phone. The formula for calculating a sample for populations with 95% confidence level and $^+.5\%$ precision is as follow:

$$n_0 = \frac{Z^2pq}{e^2} = \frac{(1.96)^2(0.5)(0.5)}{(0.5)^2} = 385$$

The sample size from calculation is 385 students, but for error that might occurs during the process then the number will be round up to 400 students. A combination of qualitative and quantitative approaches was used in this research. Quantitative data was collected through a scale for the first two parts of questionnaire consists of students' information. The second part consist of the environment of phone using. The last part was an open-ended question about opinion of using smart phone. The statistics used in data analysis were percentage, mean, standard deviation. The Independent t-test were used to analyze differences for the sample of two groups, and analysis of ANOVA (One-Way ANOVA) with samples containing more than two groups. For a significant improvement, differences were test by using paired LSD (Least Significant Difference) for statistical analysis.

2. DATA ANALYSIS

2.1 Demographic Data

Table 1: Distribution of respondents by gender

Gender	Frequency	Percentage
Male	201	50.25
Female	199	49.75
Total	400	100.00

The majority of respondents in this study are male, followed by female.

Table 2: Distribution of respondents by age

Age	Frequency	Percentage
Less than or equal to 19 years	19	4.75
20 years	63	15.75
21 years	272	68.00
More than 21 years	46	11.50
Total	400	100.00

The table 2 shown the majority respondents are 21-years old, 20 years old minor was 20 years, 21 years, more than 21 years and less than or equal to 19 years in a row.

Table 3: Distribution of respondents on continuous using smart phone

Continuous using	Frequency	Percentage
Less than 4 hours	80	20.00
Between 4 - 6 hours	240	60.00
More than 6 hours	80	20.00
Total	400	100.00

The results shows the most respondents use smart phone 4 – 6 hours a day continuously.

Table 4: Summary distribution respondents on physically and mentally illness

Illness	$\bar{x}$,	S.D.	Result	Order
Blurred vision	2.72	1.08	Uncertain	2
Eyes irritate	2.68	1.01	Uncertain	3
Feel boring when work through smart phone	3.12	1.24	Uncertain	1

From Table 4, respondents has both physically and mentally illness in uncertain level

2.2 Data Analysis for Hypothesis Testing
Hypothesis 1: the health of students were vary with their gender

Table 5: Data analysis for testing that the health of students were vary with their gender

Illness of respondent	t-test for Equality Mean					
	Gender	$\bar{x}$,	S.D	t	df	Sig.
Blurred vision	Male	2.49	0.906	-4.429	0.105	0.00
	Female	2.95	1.186		0.106	0
Eyes irritate	Male	2.68	10.85	0.032	0.101	0.97
	Female	2.68	0.930		0.101	5
Feel boring when work through smart phone	Male	2.89	1.397	-3.85	0.122	0.00
	Female	3.36	1.019		0.122	0

The result of Independent t-test shown gender affect the health that female has blurred vision, and feel boring when work through smart phone more than male at significant level <0.05.
Hypothesis 2: the health of students were vary with the continuous using smart phone

Table following on the next page

Table 6: Data analysis for testing that the health of students were vary with continuous using smart phone

Illness of respondent	Source of Variation	SS	df	MS	F	Sig.
Blurred vision	Between groups	79.360	2	39.680	50.233	0.000
	Within Groups	313.600	397	0.790		
	Total	392.960	399			
Eyes irritate	Between groups	161.707	2	80.853	130.837	0.000
	Within Groups	245.333	397	0.618		
	Total	407.040	399			
Feel boring when work through smart phone	Between groups	125.440	2	62.720	50.527	0.000
	Within Groups	492.800	397	1.241		
	Total	618.240	399			

From table 6, the one-way ANOVA testing was conduct to compare respondents' illness among their continuous using smart phone. The result indicates that number of continuous using hours were affect physical and psychological symptoms with significant level < 0.05, thus the null hypothesis (H0) was rejected. Therefore Post Hoc Test has between used to identify the difference between continuous using smart phone and respondents' illness

Table 7: Post Hoc Test (LSD) between each number of continuous using hours and respondents' illness in the blurred vision

Age	x,⁻	Less than 4 hours	Between 4 to 6 hours	Greater than 6 hours
		1.56	2.75	3.8
Less than 4 hours	1.56		-1.19 (0.020)*	-2.24 (0.031)*
Between 4 - 6 hours	2.75			-1.05 (0.001)*
More than 6 hours	3.80			

* Significant level at 0.05

From Table 7, the data analysis on each number of continuous using hours with respondents' eyes blurred vision symptom, a one-way ANOVA test indicated a statistically significant different in each pair of continuous using hours are as follows: The respondents who are continuous using longer hours have eyes blurred vision symptom less than those who are using less.

Table 8: Post Hoc Test (LSD) between each number of continuous using hours and respondents' illness in the eyes irritate

Age	$\bar{x}$	Less than 4 hours	Between 4 to 6 hours	Greater than 6 hours
		2.00	2.59	3.64
Less than 4 hours	2.00		-0.59 (0.000)*	-1.64 (0.000)*
Between 4 - 6 hours	2.59			-1.05 (0.001)*
More than 6 hours	3.64			

* Significant level at 0.05

From Table 8, the data analysis on each number of continuous using hours with respondents' eyes irritate symptom, a one-way ANOVA test indicated a statistically significant different in each pair of continuous using hours are as follows: The respondents who are using longer than others have eyes irritate symptom more than those who are using less.

Table 9: Post Hoc Test (LSD) between each number of continuous using hours and respondents' illness in feel boring when work through smart phone

Age	$\bar{x}$	Less than 4 hours	Between 4 to 6 hours	Greater than 6 hours
		1.90	3.3	3.8
Less than 4 hours	1.90		-1.4 (0.071)	-1.9 (0.010)*
Between 4 - 6 hours	3.30			-0.5 (0.044)*
More than 6 hours	3.80			

* Significant level at 0.05

From Table 9, the data analysis on each number of continuous using hours with respondents' feel boring when work through smart phone symptom, a one-way ANOVA test indicated a statistically significant different in each pair of continuous using hours are as follows: The respondents who are continuous using more than 6 hours have feel boring when work through smart phone symptom more than those who are using less.

Table 10: Summary of Testing for Hypothesis

Hypothesis 1: The differences in gender will vary with the illness.	
Illness	Gender
Blurred vision	Supported
Eyes irritate	Not Supported
Feel boring when work through smart phone	Supported

Hypothesis 2: The differences in hours of phone using will vary with illness.			
Variable	Blurred vision	Eyes irritate	Feel boring when work through smart phone
Age	Supported	Supported	Supported
Continuous using time	Supported	Supported	Supported

3. CONCLUSION, DISCUSSION AND SUGGESTIONS
3.1 Conclusions

The respondents were under graduate students in Thailand. Most of them are under 21 years old and used smart phone four to six hours per day on average. This period may be not enough to detect abnormalities that can occur with physical and mental illness. The results shown that Physical illness, respondents agree that they have a bit problems health except irritating to the eyes at an uncertain level.

Mentality illness, respondents agree that they have a bit problems health. Except they feel boring when work through mobile phone at an uncertain level.

The results of the survey show that health problems still exist in the use of smart phones. But those who have a greater or most probably will not use smart phone then they did not answer the questionnaire.

Data from the respondents can be used to health educate and reduces the cost of health care.

Hypothesis 1: The differences in gender will vary with the illness.

The reason for eyes irritate symptom not vary with the respondents' gender may cause of period not enough to detect abnormalities that can occur.

Hypothesis 2: The differences in hours of phone using will vary with illness.

The respondents who are continuous using smart phone longer than others might have illness more than those who are using smart phone less.

3.2 Discussion

The research result found that the most important situation cause health problems were age and period of continuous using hours. Females are perceived symptoms than men. The respondents that they are high period of continuous using hours have symptoms of eyes and mental. The finding consistently confirmed to a number of previous studies about illness form phone using, Nattayaporn(2013), Peter(2015), Vasu(2014), Yutthana(2014) who concluded that more period of continuous using hours more eyes symptoms. This situation may result in a problems health in the future. Therefore, it should focus on the content of using the smart phones and more. It will help reduce health problems and the cost of therapies.

3.3 Suggestions

Research should be tested further as follows.

1. Studies are required to test same sample that they have declining symptoms or not, after gaining knowledge of how to use smart phone.

2. There should be a study of other construct that related to the physical and psychological symptoms such as using hour in average per day, user' current physical condition.

3. Studies a new group of sample, such as those who already work that the physical and psychological illness due to the use of smart phones similar or different.

LITERATURE

1. Anonymous. (2013), Top 10 Health Risks of Smart Phone Use, Available at http://beforeitsnews.com/alternative/2013/12/top-10-health-risks-of-smart-phone-use-2853310.html

2. Glenn D.I. (1992), Determining Sample Size. A series of the Program Evaluation and Organizational Development. University of Florida, Publication date: November 1992.

3. Health Information System Development Office. (2012), 6 Health Crisis of Technology, Available at http://www.hiso.or.th/hiso5/healthy/news5_17.php?m=6

4. Lee Chang-sup. (2012), Smartphone addiction: disease or obsession?, Available at http://www.koreatimes.co.kr/www/news/nation/2012/08/113_117506.html

5. Nattayaporn Phrarubraksa. (2013), Factors Affecting Facebook Addiction of University Students in Chiangmai. Rajamangala University of Technology Tawan-ok Research Journal, Volume 3, Issue 1

6. Peter Stanford. (2015), Are smartphones making our children mentally ill?, Available at http://www.telegraph.co.uk/news/health/children/11486167/Are-smartphones-making-our-children-mentally-ill.html

7. Suchat Udomsopagit, Jaruayporn Srisasalux, Orapan Srisookwatana and Tipicha Poshyananda. (2013), The future health system, Health Systems Research Institute (HSRI).

8. Sungkom Suparatanagool and Dusadee Ayuwat. (2010), Factors Influence Health Security Families, Thai Population Journal, Volume 1, Issue 2.

9. Thassanee Ramangkur. (2009), Factors Influencing The Consumer Buying Behavior to House Branded Mobile Phone in Bangkok Area. Burapha University, Thailand.

10. Vasu Subhakornthanasan. (2014), Solve Problems with Using Mobile Phones., Available at http://www.nightsiam.com/forum/index.php?topic=2271.0;wap2

11. Yutthana Sukonthasap. (2014), Computer Vision Syndrome. Available at http://dr.yutthana.com/cvs.html

ADEQUACY OF THE CAPM FOR ESTIMATING THE COST OF EQUITY CAPITAL: EMPIRICAL STUDY ON UNDERDEVELOPED MARKET

Ivana Bestvina Bukvic
Josip Juraj Strossmayer University of Osijek
Department of Cultural Studies, Republic of Croatia,
ibbukvic@unios.hr

Dubravka Pekanov Starcevic
Josip Juraj Strossmayer University of Osijek
Faculty of Economics in Osijek, Republic of Croatia
dpekan@efos.hr

Ivana Fosic
Josip Juraj Strossmayer University of Osijek
Faculty of Economics in Osijek, Republic of Croatia
ifosic@efos.hr

ABSTRACT

When evaluating investment projects, an appropriate discount rate needs to be estimated, which is often represented by the weighted average cost of capital (WACC). Furthermore, when estimating the cost of equity capital, the Capital Asset Pricing Model (CAPM) is usually used. With the aim of testing and analyzing the possibility of applying the CAPM model to making capital budgeting decisions in underdeveloped markets, the authors conducted research on a sample of 62 randomly selected project proposals generated in the period from 2003 to 2014 and planned to be implemented in Eastern Croatia. Through this research, cash flows, profitability, and the investment structure of the projects were analyzed and put into relation with profitability of the investment in a created stock portfolio.
The results showed that, when using the CAPM in underdeveloped markets, certain adjustments in defining calculation input values are needed in order to get relevant output information. Even without the specificities of underdeveloped markets, the use of the CAPM is still not without controversies. The questions regarding beta calculation, a premium market rate and an adequate risk-free rate, are still being discussed.
Nevertheless, it was found that the CAPM could give a satisfactory insight into investors' minimum required returns and the riskiness of investment options. The authors emphasize that investors must not ignore the shortcomings of this model regarding the characteristics of capital markets it was tested on, the specificities of the industry being invested in and the fact that the CAPM model strongly responds to highly variable cash flows and a project period to achieve full production capacity.
Keywords: capital investments, CAPM, decision making, management, risk analysis

1. INTRODUCTION

One of the main issues when evaluating investment projects is the choice of an appropriate discount rate. In estimating the cost of equity, practitioners often use the Capital Asset Pricing Model (CAPM). The CAPM, that is conventionally used, is calculated in its primary form on the basis of the risk-free rate, the market expected rate of return and beta of the asset (project) being analyzed.

Despite its wide use, the CAPM adequacy for determining the cost of equity is continually questioned and analyzed (Bruner et al., 1998; Estrada, 2000; Fama and French, 2004; Vishwanath and Krishnamurti 2009; Celik, 2012; Dempsey, 2013). There are questions as to its applicability, especially in underdeveloped markets, such as the Croatian market. Because of the size and underdevelopment of the Croatian capital market and a lack of information regarding the level of systematic risk of publicly listed companies valued through beta on the one hand, and a shortage of information about the level and terms of leverage of comparable firms on the other hand, it is difficult to use some of the methods for determining the level of systematic risk. According to Miletic and Miletic (2015:132), as capital markets in European emerging economies are "highly volatile, less liquid and strongly dependent on the unexpected external shocks, market risk estimation based on normality assumption in CEE countries is more problematic". On the other hand, if the projects' economic and financial effects are appropriately and realistically estimated, then project risk measurement can be satisfactory (Dimitrić and Škalamera-Alilović, 2005).

Following the aforementioned, the aim of this paper was to present the results of the analysis of the applicability of the CAPM model to investment projects planned to be implemented or implemented in specific conditions of the underdeveloped Croatian market. The authors compared the profitability and yield variability of the formed market portfolio with the distribution and the value of expected returns of investment projects analyzed.

The remainder of the paper is organized as follows. Section 2 provides a literature review of the CAPM model. Section 3 describes details of the estimation procedure for the tested model. The risk premium and risk-free rate estimates of the model are given and also discussed, while Section 4 presents research results and discussion. Section 5 gives general conclusions based on research results, as well as research limitations.

2. LITERATURE REVIEW

The CAPM model is by Sharpe (1964) and Lintner (1965) one of the most frequently used models to determine the cost of equity (for example, see Fama and French, 2004; Da, Guo and Jagannathan, 2011; Bruner et al., 1998; Gedes, 2002). However, practitioners and academics debate its applicability and develop model modifications.

In 1972, Black developed the zero-beta CAPM; a model without a risk-free rate which is substituted with the zero-beta portfolio which is uncorrelated with the market portfolio. Fama and French (1993, 1996, and 2004) propose a three-factor model which includes two additional risks in addition to the overall stock market factor, i.e., size and book-to-market equity. The authors argue that these variables "reflect unidentified state variables that produce undiversifiable risks (covariances) in returns that are not captured by the market return and are priced separately from market betas". (Fama and French, 2004:20). Their model has become widely used in the empirical literature. Asness, Liew and Stevens (1997) report that three factors, namely size, book-to-market ratios and momentum, are significantly related to stock returns, but in developed markets. McNulty et al. (2002) argue that beta estimates produce inappropriate discount rates. One of the reasons is that beta measures stock's correlation as well as volatility. The second reason lies in the fact that beta relies on historical data and the last one is the indifference to the holding period. They introduced the market-derived capital pricing model (MCPM) instead, which relies on future volatility derived from the options market. Shao and Kong (2008) state that the CAPM cannot be applied to estimate the cost of capital of the project in the absence of conditions that allow its application with respect to market inefficiency. They introduced and analyzed the modified behavioral capital asset pricing model (BAPM) instead, that is primarily used in financial markets for the estimation of the cost of capital. Through their model they tried to show irrational investors' behavior in the stock

market. The shortcoming of this model is that the elements for calculating the expected return on investment portfolio have not been completely developed. Instead, they use the rate of return on the market portfolio. Despite the empirical evidence against the CAPM, Da, Guo and Jagannathan (2011) argue that the CAPM could be used in estimating the cost of capital for projects when making capital budgeting decisions. However, Estrada (2000) debates that it is not the question if beta is an appropriate measure of risk, but what additional factors should be used to explain stock returns.

In the Croatian literature, there are studies about the applicability of this method to the example of selected stocks listed on a stock market (for example, see Odobašić et al., 2014; Tomić, 2014; Džaja and Aljinović, 2013). The research carried out in 2014 about the application of the CAPM model to seven selected stocks in the Croatian capital market indicates that this model is inapplicable as it is based on the efficient capital market assumptions while the analyzed market is underdeveloped, where expected returns are not in line with the model theory (Odobašić et al., 2014). In 2014, Tomić found out that an average index return on analyzed stocks gave a negative value, which indicates that the application of the CAPM model does not give rational results. Furthermore, from the aspect of the risk of liquidity in underdeveloped markets it is desirable to correct beta coefficients depending on the stock liquidity characteristics (Tomić, 2014). Dedi and Orsag (2007) conducted research with the aim of determining the present application of quantitative capital budgeting methods, the cost of capital and cash flow estimation, risk analysis and the application of the real options approach. Regarding the use of the CAPM, the survey showed that out of 59 respondents, 45 estimated the cost of capital, of whom "40% used the cost of capital determined by the "investor's required return", 9% used the capital asset pricing model (CAPM), 40% determined the cost of capital as the weighted average cost of capital, 2% used the CAPM and the weighted average cost of capital, 2% used the "investor's required return" and the CAPM, and 7% used the "investor's required return" and the weighted average cost of capital" (Dedi and Orsag, 2007:63).

It was concluded that Croatian firms employ capital budgeting methods less extensively than firms in developed countries when evaluating long-term investment projects.

Džaja and Aljinović (2013) tested whether the CAPM is adequate for capital asset valuation in the Central and South-East European underdeveloped securities markets, and when testing the validity of beta as a measure of risk they found it cannot be used as a valid measure of risk in these markets. Estrada (2000) noted that in emerging markets systematic risk measured by beta is not significantly related to stock returns that has a direct influence on the CAPM results. Karić et al. (2013) conducted research on small and medium sized companies in Eastern Croatia and found out that a rather small number of such companies uses modern methods of investment justification evaluation in their decision-making process.

3. METHODOLOGY

Research on using the CAPM was conducted in Eastern Croatia in 2015 on project proposals written in the period from 2003 to 2014. The sampling frame was represented by 62 investment proposals.

3.1 Sample description

The research sample consists of investment proposals prepared by/for medium and large privately owned companies from Eastern Croatia. The analyzed project proposals were collected from investors themselves or analysts. The National Classification of Economic Activities 2007 was used to group project proposals according to planned project activities (Table 1).

Table 1: Description of the sample (Source: Research results)

Description of the class	Number of project proposals		Average investments in EUR	Value of investments	
	Total number	Share		Total value in EUR	Share
Total production	**48**	**77.42%**	**3,500,056**	**168,002,694**	**78.53%**
Production of crops and vegetables	10	16.13%	3,953,146	39,531,461	18.48%
Production of fruits	6	9.68%	731,382	4,388,294	2.05%
Generation, transmission and distribution of electricity	7	11.29%	5,015,798	35,110,585	16.41%
Livestock breeding	10	16.13%	4,479,828	44,798,279	20.94%
Manufacture of medical and dental instruments and supplies	4	6.45%	1,803,497	7,213,988	3.37%
Other activities	11	17.74%	3,360,008	36,960,086	17.28%
Total non-production (services)	**14**	**22.58%**	**1,639,998**	**22,959,973**	**10.73%**
Trading	6	9.68%	2,005,004	14,035,031	6.56%
Other activities	8	12.90%	1,274,992	8,924,941	4.17%
Total production and non-production	**62**		**3,128,134**	**213,922,639**	
Maximum				**11,027,815**	
Minimum				**86,318**	
Average				**3,080,043**	

Most investments are planned in the agriculture industry, given the economic characteristics of the geographic area in which the research was conducted; livestock breeding (16.13%) and the production of crops and vegetables (16.1%), followed by the production and distribution of energy (11.29%) and trading (9.68%). Projects in the fields of fruit growing and manufacture of medical and dental products make up 9.68% and 11.29%, respectively. In general, production companies are more represented in the sample than in non-production companies (77.42% vs. 22.58%). The sample average investment project value amounted to 3.08 million EUR (data includes investments in fixed assets and working capital, excluding VAT).

3.2 Analysis of the researched equity market

The research whose results are presented in this paper was carried out by analyzing the market portfolio formed on a relatively small, insufficiently developed and volatile Croatian capital market. Therefore, the question arises as to how to determine the market expected rate for the next period of ten or more years under conditions of an underdeveloped market. Here, it has to be taken into account that neither the CROBEX index (the Zagreb Stock Exchange equity index) nor any other index includes dividends in the calculation, and it is composed of 25 top-ranking stocks, but the structure of its composition is changing over time and cannot reflect the characteristics of long-term material asset investments. For that reason, in the context of the research, the authors defined a market portfolio of stocks continuously listed and actively traded on the Croatian capital market over the analyzed period.

As the Croatian security market shows large fluctuations considering returns on investments, the investments in the stock market is therefore considered riskier, especially in the period of economic crisis when returns fell rapidly and significantly. In his master thesis, Petrovski (2011) identified that the CEE equity markets are a relatively homogenous group in terms of volatility, while the SEE equity markets, whose integral part is the Croatian market, are a diversified group in terms of volatility with low synchronization and correlation with the European equity market. Graph 1 shows changes in the value of indexes CROBEX, FTSE, DAX and NASDAQ through a twelve-year period starting with January 2003.
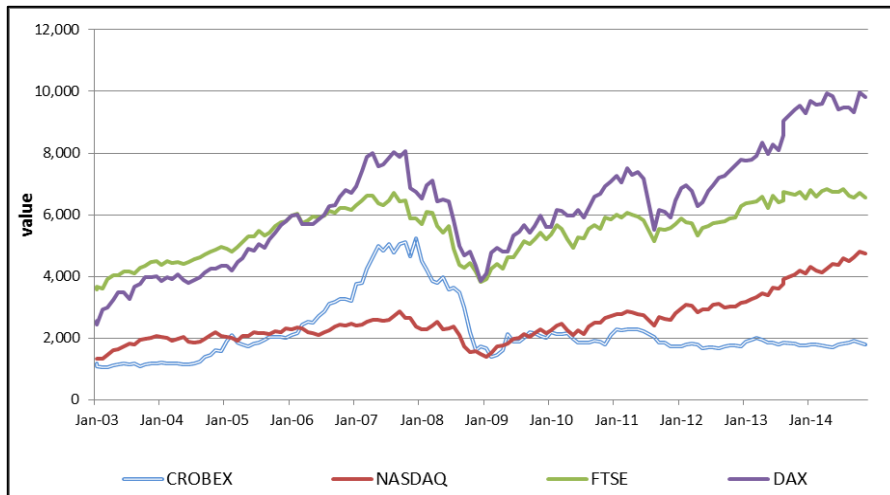
Graph 1: Values of indexes CROBEX, NASDAQ, FTSE, DAX (2003 – 2015)

Source: the authors on the basis of historical data:
- http://zse.hr/default.aspx?id=44101&index=CROBEX (accessed September 2, 2015);
- http://finance.yahoo.com/q/hp?s=%5EIXIC&a=00&b=1&c=2003&d=11&e=31&f=2014&g=m (accessed September 2, 2015);
- http://finance.yahoo.com/q/hp?a=00&b=1&c=2003&d=00&e=2&f=2015&g=m&s=dax&ql=1 (accessed September 11, 2015);
- http://finance.yahoo.com/q/hp?s=%5EFTSE&a=00&b=1&c=2003&d=00&e=2&f=2015&g=m&z=66&y=66 (accessed September 11, 2015)

In the trends of FTSE, DAX and NASDAQ indexes, the period of economic crisis was marked with the significant fall of all analyzed index values from 2007 to 2010. A stable recovery after the global economic crisis can be seen from 2011 onwards, while all four indexes recorded the highest values in 2014. On the other hand, after a significant decrease in the CROBEX index value from 2007 to 2009, neither the index nor the Croatian stock exchange market completely recovered due to the Croatian economic crisis that marked the Croatian economy and remained until 2015. At the same time other analyzed stock markets were recovering and reached or even exceeded their highest values recorded in the twelve-year period. As stated above, for the purpose of this research, the market portfolio was created that represents the portfolio an investor would be able to invest in (a well-diversified market portfolio) at the beginning of the investment period and with the same tenor. The market portfolio includes 15 common stocks listed and actively traded on the Zagreb stock exchange during the research period (Table 2).

Table 2: Structure of the created market portfolio (Source: authors based on the data published on Zagreb stock exchange web page (www.zse.hr))

Symbol	Company	Number of issued stocks	Nominal value in EUR	Market value in EUR 31 Dec 2004	Market value in EUR 31 Dec 2004
BD62-R-A	Badel 1862 d.d.	752,106	114.00	19.47	2.20
CROS-P-A	Croatia osiguranje d.d.	8,750	453.33	546.67	993.33
CROS-R-A	Croatia osiguranje d.d.	307,598	473.33	580.00	986.81
JDPL-R-A	Jadroplov d.d.	1,636,674	2.67	48.00	13.37
JNAF-R-A	Janaf d.d.	742,846	253.33	201.48	453.38
KOEI-R-A	Končar – elektroindustrija d.d.	2,572,119	9.67	20.27	92.00
KRAS-R-A	Kraš d.d.	1,373,621	36.27	47.47	48.93
PBZ-R-A	PBZ d.d.	19,074,769	29.60	66.80	73.20
PLAG-R-A	Plava laguna d.d.	546,318	173.20	253.33	534.26
PODR-R-A	Podravka d.d.	5,420,003	22.80	31.47	38.93
RIVP-R-A	Riviera Poreč d.d.	3,653,517	19.47	29.33	2.64
SUNH-R-A	Sunčani Hvar d.d.	7,310,971	5.46	10.81	2.27
ZABA-R-A	Zagrebačka banka d.d.	64,048.391	1.90	4.93	4.47

The table above shows selected stocks included in the created market portfolio and their market prices on 31 December 2004 and 2014, but the portfolio market value was calculated for every project proposal individually, depending on the year of project proposal calculation and its economic life. The total value of all stocks represents the market value used to determine the average market return in the process of calculating the cost of equity by the CAPM model.

3.3 The risk-free rate

The risk-free rate was calculated by extracting the average interest rate of the Croatian government bonds listed on the official market and it matches the tenor of the project cash flows (such approach can be found in Bruner et al., 1998; Gedes, 2002; Ernst & Young Global Limited, 2015). In February 2015, when this research was conducted, there were 10 listed government bonds with the maturity between 5 and 10 years with an average interest rate of 5.69% that is considered to be a risk-free rate in the procedure of calculating the cost of equity by the CAPM method.

4. RESULTS AND DISCUSSION

Graph 1 shows the risk level of every investment project from the sample in relation to the market risk (both presented by the beta coefficient). The average beta of the sample was 0.37, which is 63% less than the one of the portfolio of selected stocks on the equity market (on the basis of results shown in Table 4). For the purpose of comparison, the level of market risk on the basis of the created well-diversified portfolio measured by beta equals 1. The values of

project beta ranged from 0.01 to 5.4. The lowest risk of 0.01 was found in construction industry and in power engineering. The highest beta of the sample of 5.4 referred to the project in the fruit growing industry.
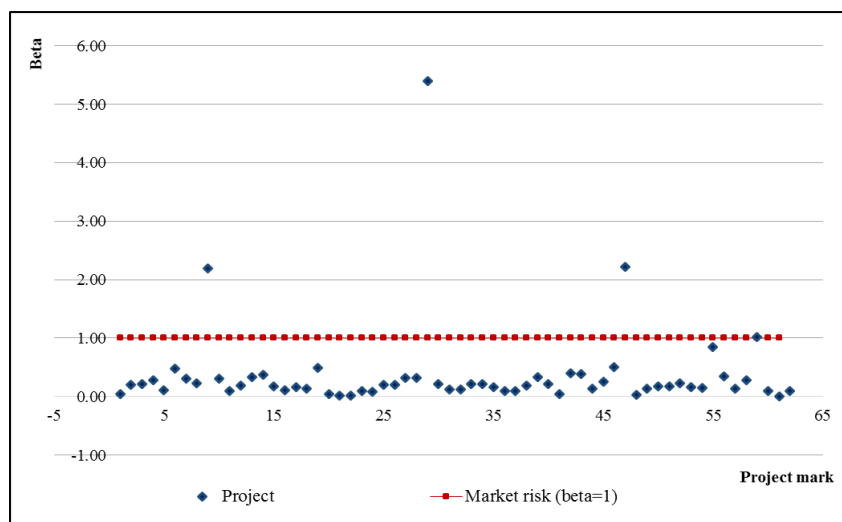
Graph 2: Distribution of project risk values (beta) (Source: Research results)

The reason for significant discrepancies in the level of risk measured by beta lies in the specifics of the industry projects are planned to be implemented in as well as in accuracy of project cash flow predictions. As already stated, previous studies show that some companies consider project planning as a formality without giving it needed significance regarding risk analysis that eventually results in incomplete or inaccurate information that are the basis for making a decision on the implementation or rejection of the planned project.

To compare the cost of equity (measured by the CAPM model) in terms of value, Table 4 shows the results of calculation of the projects' weighted average cost of capital. The WACC was calculated for every project in the sample, whereby the calculation was based on the interest rate investors gained in the process of obtaining debt funds or planned to achieve and the projects' planned capital structure (gearing). A tax rate used to calculate tax liability is 20%, which is on the level of the tax rate regulated by Croatian law. It was determined that in all cases the cost of debt was lower than the cost of equity ranging between 2% and 7.5%. The price of debt depends on conditions on the financial market, the level of project risk, creditworthiness of the investor, project proposal quality, collateral offered to the creditor, internal creditors' policies, risk aversion of the lender, etc. As subsidized credit lines for stimulation of investments in specific industries were available in the analyzed period, it is questionable if the same prices of debt would be available in a situation without state intervention. Nevertheless, the interest rates that were used were actual at the time of project writing and therefore they represent the conditions on the debt market in a relevant period.

Table 4 shows the results of calculating Beta, Cost of Equity (CAPM) and Weighted Average Cost of Capital (WACC) for project proposals analyzed by business activity planned to be invested in.

Table 3: Project proposal values of Beta, Cost of Equity (CAPM) and Weighted Average Cost of Capital (WACC) (Source: Research results)

Description of the class	BETA	CAPM	WACC
Total production	0.37	12.36%	7.29%
Production of crops and vegetables	0.13	9.54%	5.42%
Production of fruits	1.11	26.10%	16.57%

Generation, transmission and distribution of electricity	0.15	9.04%	5.78%
Livestock breeding	0.47	11.90%	6.37%
Manufacture of medical and dental instruments and supplies	0.13	9.28%	5.61%
Other activities	0.31	11.10%	6.32%
Total non-production (services)	**0.38**	**13.79%**	**8.22%**
Trading	0.23	12.26%	7.90%
Other activities	0.53	15.31%	8.53%
Maximum	**5.40**	**89.40%**	**58.00%**
Minimum	**0.01**	**5.38%**	**1.70%**
Average	**0.37**	**12.68%**	**7.50%**

The average cost of equity of the sample with respect to the level of risk is 12.68% considering the economic life of every analyzed project. Regarding the economic activities of projects in the sample, there is a significant difference in the cost of equity of the projects in the fruit growing industry in comparison to other industries, as in the same industry the highest values were recorded in terms of the level of risk and consequently the expected return on equity and debt. The reason for that is the specificity of the industry and the period when the first harvest, e.g. the first returns, can be expected. Therefore, the model recognizes oscillations in dynamics and a schedule of return and therefore projects with higher fluctuations of returns were evaluated as riskier. In this segment exactly, the reality and accuracy of project planning are essential and the role of an analyst is crucial to a realistic assessment of the level of risk and the cost of equity, the cost of capital and therefore ultimately to making decisions on the implementation of or withdrawal from the project idea. The aforementioned is confirmed by the fact that one of the lowest industry average costs of equity is determined in the energy sector with 9.04%, but due to the risks associated with a lower profit margin and market oscillations, the cost of capital (measured by the WACC) is not among the lowest values as it amounts 5.78%. If this information is compared with the data published in the publication "Sector Analyses – energy and oil industry", where the average ROA for ten leading companies in the production and distribution of energy in 2013 amounts to 4.3%, that is 34.4% below the WACC of the sample, which refers to electricity producers. To sum up, it has to be stated that all projects in the field of energy referred to the production of energy from renewable resources, with a subsidized purchase price, which means that these projects are not completely comparable to the overall Croatian energy market that in most cases consists of retail and not producing companies in the oil and gas business. As retailers retain a smaller part of a selling price percentage, it is expected that achieved profitability is less than in the case of production companies. Here lies the reason that the rule of knowing the project and specificities of the industry is essential for project analysis (according to the findings of Lee and Cummins, 2010). Furthermore, it can be stated that the average values of the cost of equity seem rational and within realistic values. The weighted average cost of capital depends on the share of debt, the tax and the interest rate. As there were state subsidized interest rates or loans with the interest rate for SMEs or corporates below the market value (in most cases approved by the Croatian Bank for Reconstruction and Development), this was not rare in the survey sample, and the information of the WACC can be estimated as satisfactory.

5. CONCLUSION AND RESEARCH LIMITATIONS

This research addressed numerous issues, as the selection of a diversified market portfolio, defining the risk-free market rate, identification of the project level of risk, and objectivity of the defined market interest rate. In this paper, the applicability of the CAPM model on the underdeveloped Croatian market was tested. The research results showed that, even with all its constraints and specificities of use in the case of an underdeveloped market, the CAPM could give a fairly good insight into investors' minimum required return on invested capital, considering the riskiness of the project and the riskiness and profitability of a well-diversified

stock market portfolio. However, this applies to the project in the industries whose returns are shown in a first year after investments. As the CAPM model strongly responds to dispersion of cash flows, its applicability is questionable in the case of investments in industries with long duration of the period to achieve full production capacity and industries with highly variable cash flows that are a result of a specific industry cycle.

Research limitations
The analysis in this paper was made on the basis of project proposals prepared by financial managers or analysts where it remains questionable whether the methods used in the preparation of the study were applied correctly. On the other hand, the selection of stocks for the created well-diversified market portfolio was limited. Due to the fact that the research period covers a relatively long period, the portfolio should include stocks actively traded on the national stock exchange in the same period of time. Due to the economic crisis and the fact that in an early stage of development of the Croatian stock market firms that were in a process of privatization were listed, that the economic crisis strongly affected the companies' financial strength and that certain companies whose stocks were listed on the stock exchange became insolvent, the number of stocks complying with the requirements for selection is limited. As a consequence of the aforementioned, the possibility of structuring an efficient portfolio for the required period of time was limited.

LITERATURE
1. Bruner, R. F., Eades, K. M., Harris, R. S., Higgins R. C. (1998). *Best Practices in Estimating the Cost of Capital: Survey and Synthesis*. Financial Practice and Education: (Spring/Summer 1998). 13-28.
2. Da, Z., Guo, R, Jagannahan, R. (2011). *CAPM for estimating the cost of equity capital: Interpreting the empirical evidence.* Journal of Financial Economics. ISSN 0304-405x. 204-220.

3. Dedi, L., Orsag, S. (2007). *Capital Budgeting Practices: A Survey of Croatian Firms.* DOI: 10.2478/v10033-007-0016-y. South East European Journal of Economics and Business. Vol. 2, No. 1, 59–67, ISSN (Print) 1840-118X, DOI: 10.2478/v10033-007-0016-y, available at: http://www.degruyter.com/view/j/jeb.2007.2.issue-1/v10033-007-0016-y/v10033-007-0016-y.xml, (accessed February 4, 2015)
4. Dimitrić, M., Škalamera-Alilović, D. (2005). *Investment projects evaluation in decision making process.* Zbornik radova Sveučilišta u Rijeci. Ekonomski fakultet Rijeka: Vol. 23, No. 1, 51-70.
5. Džaja J., Aljinović, Z. (2013). *Testing CAPM model on the emerging markets of the Central and Southeastern Europe*. Hrvatsko društvo za operacijska istraživanja Zagreb. Croatian Operational Research Review (CRORR): Vol. 4, No. 1, 164-175.
6. Gedess, R. (2002). *Valuation and Investment Appraisal*. Financial World Publishing, London. 106-127.
7. Karić, M., Bestvina Bukvić, I., Buljubašić, I. (2013). *Istraživanje primjene modela ocjene opravdanosti ulaganja u kapitalne projekte*. Ekonomski fakultet u Osijeku. Ekonomski vjesnik: Vol. XXVI, No. 1/2013; 174-189.
8. Lintner, J. (1965). *The valuation of risky assets and the section of risky investments in stock portfolios and capital budgets.* Review of Economics and Statistics 47. 13-37.
9. Miletic, M., Miletic, S. (2015). *Performance of Value at Risk models in the midst of the global financial crisis in selected CEE emerging capital markets.* Economic Research - Ekonomska Istraživanja: 28:1. 132-166.

Available at: http://www.tandfonline.com/doi/pdf/10.1080/1331677X.2015.1028243(accessed: March 2015)

10. Odobašić, S., Tolušić, M., Tolušić, Z. (2014). *The application of the CAPM model on selected shares on the Croatian capital market.* Ekonomski vjesnik, Vol. 27, No. 2/2014. Ekonomski fakultet u Osijeku. 297-312.

11. Sharpe, W. (1964). *Capital asset prices: a theory of market equilibrium under conditions of risk.* Journal of Finance 19. 425-442.

12. Shao, X., Kong, L. (2008). *Estimating Capital Cost of Project Based on Behavioral Capital Pricing Model, Proceedings of the 2008.* WiCOM '08. 4th International Conference on Wireless Communications, Networking and Mobile Computing, Dalian, China, ISBN: 978-1-4244-2107-7.

13. Vishwanath, S. R., Krishnamurti, C. (2009). *Investment Management, A Modern Guide to Security Analysis and Stock Selection.* Springer Science & Business Media, LLC, New York, ISBN: 978-3-540-88801-7.

14. Fama, E. F., French, K. R. (2004). *The Capital Asset Pricing Model: Theory and Evidence.* Journal of Economic Perspectives: 18 (3), 25-46.

15. Da, Z., Guo, R., Jagannathan, R. (2011). *CAPM for estimating the cost of equity capital: Interpreting the empirical evidence.* Journal of Financial Economics: 103 (1). 204-220.

16. Fama, E. F., French, K. R. (1993). *Common Risk Factors in the Returns on Stocks and Bonds.* Journal of Financial Economics: 33 (1). 3-56.

17. Fama, F., French, K. R. (1996). *Multifactor Explanations of Asset Pricing Anomalies.* Journal of Finance: 51 (1). 55-84.

18. McNulty, J. J., Yeh, T. D., Schulze, W. S., Lubatkin, M. H. (2002). *What's Your Real Cost of Capital?* Harvard Business Review: 80 (10), 114-121.

19. Estrada, J. (2000). *The Cost of Equity in Emerging Markets: A Downside Risk Approach.* Emerging Markets Quarterly: Fall 2000. 19-30.

20. Ernst & Young Global Limited. (2015). *Estimating risk-free rates for valuations*, Source: http://www.ey.com/Publication/vwLUAssets/EY-estimating-risk-free-rates-for-valuations/$FILE/EY-estimating-risk-free-rates-for-valuations.pdf (accessed January 31, 2016)

21. Asness, C., Liew, J., Stevens, R. (1997). *Parallels between the Cross-Sectional Predictability of Stock and Country Returns.* Journal of Portfolio Management: 23 (3). 79-87.

22. Petrovski, D. (2011). *Comparison of Stock Market Volatilities in Central Eastern Europe and South Eastern Europe.* Master Thesis.
    Available at: https://is.cuni.cz/webapps/zzp/detail/92943/?lang=en (accessed September 3, 2015)

23. Tomić, B. (2014). *The Application of the Capital Asset Pricing Model on the Croatian Capital Market.* Munich Personal RePEc Archive Paper: No. 55764. 104-123.
    Available at: http://mpra.ub.uni-muenchen.de/55764/1/MPRA_paper_55764.pdf, (accessed February 2, 2015)

24. Lee, A. C., Cummins, J. D. (2010). *Alternative Models for Estimating the Cost of Equity Capital for Property/Casualty Insurers* (ch. 99.), Handbook of Quantitative Finance and Risk Management: Lee C.F., Lee J. (Eds.) Springer Science + Business Media

25. Dempsey, M. (2013). *The Capital Asset Pricing Model (CAPM): The History of a Failed Revolutionary Idea in Finance?* ABACUS - A Journal of Accounting, Finance and Business Studies: 49 (S1). 7-23.

26. Black, F. (1972). *Capital Market Equilibrium with Restricted Borrowing*. Journal of Business: 45 (3). 444-455.

27. Celik, S. (2012). *Theoretical and Empirical Review of Asset Pricing Models: A Structural Synthesis.* International Journal of Economics and Financial Issues: 2 (2). 141-178.

28. http://zse.hr/default.aspx?id=44101&index=CROBEX (accessed September 2, 2015);

29. http://finance.yahoo.com/q/hp?s=%5EIXIC&a=00&b=1&c=2003&d=11&e=31&f=2014 &g=m (accessed September 2, 2015);

30. http://finance.yahoo.com/q/hp?a=00&b=1&c=2003&d=00&e=2&f=2015&g=m&s=dax& ql=1 (accessed September 11, 2015);

31. http://finance.yahoo.com/q/hp?s=%5EFTSE&a=00&b=1&c=2003&d=00&e=2&f=2015& g=m&z=66&y=66 (accessed September 11, 2015)

CAPABILITYES AND HUMAN WELL-BEING: HOW TO BRIDGE THE MISSING LINK?

Farah Naz
University of Klagenfurt, Austria
fanaz@edu.aau.at

ABSTRACT

The division of theoretical work into two broad areas of social and economic theory kept the social and economic domains separated from each other for a long time at the theoretical level. This division of social and economic theoretical realms is at odds with the everyday realities of life, where social activities are entwined with economic activities through a nested relationship. Sen's major contribution in the field of economics is to resist the desocialization of economics and challenge the philosophical foundation of traditional economic theory. Sen contributed to shifting the focus in the field of economics and development studies from an exaggerated emphasis on growth towards issues of personal well-being, agency and freedom. In this line of argument, known as capability approach (CA), Sen has provided a broader definition of human welfare involving more complex motivations, like social concerns and the well-being of future generations, etc. However, despite having many promising features, Sen's CA also has its own weaknesses when considered on its own. CA is often criticized for its underspecified nature and the lack of a definite list of capabilities raised some concerns regarding the practical application of this approach. Through an exhaustive review of relevant literature, this paper sets out to outline the main feature of Sen's approach. The aim of this paper is to identify the potential as well as the limits of CA for the conceptualization and assessment of human well-being. The paper concludes that in order to use CA to construct an empirically grounded assessment of wellbeing, one needs to adopt carefully designed procedural methods for the selection of relevant capabilities.
Keywords: Capability Approach, Quality of Life, Well-being

1. INTRODUCTION

Neglect of social relations and structure led to the desocialization (Jackson, 2013) of economic theory that created a major rift between social and economic theory, keeping them far apart from each other at a theoretical level. The orthodox economic theory rests on a single body of the core principles of methodological individualism, instrumental rationality and a strong equilibrium concept. Social interdependencies like sympathy and commitment that provide a sound base for understanding human behavior are treated as externalities in traditional economic analysis. On the other hand, social theory is practiced outside the discipline of economics by scholars primarily linked to the discipline, such as those from sociology, psychology, cultural studies, linguistics and other disciplines. Social theory is pluralistic in nature and rests its foundation upon social relations and structures. This division of the social and economic theoretical realm is at odds with the everyday realities of life, where social activities are entwined with economic activities through a nested relationship. Heterodox economists did propose various alternatives to neoclassical theory, though their voices largely remained marginalized within the discipline of economics and the orthodox viewpoint continues to dominate the discipline of economics (Jackson, 2013). Economic interaction takes place within pre-existing institutions lending it a social dimension that is hard to play down. In the same vein, the individual's well-being in any society cannot be completely divorced from the broader economic context. Sen's major contribution in the field of economics is to resist the desocialization of economics and challenge the philosophical foundation of traditional economic theory. Traditional welfare economics holds that individuals are rational beings and

free exchange will increase the well-being of these rational actors (Pressmani & Summerfield, 2000). Sen expanded the notion of human well-being beyond consumption and developed better measures of poverty and inequality. Sen's work has broadened the economic analysis beyond the provision of goods and services. He has introduced a different view of human economic agents having some intrinsic worth rather than being just rational utility maximizers. His notion of well-being also encompasses development of human potential by increasing the options available to individuals in any society. Sen asserted that when making normative evaluations about a valuable life, the focus should be on what people are able to be and to do, and not just on the material resources that they are able to consume. In this line of argument, known as the capability approach (CA), Sen built more realistic assumptions about economic science based on the notion of entitlements and human capabilities. This focus on human capabilities is in contrast with traditional economics, which mainly define development in terms of increased production, efficiency and utility. Sen contributed to shifting the focus in the field of economics and development studies from an exaggerated emphasis on growth towards issues of personal well-being, agency and freedom. Sen acknowledged the importance of growth and material prosperity for human development. It is convincingly argued that people cannot live, let alone live well, without goods and services. However, Sen advanced much compelling argument for going beyond the notion of utility and welfare when it comes to judging personal well-being or human development (Clark, 2005). Although traditional development economics has shifted its focus from growth to income distribution, income alone is not an adequate basis for analyzing a person's entitlements, i.e. a rise in income does not automatically or necessarily translate into an entitlement to education or health services, social equality, self- respect, or freedom from social harassment (Sen, 1983). Traditional economic thinking also ignores processes and human relationships that are as important as outcomes. Social interdependencies like sympathy and commitment that provide a sound base for understanding human behavior are treated as externalities in traditional economic analysis. Bringing these interdependencies back into economic analysis could broaden the scope of economics beyond utility maximization. Another important limitation of traditional welfare economics is the assumption about individual preferences, which might be distorted due to individual life histories or structural conditions (Pressmani & Summerfield, 2000). Emphasis on the agency - capability relationship broadens the perspective (Binder, 2013) and shifts the focus from the conditions of living to the ability to make choices about the conditions of living (Jasek-Rysdahl, 2001). Sen provided a broader definition of human welfare involving more complex motivations, like social concerns, the well-being of future generations, etc. Sen also argued that there are many nonmaterial dimensions of utility and disutility that cannot be bought and sold in the market. Though Sen never denied the significance of resources in contributing to wellbeing, he nevertheless rightly argued that material resources are but a means and not an end to achieving human wellbeing, According to Sen, capabilities are the right basis for evaluating an individual's well-being or standard of living. However, Sen's CA is a general framework and not a fully fleshed-out theory. Sen has not provided a list of capabilities, which are relevant to investigate the issue of human wellbeing empirically. This paper is an attempt to explore how CA can be used to investigate human well-being empirically. An effort is made to identify the main features of the capability approach through an exhaustive review of relevant literature and to explore the possibilities and limits of Sen's capability approach to conceptualize and assess human wellbeing. The paper is structured as follows. Section two following the introduction outlines the main features of CA. The third section deals with the ontological commitments of CA. The fourth section of this paper looks deeply into the concept of well-being and also identifies challenges of a better informed appraisal of well-being from the perspective of CA. The fifth section mainly draws on the various discussions to justify a basic capability set to assess wellbeing.

The paper concludes by suggesting how to deal with some possible problems of paternalism and hedonistic adoption (Binder, 2013), as pertaining to the measurement aspects of wellbeing.

2. CAPABILITY APPROACH (CA): CONCEPTS AND INTERPRETATIONS

CA postulates that the focus should be on people's capabilities when making any normative evaluations, like in the case of social justice issues, development ethics, and inequality analysis, etc. Sen defined capabilities as opportunities that individuals have to achieve certain functioning. Thus, capabilities are the individuals' ability to do something, whereas functioning refers to achievements. Capability is defined as positive freedom by Sen (Sen, 1987). According to Sen, capabilities have both instrumental and intrinsic value. The mutual dependency between functionings and capabilities, as the ability to choose a set of functionings, depends upon the functionings previously achieved by the individual in his or her life. For example, directly needed functionings for capabilities are good nourishment, health, and education (Gandjour, 2008). Sen himself argued that physical health and the absence of poor nourishment are important for people's "liberty to choose to live as they desire" (Sen 1992, p. 67). There are other functionings that are indirectly related to the individual ability to do something; mental health is a case in point. In case of mental health problems like a mental disorder or negative thoughts, the individual's perception of existing opportunities might become distorted, thus limiting the individual's ability to seize the opportunity (Gandjour, 2008). In the CA , functionings and capabilities intervene between material consumption and psychic utility or welfare. Following Aristotle, Sen (1990) also argues that material things are not an end but a means towards another end, and in the case of some important ends, they even fail to serve as a means. One important thematic deficiency of traditional development economics as it is identified by Sen is its focus on national product, aggregate income and total supply of particular goods rather than on 'entitlements' of people and the 'capabilities' these entitlements generate (Sen, 1983). Therefore, development economics needs to shift its focus from traditional measures of growth to entitlement, i.e. what people can or cannot do. According to Sen (1983), entitlement refers to the set of alternative commodity bundles that a person can command in a society using the totality of rights and opportunities that he or she faces. Entitlements (material consumption and other resources) are a means for producing welfare. Entitlements generate capabilities as a means of enlarging individual choice and participation in society. However, the causal link between entitlement, capabilities and functioning is far from being simple and linear, but rather it is complex and tangled (Jackson, 2005). Rather than being paternalistic and perfectionist, Sen intends his capability approach to promote human freedom. Sen's notion of capabilities and functionings provides us with a better and complete understanding of the quality of life of people. Functionings refers to the current or actual life condition of people (Sen, 1993), e.g. the level of health, happiness, income, and nourishment are some of the examples of functionings that a person can achieve. However, the functionings of an individual or family are the result of the choices already made. The standard of living reflects the amount of choices a person can make for different life achievements. People with the highest standards of living have the largest set of possible functionings (Jasek-Rysdahl, 2001). However, functionings are only a partial measure of the standard of living. Sen argued that, in order to have a better understanding of the standard of living, one must include a person's capabilities. Capabilities can be defined as a set of possible functionings available to a person and freedom to choose from them (e.g. Sen, 1993). An individual's entitlements provide the basis for his capabilities, i.e. the ability to do this or that (e.g. be well nourished), and failure to acquire some other capabilities, and in turn individual entitlements of goods and commodities, depends upon individual capabilities. Another important notion that also plays a central role in Sen's capability framework is the concept of freedom. According to Sen, capabilities mean a positive freedom and/or negative freedom. Positive freedom refers to a state

of being when a person is able to do what the person wants to do. Whereas in the case of negative freedom, a person can have multiple choices, but is not able to exercise these choices due to external constraints. In this case, no-one acts to prevent a person from achieving a particular functioning, but a person lacks the positive freedom to choose, e.g. a girl might have freedom of education but lack the means of transport to commute. In this case, she has a negative freedom, as her freedom of education is constrained by structural factors. Sen's focus is on the positive aspect of freedom and often seems to connect the idea of capabilities to empowerment and agency (Jasek-Rysdahl, 2001). In his discussion, Sen mentioned two different aspects of freedom, namely first opportunity freedom, which encompasses a person's ability to do or be various things – which he terms ''capability'' and thinks of as related to a person's positive freedom. The second is the process aspect of freedom that covers ''autonomy of choice'' and ''non-interference.'' This latter aspect is closely related to libertarian concerns and ''negative freedom.'' Rather, he conceives of an agent as ''someone who acts and brings about change, and whose achievements can be judged in terms of her own values and objectives, whether or not we assess them in terms of external criteria'' (Sen 1999: 19). Sen also distinguishes between well-being freedom – the freedom to pursue one's own well-being – and agency freedom, which captures the freedom to pursue (Qizilbash, 2005). Agency refers to the ability of an individual who can act to bring about change. According to Sen (1999), "the agency role is thus central to recognizing people as responsible people . . . we act or refuse to act" (p: 190). The concept of agency is entwined with the capabilities in that one can only make choices and act responsibly when one has options. Freedom and social welfare is not only an end in itself, but also a means to promote well-being and advancement, e.g. policies that are oriented towards social goals such as education are also a means to promote human growth and development, which in turn can further facilitate the social goal of education by releasing more resources for this purpose. Similarly, freedom is also both a means and an end of development. Freedom (or capability or power) can play an instrumental role in promoting economic development and also has a constitutive role in enriching human life, because freedom is not just a desirable ethical goal, but also an ontological constituent of reality (Martins, 2007a).

3. ONTOLOGICAL COMMITMENT OF CAPABILITY APPROACH

Ontology is an inquiry about the nature of being or an analysis of the underlying categories of reality. Such assumptions about the nature of reality are present in every theory, for any theory refers (if only implicitly) to some reality, which is described through our categories and conceptions. Ontological differences are due to the heterogeneous nature of reality (Martins, 2007b). Amartya Sen's CA is part of an older tradition within practical reasoning. According to Sen (2002), social reality is an open system and human agents are driven by multiple preference orders and have different motivations, goals, values, and reasons for choice. This ontological conception of reality is based on biological dynamics, and not on equilibrium concepts inspired by physics. This approach stresses the interconnectedness of the various parts of the system, which cannot be reduced to its constituent parts. For Sen, such interconnections are essential features of reality. Sen criticizes ethical theories that use resources, commodities, goods, income, wealth or other material conditions, as the only bases of well-being and advantage (Martins, 2007b). Thus, value must be assigned to what matters intrinsically, namely people's functionings and capabilities. As functioning and capabilities are individual traits, the approach is an ethically (or normatively) individualistic theory. Ethical individualism implies each person will be taken into account in our normative judgments and that the units of normative judgment are individuals, and not households or communities. However, ontologically, CA is non-individualistic, as it acknowledges social and environmental conversion factors as well. Conversion -ability might differ between different people based on their individual or structural differences in society like gender, class or cast etc. (Robeyns,

2000). Sen and Nussbaum highlight the strong sensitivity of the CA to people's individual beliefs, values and desires, but do not always maintain its link to universal values, or at least to some minimal common pre-requirements

3.1. Capability Approach and Structured Ontology

Human subjectivities, human experiences and social structures are ontologically different but interdependent modes of being that are not reducible to one another (Lawson 2003: 241). The same is true about human agency and socioeconomic structures: both interact as ontologically distinct realities. Social structures are transformed and reproduced by human agency and at the same time can also promote or constrain human agency. This is not a static model, as human agency is not reducible to structure, as human agents are capable of choosing from a capability space that is shaped by the given social structure (Martins, 2007b). Social structures are sets of social rules that provide the material base of action to the human agent. Therefore, social structures are social tools available to human agents at any given point in time and it is at their discretion to choose if they wish to do so. The ontological distinction between social structures and human agency provides space for empirical diversity with universalizing and human freedom with the causal efficacy of socioeconomic structures. This is a dynamic and not a deterministic model of structural causation, where agents do not have the freedom to act in a different way than the one determined by social structures (ibid). It is important to analyze the structural causes behind a given capability space and acknowledge the ontological distinction between underlying (biological, psychological, economic or social) structures and the particular way in which they become manifest in human experiences, human subjectivity, human wants and desires. The capability approach defines capabilities as an individual property and, in this respect, resembles an individualistic portrayal of human agency. It concedes that capabilities are culturally specific, but makes little effort to discuss how social structures influence them. It is therefore useful to see capabilities as a blend of structural, social and individual capacities to act (Jackson, 2005). The social capacity to act refers to individual agency or own ways of working. Therefore, a comprehensive picture of social behavior is given by the combination of role-based structure or the structural capacity to act and personal social behavior or the social capacity to act. The social capacity to act is closely linked with the notion of social capital. However, the term social capital is defined quite loosely and often blurs boundaries between personal and impersonal relations, and furthermore does not correspond exactly to either social or structural capacities. All social, structural and individual capacities are interlinked. A person with high structural capacity but low social capacity is not able to realize their full potential. Empirical evidence suggests that as personal incomes fall, so do social participation and the security and support provided by families (ibid). Therefore, any analysis of functioning and well-being should not be viewed as monolithic or unidimensional, and to overemphasize some at the expense of others is a serious limitation. The domestic sector of the economy complements the formal sector, stabilizes the economic system and contributes substantially to total economic activity, in spite of being omitted from the national accounts (Elson, 1998). Social capacities may have a special importance in times of economic change. Any mismatch between structural and social relations often creates pressure for institutional reforms, thus creating space for new structural capacities. Beside structural and social capacities, there is another layer of individual capacity that is independent of roles or social relations. Individual capacity could be nurtured in society, but is independent of the social context, e.g. inherited physical and mental qualities. Inherited physical and mental qualities have their own effects on capabilities, beside the effects of culture, social structure and resource endowments, and any approach neglecting them would be blinkered and incomplete (Jackson, 2005).

4. CAPABILITY APPROACH AND NOTION OF WELL-BEING

The reductionist ambition of desocialized orthodox economic theorizing was toned down by Sen, who challenged the supremacy of utility in economic theorizing and introduced the dimension of capabilities and functioning in his approach. The traditional notion of well-being that conflates well-being with opulence or utility is criticized by Sen on the grounds of informational monism. According to Sen, preferences cannot be an informational basis of justice, as they may become distorted, adopted or adjusted due to all kinds of inputs, such as social norms, government regulation, culture and so on (Moss, 2013). According to Sen (1987), A person who has had a life of misfortune, with very limited opportunities, and rather little hope, may be more easily reconciled to deprivations than others reared in more fortunate and affluent circumstances. The metric of happiness may, therefore, distort the extent of deprivation, in a specific and biased way. Sen suggested that traditional economic theory had reversed the relationship between preference and action. In the standard utilitarian approach, individual preferences are considered as sole responsible cause for human action. However, Sen convincingly argued that preferences are not the valid determinant of human welfare and often do not provide the basis for human action, as individuals adapt their preferences according to the social situation. Sen also highlighted the fact that taking the autonomous individual as a unit of analysis could be problematic, as individuals live in families and households where power dynamics within the household play a role in the distribution of resources. Therefore, individual well-being within a household might not correspond with aggregate family income due to distribution issues (Pressmani & Summerfield, 2000). Sen focused on functionings as metrics of well-being. Functionings lie in between the other metrics of well-being. Functionings are neither measures of welfare nor some sort of distributive resource. Therefore, the ability to achieve these functioning is also of interest and not just the functionings themselves. As Sen (1993) put it, 'The capability approach to a person's advantage is concerned with evaluating it in terms of his or her actual ability to achieve various valuable functionings as a part of living' (p. 30). Sen argued that the capability approach allows us to expand the information base and include freedom and not just achievement as welfare indices. A person with limited options is in a clear sense disadvantaged compared to a person with many options. Having the freedom to choose between various sets of functionings may be directly relevant to a person's well-being and redistribution claims. From Sen's perspective, in order to ensure that a person has the capability to achieve a certain desired level of functioning, it is important to have freedom to or freedom from, e.g. a person may be disease-free due to the capability that was achieved by the efforts of an individual or through the implementation of preventive health programs (Moss, 2013). According to Sen, information provides the evaluative basis of the judgment about its merits and demerits. The information base of any theory is characterized by 'informational inclusion' (the information needed for making judgements using a particular approach) and 'informational exclusion' (the information 'excluded' from a direct evaluative role in that approach) (Sen 1999: 56). Most informational constraints are due to informational exclusion rather than 'informational inclusion'. One case in point is utilitarianism, where the information base is a person's utility (Giovanola, 2005). This monistic interest in utility as informational base in evaluation leads to a 'drastic obliteration of usable information' (Sen 1985: 175). Thus, a lack of information due to informational and principle monism could distort individual perceptions of well-being. Therefore, in order to address the problem of preference-deformation, it is essential to broaden the base of information by focusing more on human agency through an 'information-pluralist' approach such as the 'capability approach'.

4.1 Challenges to Conceptualize and Assess Human Wellbeing

Disenchantment with traditional income-based measures of wellbeing in recent years has led to the search for alternative measures of well-being. Income-based measures of wellbeing are

criticized on the basis that they paint a very narrow picture of human welfare (Binder, 2013).The earliest attempts to move beyond utilitarian economics were made by the basic need approach that was pioneered by development economist Paul Streeten in the late 1970s and early 1980s. However, the basic need approach was subject to criticism similar to that raised against traditional welfare economics. There were many unanswered questions in the basic need approach that led Sen to shift his focus from goods to people. Fundamental questions that posed a serious challenge to the basic need approach were, for example: What are basic needs? Are they the same for everyone at every time? Is consumption at or above some basic level all that we want for people? How do we justify entitlements and what determines these entitlements? (Pressmani & Summerfield, 2000) In attempting to address these issues, Sen developed the concept of capabilities, i.e. what a person is able to do or be that has intrinsic value in life as compared to the goods that provide instrumental value or utility. Sen tried to expand the basic need approach. According to Sen, people's ability to do things matters more for their well-being than what people can buy with their income. Sen argued that development can best be explained as a process of expansion of capabilities of people (Sen, 1983). Thus, freedom and agency to choose have intrinsic value for a good life. The distinction between the notion of functionings (bare achievement) and capabilities (opportunity or freedom) deserves attention. Sen has paid more attention to the notion of capabilities than that of functionings while discussing well-being. Therefore, within Sen's framework, any account of human well-being and development can be seen in the evaluative space of capabilities or functioning (Clark, 2005). Converting capabilities into social functioning is mediated through many social and personal factors. One major contribution of the capabilities approach is to recognize a different anthropological model, which respects human diversity and is sensitive to pluralism rather than reducing human beings to their utility function. According to the capabilities perspective, the ability to be well-nourished, to avoid escapable morbidity or mortality, to read and write and communicate, to take part in the life of the community, to appear in public without shame has intrinsic value for human welfare (Sen, 1990, p. 126). While a utilitarian measure of human welfare would regard a person, e.g. a divorced woman, to be worse off in terms of economic security, the capability approach can show that with greater freedom and greater choice, her welfare may have increased (Pressmani & Summerfield, 2000). The capabilities approach has brought a paradigm shift within the field of economic development, moving away from economic growth to human well-being as a focal point in development discourse. According to Sen (1984), development is about expanding the capabilities of people. The goal of economic development thus shifted from increasing per capita income to expanding individual choices or opportunities and providing more positive freedom to people. As Sen has stressed continuously, there are many things besides income that create utility or well-being. According to the capabilities approach, deprivation means a lack of certain capabilities, and so the `wealthy but not healthy' may be counted as poor. For Sen, income is not an end in itself, and the end is to increase the functionings and capabilities of people (Pressmani & Summerfield, 2000). Although Sen has not given a definitive list of capabilities, he has mentioned some basic capabilities like basic liberties, such as freedom of movement, freedom of association and freedom of occupational choice against a background of diverse opportunities; positions of responsibility in political and economic institutions; income and wealth; and the social bases of self-respect. Development could best be explained in terms of these human capabilities (Qazelbash, 2002). Seen from Sen's perspective, well-being is about the expansion of capabilities, i.e. to improve human lives by expanding the range of things that a person can be and do, such as to be healthy and well-nourished, to be knowledgeable, and to participate in community life. Sen's capability approach is a perspective that respects human diversity in the assessment of well-being. However, this stance of CA on human diversity poses serious challenges to the application of CA in the assessment of well-being. The existence of empirical diversity renders generalizations less

obvious, but the selection of capabilities implies making generalizations and comparisons. However, one of the most difficult tasks in applying the capabilities approach for empirical analysis is deciding which capabilities are most important, as there is a wide range of human capabilities and their relevance or value varies with social context–from one community or country to another, and from one point of time to another. Therefore, while specifying the list of capabilities, underlying motivation and social values must be taken into account. For Sen, each list of capabilities must be context specific and the context is both the geographical area to which it applies, as well as the sort of evaluation that is performed.

5. JUSTIFYING A ABASIC CAPABILITY SET : METHODOLOGICAL CONCERNS

In order to avoid charges of paternalism, Sen shied away from giving a definite list of capabilities. The underspecified nature of CA and the lack of a definite list of capabilities raised some methodological concerns regarding the application of CA to measure human well-being. Whether to employ a subjective or an objective method to determine which capabilities are most valuable to measure human well-being, is a matter of great concern. Nussbaum's Platonism approach selects an objective list of capabilities that should form the basis of claims that individuals have. Platonism as a philosophy is based on an objective and a universalistic notion of the Good. According to Platonism, actual desire and choice play no role at all in justifying something as good. Preferences can be distorted or manipulated by traditions. Nussbaum's appeal to desires points back to the objective substantive good based on normative principles (Giovanola, 2005). Nussbaum defends a 'convergence' between the substantive lists of capabilities and the norms that shape a sensible informed-desire (Nussbaum 2000: 161). Unlike other approaches of subjective welfares in CA 'each person's own perception of well-being could not be the basis of social choice due to the problem of preference-deformation (Nussbaum 2000: 8). However, any universal claims of human well-being are subject to criticism on the grounds of being paternalistic or overlooking cultural and historical differences. Drawing directly on the values and experiences of the poor to sketch relevant capabilities could help minimize the risk of imposing ethnocentric or elitist views. Nevertheless, meaningful results are not guaranteed, even through this consultative process, as poor communities and individuals might be lacking the necessary knowledge and experience to make informed value judgments about alternative life styles and their preferences adapt to match circumstances, or are distorted through indoctrination (Clark, 2005). An objective list of capabilities could help to overcome many of the problems associated with the subjective account of well-being. According to Moss (2013), opting for an objective list of capabilities doesn't necessarily compromise freedom or autonomy of the individual, because the list of capabilities increases people's autonomy by giving them the ability to function in important ways that are necessary for a worthwhile life. Having capability does not mean that one must translate it into functioning by doing it. However, excessive emphasis on objectivism may raise problems of perfectionism and legitimacy that could result in a limited endorsement of the list by those to whom it applies. In order to grapple with these serious intellectual and legitimacy challenges, one may endorse Robeyns' suggestions. Robeyns (2003, 2005) outlined five criteria for drawing such lists. First, the criterion of explicit formulation; second, the criterion of methodological justification; third, the criterion of sensitivity to context; fourth, the criterion of different levels of generality and; fifth, the criterion of exhaustion and non-reduction. On the basis of the above-mentioned criteria, Robeyns (2003) made the following recommendations. It is important to draw an explicit list of capabilities and any such list needs to be discussed, defended and must provide valid justification of the method used for drawing such a list. The level of abstraction at which the list of capabilities is drawn should correspond to the context of empirical investigation, e.g. in the case of social, or economic discussions, the list will be less abstract than in the case of philosophical discussions. Lists of capabilities should be exhaustive and every relevant

dimension should be taken into account. Therefore, any empirical investigation aiming at policy implementation should draw the list in two stages; at the first stage, one must draw an ideal list based on a review of existing literature. At the second stage, one must draw up a more pragmatic list by comparing the two above-mentioned lists in addition to taking into account the limitations of data or measurement design, or of socioeconomic or political feasibility. Hence, the deliberately underspecified nature of CA stresses the role of agency, the process of choice, and the freedom to reason with respect to the selection of relevant capabilities. CA provides a general framework for evaluation and its application can be diverse in various disciplines. Therefore, one catch-all definite list is neither possible nor desirable due to epistemological and legitimacy reasons. The focus on individual agency, which involves a concern with people realizing their values or objectives through their own efforts, also suggests that different lists of capabilities might be relevant for different groups. Consequently, to make a selection and draw any applicable list of capabilities, one needs to design some criterion in order to avoid the risk of paternalism. According to Qazalbash (2002), there is some bedrock of shared values around which the various lists of needs, capabilities and prudential values are structured. The articulation of the list of capabilities by different authors reveals some points of convergence (Sen, 1983; Nussbaum, 1995, 2000, 2003; Alkire & Black, 1997; Robeyns, 2003; Schölmerich, 2013). However, to endorse one specific list of capabilities to assess well-being, we do need some systematic methodological reasoning on how such a selection could be done. Process matter as much in the enumeration of a capability list as an outcome . Sen (1997) himself introduced a distinction between culmination outcomes and comprehensive outcomes. The culmination outcomes are narrowly defined in the sense that the process that led to the outcome is not taken into account. Whereas a comprehensive outcome includes aspects of the choice process, including the identity of the chooser, information on the legitimacy, and fairness, or democratic content of the process that led to the outcome (Sen, 1997). In the case of drawing a capability list to assess the well-being of some socially excluded or marginalized groups, some critical questions need to be asked, e.g. who decide on the content of this list, what kind of choice processes are used, and how are discordant opinions treated? Although the application of a procedural approach may also eventually lead us to similar capability lists as already provided in literature, but they will provide a legitimacy to the process. Therefore, beside two stages already mentioned namely, drawing an ideal list of capabilities from literature and comparing this list with a more pragmatic list drawn by taking into account limitations of data or measurement design, one additional stage is required. The list that is an outcome of the ideal and the pragmatic list should be checked with the relevant group of people (Alkire, 2002). It is important that they decide for themselves which capabilities they will prefer to focus on, from the capability list they are embedded in, and engage with the existing literature in that field. In order to avoid the bias that may possibly stem from the positioning of the researcher, selection of a capabilities list should be subjected to open discussions and democratic participation should be built into the decision making process (Crocker, 2004).

6. CONSLUSION
The division of theoretical work into two broad areas of social and economic theory kept the social and economic domain apart from each other for a long time at a theoretical level. However, the reductionist ambition of desocialized orthodox economic theorizing was toned down by Sen, who challenged the supremacy of utility in economic theorizing and introduced the dimension of capabilities and functioning in his approach to wellbeing. Sen defined capabilities as opportunities that individuals have to achieve certain functioning. Thus, capabilities are the individuals' ability to do something, whereas functioning refers to achievements. As functioning and capabilities are individual traits, the approach is ethically (or normatively) individualistic theory. However, ontologically CA is non-individualistic, as it

acknowledges social and environmental conversion factors and admits that conversion-ability might differ between different people based on their individual or structural differences in society like gender, class or cast, etc. However, despite having many promising features, Sen's CA also has its own weaknesses when considered on its own. CA is often criticized for its underspecified nature and the lack of a definite list of capabilities raised some concerns regarding the practical application of this approach. However, this weakness of CA could be overcome by the application of a procedural approach. CA provides a general framework for evaluation and its application can be diverse in various disciplines. Therefore, one catch-all definite list is neither possible nor desirable due to epistemological and legitimacy reasons. The focus on individual agency, which involves a concern with people realizing their values or objectives though their own efforts, also suggests that different lists of capabilities might be relevant for different groups. Consequently, to make a selection and draw any applicable list of capabilities, one needs to design some criterion in order to avoid the risk of paternalism. Although the application of a procedural approach may also eventually lead us to similar capability lists as already provided in literature, it will nevertheless provide a legitimacy to the process and help to overcome the weakness of CA.

LITERATURE

1. Alkire, S., & Black, R. (1997), A Practical Reasoning Theory of Development Ethics: Furthering the Capabilities Approach. *Journal of International Development*, 9(2): 263 – 79.
2. Alkire, S. (2002), *Valuing Freedoms. Sen's Capability Approach and Poverty Reduction*, Oxford University Press: New York.
3. Binder, M. (2013), Subjective Well-Being Capabilities: Bridging the Gap Between the Capability Approach and Subjective Well-Being Research. *Journal of Happiness Studies,* 1–21. http://doi.org/10.1007/s10902-013-9471-6.
4. Clark, D. A. (2005), Sen's Capability Approach and the Many Spaces of Human Well-being. *The Journal of Development Studies*, Vol.41, No.8, pp.1339–1368.DOI: 10.1080/00220380500186853.
5. Crocker, D. (2004), *Deliberating Democracy: Ethics, Capability, and Democracy*. University of Maryland .
6. Deneulin, S. (2002), Perfectionism, Paternalism and Liberalism in Sen and Nussbaum's Capability Approach. *Review of Political Economy*, 14(4):   497-518. DOI: 10.1080/095382502200000992 4.
7. Elson, D. (1998), The economic, the political and the domestic: businesses, states and households in the organisation of production. *New Political Economy*, Vol. 3, p, 189 – 208.
8. Gandjour, A. (2008), Mutual dependency between capabilities and functionings in Amartya Sen's capability approach. *Soc Choice Welfare*, Vol. 31:345–350 DOI 10.1007/s00355-007-0283-7.
9. Giovanola, B. (2005), Personhood and Human Richness: Good and Well-Being in the Capability Approach and Beyond. *Review of Social Economy*, Vol. LXIII, No. 2, pp. 249-267. DOI: 10.1080/00346760500130416.
10. Jasek-Rysdahl, K. (2001), Applying Sen's Capabilities Framework to Neighborhoods: Using Local Asset Maps to Deepen Our Understanding of Well-being.
11. Jackson, W. A. (2005), Capabilities, Culture and Social Structure. *Review of Social Economy,* VOL. LXIII, NO. 1,pp, 101-124, DOI: 10.1080/ 00346760500048048.
12. Jackson, W. A. (2013), The desocialising of economic theory, 40(9), 809–825. http://doi.org/10.1108/IJSE-09-2012-0174.
13. Lawson, T. (2003), *Reorienting Economics*. London: Routledge.

14. Martins, N. (2007a), Ethics, Ontology and Capabilities. *Review of Political Economy*, Vol. 19, No 1, pp. 37–53, DOI: 10.1080=09538250601080768.

15. Martins, N. (2007b), Realism, Universalism and Capabilities. *Review of Social Economy,* VOL. LXV, NO. 3,pp. 253-278. DOI: 10.1080/00346760701635817.

16. Moss, J. (2013), Policy Forum: The Measurement of Well-Being The Foundations of Well-Being. *The Australian Economic Review*, vol. 46, no. 1, pp. 62–69.

17. Nussbaum, M. (1995), ''Human Capabilities, Female Human Beings,'' in Martha Nussbaum and Jonathan Glover (eds.) *Women, Culture and Development: A Study of Human Capabilities*, pp. 61 – 104. Oxford, UK: Clarendon Press.

18. Nussbaum, M. (2000), Women and Human Development. The Capabilities Approach. Cambridge, UK: Cambridge University Press.

19. Nussbaum, M. (2003), Capabilities as Fundamental Entitlements: Sen and Social Justice.*Feminist Economics*, 9(2 – 3), 33 – 59.

20. Pressmani, S., and Summerfield, G. (2000), The Economic Contributions of Amartya Sen. *Review of Political Economy*, Vol. 12, No. 1, pp. 89-113.

21. Pressmani, S., and Summerfield, G. (2002), Sen and Capabilities. *Review of Political Economy,* Volume, 14, Number 4, pp. 429-434. DOI: 10.1080/095382502200000988 9.

22. Qazelbash, M. (2002), Development, Common Foes and Shared Values. *Review of Political Economy*, Vol. 14, No. 4, pp. 464-480.

23. Qizilbash, M. (2005), Dialogue: Sen on Freedom and Gender Justice. *Feminist Economics,* Vol. 11, No, 3.pp. 151–166. DOI: 10.1080/13545700500301551.

24. Robeyns, I. (2000), *An unworkable idea or a promising alternative?: Sen's capability approach re-examined,* (December), 0–33. Retrieved from https://merode.econ.kuleuven.ac.be/eng/ew/discussionpapers/Dps00/DPS0030.pdf.

25. Robeyns, I. (2003), Sen's Capability Approach and Gender Inequality: Selecting Relevant Capabilities .*Feminist Economics*, 9(2–3), 2003, 61–92. DOI: 10.1080/1354570022000078024.

26. Robeyns, I. (2005), Selecting Capabilities for Quality of Life Measurement. Social Indicators Research, 74(1), 191–215. http://doi.org/10.1007/s11205-005-6524-1.

27. Schölmerich, M. J. (2013), On the impact of corporate social responsibility on poverty in Cambodia in the light of Sen's capability approach. *Asian Journal of Business Ethics,* Vol. 2:1–33 DOI 10.1007/s13520-012-0016-6.

28. Sen, A. (1983), Development: Which Way Now? *The Economic Journal*, 93 (December 1983), 745-76.

29. Sen, A. (1984), *Resources, Values and Development*. Oxford, Blackwell & Cambridge, Harvard University Press.

30. Sen, A. (1985), Well-Being, Agency, Freedom. The Dewey Lectures 1984. The *Journal of Philosophy*, 82: 169–221.

31. Sen, A. (1987), *On Ethics and Economics*. Basil Blackwell, Oxford.

32. Sen, A. (1990), Gender and cooperative conflict, in: I. Tinker (Ed.) *Persistent Inequalities*, New York: Oxford University Press, pp. 123–149.

33. Sen, A. (1992), *Inequality Reexamined*. Oxford, UK: Oxford University Press.

34. Sen, A. (1993), Capability and wellbeing, in: M. Nussbaum & A. K. Sen (Eds) *The Quality of Life* , Oxford; Oxford University Press, pp. 30–53.

35. Sen, A. (1997), Maximization and the act of choice. *Econometrica,* 65(4), pp. 745–779.

36. Sen, A. (1999), *Development as Freedom*. Oxford: Oxford University Press.

37. Sen, A. (2002), *Rationality and Freedom*. Cambridge, Ma: Belknap Press.

ACCESSIBILITY OF INFORMATION: INTERNATIONAL STANDARDS, RECOMENDATIONS AND PRACTICES

Valentina Kirinic
University of Zagreb, Faculty of Organization and informatics, Croatia
valentina.kirinic@foi.hr

Melita Kozina
University of Zagreb, Faculty of Organization and informatics, Croatia
melita.kozina@foi.hr

Violeta Vidacek-Hains
University of Zagreb, Faculty of Organization and informatics, Croatia
vvidacek@foi.hr

ABSTRACT
Awareness of different people's abilities, characteristics and needs and their inclusion should be and are attributes and tasks of modern, responsible societies, since in today's information society access to information is a basic human right - a prerequisite for equality and equal opportunities. Information and communication technology (ICT) as an assistive technology and a tool supporting diverse users through its quality aspects (usability and accessibility) is a very important factor in this concept. International standards, recommendations and (best) practices of ICT addressing accessibility issues of information discussed in the paper are among key drivers of promoting and assuring accessibility of information and ICT. In general, international standards and recommendations should also foster and put into practice the universal design as the design of products, environments, programs and services being usable by all people to the greatest extent possible, without the need for adaptation or specialized design, as stated in the Convention on the Rights of Persons with Disabilities.
Keywords: Accessibility, Inclusion, International standard, Information and communication technology, User diversity

1. INTRODUCTION
Every person is unique - having different abilities, characteristics, and needs. In today's information society, equal access to information is a prerequisite for inclusion and equal opportunities for all. Information and communication technology (ICT) is the main platform and driver in fulfilling this prerequisite, as it is usable and accessible (and used as assistive technology) by everyone concerned, including persons with disabilities.
Disability has been defined and approached differently in the past few decades. As noticed in the *Guide for Addressing Accessibility in Standards* (ITU, 2014, p. 37) there are several "models of disability":
- The "medical model" of disability – the earliest model, "which described disabilities with reference to the medical conditions they were seen to arise from";
- The "social model" of disability – developed in response to the previous one, arguing that disability "was not mainly caused by impairments but by the way society was organized and responded to people with disabilities" and defining disability as "the product of the physical, organizational and attitudinal barriers present within society";
- The "human rights model" of disability – development of this model follows the previous models, expressing "a moral and political commitment that countries, states and organizations should take with regard to persons with disabilities".

It is encouraging to see that approaches to disability evolved and changed emphasis, from isolated, medically determined to social, inclusive focus, resulting in inclusive societies.

Today's societies are information societies in which information creation and design, distribution and sharing, usage and exploitation are in the focus of economic, political and other activities. Current tendency is for information societies to become true knowledge societies, where "capabilities to identify, produce, process, transform, disseminate and use information to build and apply knowledge for human development" depend on "empowering social vision which encompasses plurality, inclusion, solidarity and participation" (UNESCO, 2003, p. 1). In view of this, we can say that we live in a knowledge-based, inclusive society- one overbridging all kinds of "digital divides" – social, economic and other inequalities in accessing, having and using ICT and being equitable according to the principles and parameters set by UNESCO: "freedom of expression; universal access to information and knowledge; respect for human dignity and cultural and linguistic diversity; quality education for all; investment in science and technology; understanding and inclusion of indigenous knowledge systems" (UNESCO, 2003, p. 2).

Knowledge-based societies are not possible without taking care of and using "the universal design" – defined in the Convention on the Rights of Persons with Disabilities (UN, 2006) as "the design of products, environments, programs and services to be usable by all people to the greatest extent possible, without the need for adaptation or specialized design".

In the area of ICT there are standards, recommendation and practices to ensure that ICT products and services are usable and accessible to everyone as much as possible. In the paper the authors propose and present (in the Section 4.1) the systematization and categorization of ICT international standards related to accessibility, prepared mostly based on results of searching and browsing the ISO catalogue (n.d.) and content analysis of selected international standards.

2. DIVERSITY OF INFORMATION/ICT USERS AND THEIR (INFORMATION) NEEDS

2.1. Information users and needs

We are facing the need for information whenever we become aware that our knowledge about something is missing or incomplete. This refers to a range of different everyday life or professional situations encountered by individuals, groups or organizations.

Wilson (1981, p. 6) in his "On User Studies and Information Needs" stated that "it may be advisable to remove the term "information needs" from our professional vocabulary and to speak instead of "information seeking towards the satisfaction of needs"". Furthermore, he visualizes (1981, p. 6, Figure 3) the interrelated factors that affect information seeking behaviour: on personal level there are physiological needs (need for food, water, air, etc.), affective needs - psychological or emotional needs (the need for love, attainment, etc.) and cognitive needs (need to plan, to learn, etc.). Additionally, information-seeking behaviour is affected by the work role of the person and his/her performance level, additionally affected by work-related, socio-cultural, politico-economic and physical environment factors. Concerning the above, there are many personal, interpersonal and environmental barriers to "information-seeking towards the satisfaction of needs" which should be taken into account, especially when trying to assure accessibility of information.

2.2. Diversity of human abilities and characteristics

According to the World Health Organization (WHO), the term disability includes a wide range of elements. The International Classification of Functioning, Disability and Health ICF (WHO, 2001) defines disability as the "difficulties encountered in any one or all three areas: human function impairments, activity limitation and participation. Impairment refers to the problem in body functions, for example, deafness or blindness". The wide definition and the variety of different factors linked to the social functioning demands a serious analytic approach to this matter - one which will enable the disabled to be included in all aspects of life. According to different public policies of different countries, there is a wide range of approaches and examples of good practice in this field, linked to means of supporting people with disabilities in education, medical care and the labour market (Kaur, Leong, Yusof, Singh, 2015). Approaches depend on different attitudes and public opinion, which is the reason for high-quality informing of the public on this topic.

One type of specific disorder we are dealing with is mental disorders. According to the Diagnostic and Statistical Manual of Mental Disorders DSM-5 (APA, 2013), there is a common language for describing psychopathology in accordance with diagnostics and treatment that could help people with disabilities to be included in everyday society.

The United Nations promotes equity-based approach for all children concerning their access to education (UN, 1989). The Convention ensures the right to treatment for children with disabilities, their right to education and improvement of their capacity and skills. The same convention also insures all other civil, political, economic, social and cultural rights of children. The Convention on the Rights of Persons with Disabilities (UN, 2006) emphasizes that any kind of discrimination based on disability is not allowed. All people have the right to fundamental freedoms, including the freedom to receive education and to work. The framework for supporting people with disabilities in terms of institutional support and right to education is ensured by the Croatian National strategy of equalization of possibilities for persons with disabilities 2007-2015 (Government of the Republic of Croatia, 2015).

Equalization of possibilities should address the needs of (information) users being visually impaired (blind persons, partially blind persons, persons with vision impairments, etc.), hearing-impaired (those deaf or hard-of-hearing), with physical disabilities (motor skills disorders, chronic diseases), dyslexic, those with attention deficit hyperactivity disorder – ADHD (developmentally inappropriate level of inattention, excessive activity and impulsivity; makes self-direction, planning, and behaviour organization difficult), or mental illnesses and disorders, through using ICT as assistive technology, assuring quality of ICT product and services in terms of their usability and accessibility (as is the focus of this paper).

Cook and Polgar (2014, p. 5) use the term assistive technology to refer to "a broad range of devices, services, strategies, and practices that are conceived and applied to ameliorate the problems faced by individuals who have disabilities".

Computers and other ICT devices may be used as assistive technologies with the help of different software such as (Voodish):

- Speech recognition software - for individuals having difficulty using a mouse or a keyboard;
- Screen magnification software - making it easier to read for vision impaired users;
- Keyboard overlays – making typing easier and more accurate for those who have motor control difficulties;
- Screen reader software with readout capabilities (using synthesised speech), which is helpful for users with reading or learning difficulties, or when used by blind and vision-impaired users;
- Translation software - reading of websites in foreign languages, especially helpful to those diagnosed with learning disabilities.

3. QUALITY IN ICT: USER PERSPECTIVE

3.1. Importance of international standards, recommendations and (best) practices in ICT

Modern business companies continually increase their dependence on information and communication technology (ICT) and its support in the implementation of business strategies. However, software quality is presently becoming quite questionable due to low productivity of development teams, low software usability, and high maintenance costs. The primary strategic goal of the software industry is becoming improvement of software quality using different standards, methods, models, tools for quality increase and successful development and management of software products.

The market presently offers different maturity models, various standards and methodologies that provide integrated product and process development in the area of software production and in the area of design of complex ICT systems and ICT services. We can specify the following models/standards (Kenett, Baker, 2010):

- CMMI (Capability Maturity Model Integration): CMMI for Development (CMMI-DEV), CMMI for Acquisition (CMMI-ACQ) and CMMI for Services (CMMI-SVC)
- People Capability Maturity Model (P-CMM)
- Personal and Team Software Process
- Information Technology Infrastructure Library (ITIL)
- Information Technology Service Standard (ISO 20000)
- CMU's eSourcing Capability Models
- ISO Quality Management Standard 9000
- ISO Software Life Cycle Standard 12207
- ISO Software Processes Assessment Framework Standard 15504
- ISO System Engineering—System Life-Cycle Processes Standard 15288.

Each of these models has its own rules or procedural practices, methods and approaches for assessing maturity and quality improvement within the software industry. It is quite difficult to apply a single model / standard in the organization in order to achieve the optimal level of software process improvement. The following is a short description of each model.

CMMI models offer the best practice concept, as well as methods and approaches for assessing process capability / maturity of an organization and its improvements (CMMI Product Team, 2010). CMMI models can be combined with other methods and standards such as ISO 9000, ISO / IEC 15504, ISO / IEC 20000, CobIT (Control Objectives for Information and Related Technology), ITIL (Information Technology Infrastructure Library), etc.

ISO/IEC 15504 is an international standard for process assessment initiated in 1993 as the SPICE (Software Process Improvement and Capability dEtermination) model. ISO/IEC 15504 was developed by JTC1/SC7's Working Group. The origins for the development of the ISO/IEC 15504 were the ISO/IEC 12207 standard (Systems and Software Engineering -Software Life Cycle Processes) and maturity models such as Bootstrap, Trillium and the CMM (ISO/IEC TR 15504-2:1998(E), 1998).

COBIT, published by IT Governance Institute (ITGI), is a globally accepted framework for IT governance. IT governance addresses the following main areas of ICT activity (Haes and Grembergen, 2004): strategic alignment between ICT and business solutions; value delivery from ICT; risk management, addressing the safeguarding of ICT assets; resource management, optimizing knowledge and ICT infrastructure; performance measurement, tracking project delivery and monitoring ICT services.

ITIL standard, published by the UK government, ensures a consistent best practice concept for setting up the IT service management processes built into the ICT organization (OGC, 2007). Some of ITIL benefits for customers/users are: ICT services are described better and in more detail; quality, availability, reliability and cost of services are managed better; and the

provision of ICT services becomes more customer-focused. Some of ITIL benefits for the ICT organization are: it develops a clearer structure, more focused on corporate objectives; it has better control over the ICT infrastructure and services; ITIL best practices support the introduction of a quality management system; ITIL provides high-quality internal communication and communication with suppliers.

According to Scott, Spyridonis and Ghinea (2015, p. 114) "designing software and products with accessibility requirements in mind entails that designers should include these from the outset or at least, in the early stages of the design process". The authors (Scott, Spyridonis and Ghinea, 2015, p. 114) promote Virtual and Augmented Environments and Realistic User Interactions to Achieve Embedded Accessibility Designs Project (VERITAS), providing designers with a framework of design and simulation tools which would help them overcome challenges and difficulties they encounter when trying to understand the issues raised as a result of an inclusive design process (e.g. difficulty in simultaneously designing for more than one type of impairment). As evidence suggests, as software production and design of complex ICT systems and ICT services have matured, a lot of effort has been put into important aspects of ICT product and services – accessibility and designs fit for all.

3.2. Defining usability and accessibility

Among others, two quality aspects of ICT and its products and services relate directly to users: usability and accessibility.

Usability as a quality characteristic has been defined in ISO/IEC TR 9126-2 (2003, 29) (the International Standard to be revised), as "a set of attributes that bear on the effort needed for use, and on the individual assessment of such use, by a stated or implied set of users". It is described by its sub-characteristics: understandability (ability of users to identify the functions of the product), learnability (how long it takes to learn some specific functions without using any documentation), operability (whether the user can use the capabilities of the software), attractiveness (the look/appearance of the user interface) and usability compliance (applied standards, conventions, style guides or regulations relating to usability).

Usability in the context of new standard ISO/IEC 25010 (2011, p. 12) is defined as "degree to which a product or system can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use", having the following sub-characteristics: appropriateness (to user needs – A/N) recognizability, learnability, operability, user error protection, and user interface aesthetics, including accessibility. Besides people with disabilities it focuses needs of people having includes disabilities associated with age i.e. older people. Furthermore, it is noted that "accessibility for people with disabilities can be specified or measured either as the extent to which a product or system can be used by users with specified disabilities to achieve specified goals with effectiveness, efficiency, freedom from risk and satisfaction in a specified context of use, or by the presence of product properties that support accessibility".

Regarding the web and web technologies, the main body developing appertaining standards - The World Wide Web Consortium (W3C) - addresses accessibility through its Web Accessibility Initiative (WAI). According to the WAI "Web accessibility means that people with disabilities can perceive, understand, navigate, and interact with the Web, and that they can contribute to the Web" (W3C, 2005), but it relates to older people, as well as other groups - such as people with low literacy or those not fluent in the language, people with low bandwidth connections or those using older technologies, new and infrequent users, and mobile phone users (W3C, 2012).

4. INTERNATIONAL STANDARDS, RECOMMENDATIONS AND PRACTICES RELATED TO ACCESSIBILITY OF INFORMATION

4.1. International standards related to accessibility of information

Importance of accessibility issues has been increasingly recognised and addressed in both ICT related international standards and recommendations, as well as in practice.

The International Organization for Standardization (ISO) takes care of providing manufacturers, service providers, designers and policy makers with specifications and guidelines on how to design products and services that are accessible to all (ISO, n.d). ISO also ensures, as noted in its ISO/IEC Guide 71 (2014), that during the development of standards, accessibility will be addressed as much as possible. International standards include those addressing the physical environment and information technology, as well as more specific aspects such as mobility devices. The focus of this paper is accessibility of information and ICT; consequently, standards related to these aspects will be considered as well.

In order to systemize Information and Communication Technology (ICT) standards related to accessibility, the authors created Table 1, mostly based on results of searching and browsing the ISO catalogue (n.d) and content analysis of selected international standards. Accessibility-related standards have been categorized in the following areas/levels:

Accessibility/ergonomics (in general) – refers to standards addressing accessibility consideration in user needs and accessible design in ergonomics;

IT technology/equipment/services – emphasizes interoperability with assistive technology;

(IT) Systems – refers to accessibility in specific (IT) systems (e-learning and biometrics)

Software – focuses on software and user interface accessibility; and

Information/content/document – refers to information and information representation (content/document) accessibility.

Table 1: ICT standards related to accessibility (Part 1)

Focus/area (purpose)	Standard
Accessibility/ergonomics (in general)	
Addressing accessibility in standards	**ISO/IEC Guide 71:2014** Guide for addressing accessibility in standards
Accessible design	**ISO 24503:2011** Ergonomics - Accessible design - Tactile dots and bars on consumer products
User needs - accessibility considerations	**ISO/IEC TR 29138-1:2009** Information technology - Accessibility considerations for people with disabilities - Part 1: User needs summary **ISO/IEC TR 29138-2:2009** Information technology - Accessibility considerations for people with disabilities - Part 2: Standards inventory **ISO/IEC TR 29138-3:2009** Information technology - Accessibility considerations for people with disabilities - Part 3: Guidance on user needs mapping
	ISO/IEC 24756:2009 Information technology - Framework for specifying a common access profile (CAP) of needs and capabilities of users, systems, and their environments
ICT equipment and services	**ISO 9241-20:2008** Ergonomics of human-system interaction - Part 20: Accessibility guidelines for information/communication technology (ICT) equipment and services

Table 1: ICT standards related to accessibility (Part 2)

Focus/area (purpose)	Standard
IT technology/equipment/services (cont.)	
Accessibility of personal computer hardware	**ISO/IEC 29136:2012** Information technology - User interfaces - Accessibility of personal computer hardware
IT/assistive technology	**ISO/IEC 13066-1:2011** Information technology - Interoperability with assistive technology (AT) - Part 1: Requirements and recommendations for interoperability **ISO/IEC TR 13066-2:2016** Information technology - Interoperability with assistive technology (AT) - Part 2: Windows accessibility application programming interface (API) **ISO/IEC TR 13066-3:2012** Information technology -- Interoperability with assistive technology (AT) - Part 3: IAccessible2 accessibility application programming interface (API) **ISO/IEC TR 13066-4:2015** Information technology - Interoperability with assistive technology (AT) - Part 4: Linux/UNIX graphical environments accessibility API **ISO/IEC TR 13066-6:2014** Information technology - Interoperability with Assistive Technology (AT) - Part 6: Java accessibility application programming interface (API)
Office equipment	**ISO/IEC 10779:2008** Information technology - Office equipment accessibility guidelines for elderly persons and persons with disabilities
(IT) Systems	
E-learning, education and training	**ISO/IEC 24751-1:2008** Information technology - Individualized adaptability and accessibility in e-learning, education and training - Part 1: Framework and reference model **ISO/IEC 24751-2:2008** Information technology - Individualized adaptability and accessibility in e-learning, education and training - Part 2: "Access for all" personal needs and preferences for digital delivery **ISO/IEC 24751-3:2008** Information technology - Individualized adaptability and accessibility in e-learning, education and training - Part 3: "Access for all" digital resource description
Accessible biometric systems	**ISO/IEC TR 29194:2015** Information Technology - Biometrics - Guide on designing accessible and inclusive biometric systems
Software	
Human-system interaction	**ISO 9241-171:2008** Ergonomics of human-system interaction - Part 171: Guidance on software accessibility
Accessible user interface	**ISO/IEC 24786:2009** Information technology - User interfaces - Accessible user interface for accessibility settings
	ISO/IEC TS 20071-11:2012 Information technology - User interface component accessibility - Part 11: Guidance for alternative text for images **ISO/IEC TS 20071-21:2015** Information technology - User interface component accessibility - Part 21: Guidance on audio descriptions
Design of accessible icons and symbols	**ISO/IEC TR 19766:2007** Information technology - Guidelines for the design of icons and symbols accessible to all users, including the elderly and persons with disabilities
Software quality – accessibility aspect	**ISO/IEC TR 9126-2:2013** Software engineering - Product quality - Part 2: External metrics **ISO/IEC 25010:2011** Systems and software engineering - Systems and software Quality Requirements and Evaluation (SQuaRE) - System and software quality models
Information/content/document	
Accessible web content	**ISO/IEC 40500:2012** Information technology - W3C Web Content Accessibility Guidelines (WCAG) 2.0
Electronic document file format	**ISO 14289-1:2014** Document management applications - Electronic document file format enhancement for accessibility-Part 1:Use of ISO 32000-1 (PDF/UA-1)

The selected standards are not referenced in the Bibliography since Table 1 contains all bibliographic information describing the standards for further use and referencing.

4.2. Recommendations related to accessibility of information

Web Content Accessibility Guidelines (WCAG) 2.0 and the W3C Recommendation (W3C, 2008) - a wide range of recommendations for making Web content more accessible - became freely available as the International Standard ISO/IEC 40500 (2012).

The WCAG 2.0 Guidelines implicate four principles and their associated guidelines (W3C, 2008):

"Principle 1: Perceivable - Information and user interface components must be presentable to users in ways they can perceive."

The guidelines refer to providing textual alternatives for any non-textual content so that it can be changed into other forms needed (large print, braille, speech, etc.); providing alternatives for time-based media; creating content that can be presented in different ways (e.g. simpler layout) without losing information or structure; and making the content easier for users to see and hear content including separating foreground from background.

"Principle 2: Operable - User interface components and navigation must be operable."

The principle is described by the guidelines advising to make all functionality available from a keyboard; to provide users enough time to read and use content, avoid content design in a way that is known to cause seizures; and to provide ways to help users navigate, find content, and determine where they are.

"Principle 3: Understandable - Information and the operation of user interface must be understandable."

The guidelines facilitating the third principle refer to making text content readable and understandable; making Web pages appear and operate in predictable ways; and helping users avoid and correct mistakes.

"Principle 4: Robust - Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies."

The only guideline refers to maximization of compatibility with current and future user agents, including assistive technologies.

Guidelines (W3C, 2008) also define Conformance Requirements which must be satisfied for web pages in order to conform to the WCAG 2.0. Conformance Requirements are explained in detail in this document (W3C) and could be checked by the Web Accessibility Evaluation Tools listed at the W3C web page (2014).

4.3. Practices related to accessibility of information

Scott, Spyridonis and Ghinea (2015, p. 116) inclusive design practices, often used by practitioners, include: developing personas, creating fictional characters to understand and empathise with a particular audience; standards review, using a set of guidelines to ensure that constraints are accommodated within a design; automated checking, using tools which evaluate designs against set guidelines automatically; and user testing - involving both, experts and potential end-users.

Besides the review of standards presented in the paper and the already mentioned VERITAS framework of design and simulation tools (Scott, Spyridonis and Ghinea, 2015, p. 114) and Web Accessibility Evaluation Tools (W3C, 2014), we wish to emphasize two aspects of inclusive design accessibility practices with examples:

- Different needs awareness and understanding
    - Experience dyslexia (http://homeschoolingwithdyslexia.com/dyslexia-simulations/)
    - Color Vision (http://www.iamcal.com/toys/colors/)
- Automated checking of (some) accessibility elements
    - Color Contrast Checker (http://webaim.org/resources/contrastchecker/)

- Check (Microsoft Office) documents for accessibility
  (https://www.microsoft.com/enable/products/office2013/default.aspx)
- Check accessibility of PDFs (Acrobat Pro DC)
  (https://helpx.adobe.com/acrobat/using/create-verify-pdf-accessibility.html)

User-testing practices in the sense of accessibility, are covered within the discipline of usability and are the focus of professional activities of usability engineers and usability community.

5. CONCLUSION

There is no doubt that accessibility of information is a very important inclusion aspect when related to people with disabilities. There are many standards, recommendations and practices dealing with this issue. The problem arising from this matter is that accessibility has many aspects being the focus of activities of numerous professions dealing with information. Some IT/ICT professions deal with information/content design, some with human-computer/system interactions, some focus on software accessibility or deal with the information system level, while others deal with hardware accessibility. The paper presents some base-level systematisation in the area, but further systematization of all efforts put into providing accessible information is needed in order to help promote accessibility, inclusivity, and the universal design across more numerous and varied disciplines.

Applications of systematization are possible in different fields of usage, for example in education, human resource management, industry, medicine, etc. One of the purposes is to inform experts and to raise their sensitivity towards everyday needs of people with disabilities.

LITERATURE

1. APA. (2013). *Diagnostic and Statistical Manual of Mental Disorders: DSM-5*. Arlington, VA, USA: American Psychiatric Association's (APA).
2. CMMI Product Team. (2010). *CMMI for Development, Version 1.3*. Retrieved 20.01.2016 from http://resources.sei.cmu.edu/library/asset-view.cfm?assetid=9661.
3. Cook, A. M., Polgar, J. M. (2014). *Assistive technologies: Principles and practice*. Elsevier Health Sciences.
4. Government of the Republic of Croatia. (2007). *The National Strategy of equalization of possibilities for persons with disability*. Retrieved 18.02.2016 from http://www.mspm.hr/media/files/nacionalna_strategija_izjednacavanja_mogucnosti_za_osobe_s_invaliditetom2
5. Haes, S.D., Grembergen, W.V. (2004). IT Governance ad Its Mechanisms. *Information Systems Control Journal*, Vol.1 (pp. 27-33). ISACA, ISSN: 1526-7407.
6. ISO - International Organization for Standardization (n.d.). *Accessibility*. Retrieved 13.03.2016 from http://www.iso.org/iso/home/news_index/iso-in-action/accessibility.htm
7. ISO catalogue (n.d.). Retrieved 13.03.2016 from http://www.iso.org/iso/home/store/catalogue_ics.htm
8. ISO/IEC 25010. (2011). *Systems and software engineering - Systems and software Quality Requirements and Evaluation (SQuaRE) - System and software quality models*
9. ISO/IEC 40500. (2012). *Information technology - W3C Web Content Accessibility Guidelines (WCAG) 2.0*. Retrieved 13.03.2016 from http://standards.iso.org/ittf/PubliclyAvailableStandards/index.html
10. ISO/IEC Guide 71 (2014). *Guide for addressing accessibility in standards*
11. ISO/IEC TR 15504-2:1998(E), (1998). *Information technology - Software process assessment - Part 2: A reference model for processes and process capability*
12. ISO/IEC TR 9126-2. (2003). *Software engineering - Product quality - Part 2: External metrics*

13. ITU (2014). Supplement 17 to ITU-T H-series Recommendations *Guide for addressing accessibility in standards*, Retrieved 03.03.2016 from http://www.itu.int/rec/T-REC-H.Sup17-201411-I/en

14. Kaur, G., Leong, T.P., Yusof, J.M., Singh, D. (2015). Perception of people with disability in creating sustainable public policy. *Procedia - Social and behavioral sciences*, 168 (pp. 145-155).

15. Kenett, R.S., Baker, E.R. (2010). *Process Improvement and CMMI for Systems and Software,* London: CRC Press, Taylor&Francis Group.

16. OGC - Office of Government Commerce. (2007). *Introduction to ITIL*. U.K.: OGC

17. Scott, M. J., Spyridonis, F., & Ghinea, G. (2015). Designing for designers: Towards the development of accessible ICT products and services using the VERITAS framework. *Computer Standards & Interfaces*, 42, (pp. 113-124).

18. UN (1989). *Convention on the rights of the children*. New York, N.Y., USA. Retrieved 12.02.2016 from http://www.ohchr.org/en/professionalinterest/pages/crc.aspx

19. UN (2006). *Convention on the rights of persons with disabilities.* New York, N.Y., USA. Retrieved 08.02.2016 from http://www.un.org/disabilities/default.asp?id=262

20. UNESCO (2003). *Communiqué of the Ministerial Round Table "Towards Knowledge Societies"*, 32nd session of the General Conference of UNESCO, Paris, 9–10 October 2003 (document 32 C/INF. 26, para. 3). Retrieved 13.03.2016 from http://unesdoc.unesco.org/images/0013/001321/132114e.pdf

21. Voodish - North Wales Web Design. *What is Web Accessibility?* Retrieved 13.03.2016 from http://www.voodish.co.uk/articles/what-is-web-accessibility/

22. W3C - The World Wide Web Consortium (2005). *Introduction to Web Accessibility*. Retrieved 13.03.2016 from https://www.w3.org/WAI/intro/accessibility.php

23. W3C - The World Wide Web Consortium (2008). *Web Content Accessibility Guidelines (WCAG) 2.0.* Retrieved 13.03.2016 from http://www.w3.org/TR/WCAG20/

24. W3C - The World Wide Web Consortium (2012). *Social Factors in Developing a Web Accessibility Business Case for Your Organization.* Retrieved 13.03.2016 from https://www.w3.org/WAI/bcase/soc.html#groups

25. W3C - The World Wide Web Consortium (2014). *Web Accessibility Evaluation Tools List.* Retrieved 13.03.2016 from https://www.w3.org/WAI/ER/tools/index.html

26. W3C - The World Wide Web Consortium (n.d.) *Understanding Conformance.* Retrieved 13.03.2016 from https://www.w3.org/TR/UNDERSTANDING-WCAG20/conformance.html#uc-conformance-requirements-head

27. WHO. (2001). *The international classification of functioning, disability and health (ICF)*. World Health Organization, Geneva. Retrieved 18.02.2016 from http://psychiatr.ru/download/1313?view=1&name=ICF_18.pdf (access 10.02.2016)

28. Wilson, T.D. (1981). On User Studies and Information Needs. *Journal of Documentation*, Vol. 37, No. 1, 1981 (pp. 3-15)

CAN UNPREDICATABILITY BENEFIT AN INEFFICIENT FIRM?

Varun Pandit
Economics, HSS, IIT Kanpur(India)
varnp@iitk.ac.in

Brahma Deo
Ex-Professor, Materials Science and Engineering, IIT Kanpur (India)
Visiting Professor, IIT Bhubaneswar (India)
bdeo@iitk.ac.in

Praveen Kulshreshtha
Professor, Economics, HSS, IIT Kanpur (India)
pravk@iitk.ac.in

ABSTRACT

Occurrence of chaos in Cournot Duopoly model is investigated by assuming isoelastic demand function and suppliers' expectation. The Nash Equilibrium and its stability are examined for both homogeneous and heterogeneous suppliers. Largest Lyapunov exponent and Kaplan-Yorke dimension of strange attractors are obtained. Average long run profit for both types of expectations and different inefficiency scales is observed. It is shown that an inefficient supplier, following either homogeneous adaptive or heterogeneous expectation, is benefited when chaos persists whereas an efficient supplier is benefited by controlling chaos.
Keywords: Adaptive expectation, Bounded rationality, Chaos, Cournot Duopoly, Long run average profit

1. INTRODUCTION

In a free market finite suppliers participate among themselves giving rise to an oligopoly market structure. Oligopoly market structure lies between two extreme market situations, namely monopoly and perfect competition. Suppliers in perfect competition are considered to be "Price takers" while the monopolist achieves largest market power and reduces social surplus. Oligopoly market structure achieves intermediate market performance. Duopoly is the most studied oligopoly market structure where the suppliers possess sufficient market power.

Oligopoly market competition is seen as a game where suppliers choose strategies such as quantity (Cournot Oligopoly) or price (Bertrand Oligopoly) to compete. Cournot Duopoly model, first introduced by Antoine Augustin Cournot in 1838, is a market structure where two firms produce homogeneous goods, don't collude and act rationally to gain the highest market power by strategically competing, while using quantity of goods as strategic tool. The Nash Equilibrium of the static and simultaneous competition in Cournot model depends upon the structure of market demand and the cost function of participating firms. Linear market demand structure simplifies the model giving explicit and unique Nash Equilibrium.

One of the Cournot Duopoly models, where market demand structure is assumed to be isoelastic, was analyzed by Puu (Puu, 1991, pp. 573–581). Nash equilibrium in Cournot-Puu dynamic setting loses stability leading to emergence of multiperiod orbit. The aperiodicity of orbits results in chaotic regime for certain values of parameters. The best response function of dynamic Cournot-Puu Duopoly model was established on the naive expectation of quantities. Hommes used adaptive expectation of quantity and offered geometric explanation for existence of chaos in a nonlinear demand-supply framework (Hommes, 1994, pp. 315–335). The stability behaviour of Nash Equilibrium was found to be flexible when adaptive expectation was used. Kopel modeled nonlinearity in cost function and found logistic dynamic for quantity (Kopel,

1996, pp. 2031-2048). Kopel model was further investigated by Agiza for stability and bifurcation (Agiza, 1999, pp. 1909-1916). Introduction of time lag leading to nonlinear oligopoly model has also been investigated for bifurcation (Chiarella, 1996, pp. 2049-2065). Further agents of chaos were found in oligopoly models in heterogeneity. Heterogeneity in expectation in duopoly game with linear demand-supply framework also leads to bifurcation and chaos (Agiza, 2003, pp. 512-514). Heterogeneous expectation (Boundedly Rational and Naïve) was further studied for linear demand-supply duopoly with product differentiation (Fanti, 2012, pp. 421-427). Apart from heterogeneity in expectation, learning in nonlinear environment is also a source complex behavior (Naimzada, 2006, pp. 707-722).

OGY and DFC control methods have been used to control the chaotic dynamics (Iwaszczuk, 2013, pp. 108-123; Iwaszczuk, 2013, pp. 29-37). Huang demonstrated that long run behavior of chaotic dynamics is beneficial as it can enhance profit and economic surplus (Huang, 2008, pp. 1332-1355). Matsumoto found that average profit of inefficient firm is higher along multiperiodic orbit and showed that the dynamics of Cournot-Puu model with naïve expectation is inconsistent (Masumoto, 2006, pp. 379-392). Results by Tuinstra-Wagener-Westerhoff also showed that trade barriers can have positive welfare effects in nonlinear framework (Tuinstra, 2014, pp. 246-264). Present work examines average profit for different expectation models and gives comparative results for homogeneous and heterogeneous expectation for different inefficiency scales. Heterogeneous (boundedly rational and adaptive expectation) and homogeneous (adaptive) expectations in Cournot Duopoly model are investigated with isoelastic demand function. The existence of chaos and dimension of strange attractors are studied. Long run average profits for different expectations are computed to see effects of cost inefficiency and chaotic dynamics on average profit.

The paper is organized as follows. Section 2 of the paper discusses Nash Equilibrium and its stability for both types of expectation models. Maximum Lyapunov exponent and the dimensions of strange attractors are computed in section 3. Section 4 investigates the average profit of each firm for different expectations followed by conclusion.

2. MODEL

The economy is assumed to comprise of two firms (1 and 2) and a large number of buyers with isoelastic demand function for one commodity. The isoelastic inverse demand function for the commodity is given by:

$$P_t = \frac{1}{(Q_{1,t} + Q_{2,t})}$$

(1)

where P_t denotes the price of commodity for period t, $Q_{1,t}$ and $Q_{2,t}$ denote the quantities supplied in period t by firm 1 and firm 2 , respectively. The cost function is assumed to have a constant marginal cost for both firms (c_i; i = 1,2) with no fixed costs. Each firm rationally produces quantity $Q_{i,t}$ (i = 1;2) such that the respective profits are maximized for the current period.

$$\max \pi_{i,t} = P_t Q_{i,t} - Q_{i,t} c_i$$

The ith firm expects the other firm to produce quantity $Q^e_{-i,t}$ during period t (henceforth "-i" denotes the other firm). First order condition of profit maximization gives following best response function of ith firm

$$Q_{i,t} = max\left(\sqrt{\frac{Q^e_{-i,t}}{c_i}} - Q^e_{-i,t}, 0 \right)$$

(2)

The best response function of ith firm is shown in figure 1. The above model was introduced by Puu and existence of chaos was seen for naive expectation[1]. The paper also discussed strange attractor for adaptive expectation. In the present work the model is extended by assuming different expectations for quantities.
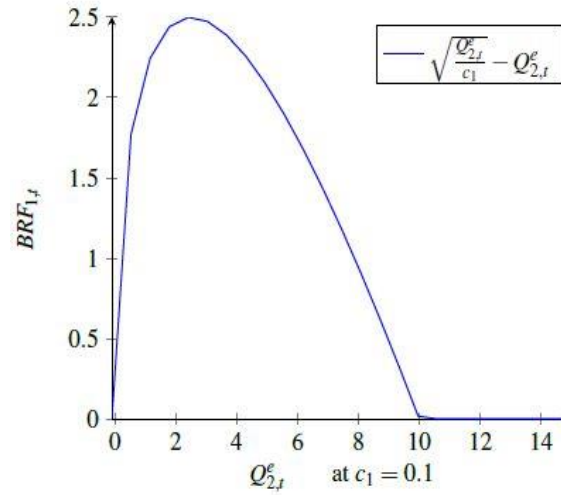
Figure 2: Best Response Function of Firm 1 at its marginal cost 0.1 Units

2.1 Adaptive expectation and boundedly rational expectation

The adaptive expected quantity, $Q_{i,t+1}^e$, is given by

$$Q_{i,t+1}^e = (1 - \lambda_i)Q_{i,t}^e + \lambda_i Q_{i,t}$$

(3)

where λ_i is the adaptive weight factor given to the actual quantity produced in the previous period. It implies that firm's expectation is revised as the weighted average of previous production and the previous period's expectation.

Hommes used adaptive expectation in price in a nonlinear demand-supply setting, investigated the equilibrium and showed the existence of chaos (Hommes, 1994, pp. 315-335)

A boundedly rational firm adjusts expectation for quantities for the current period by learning from last period's marginal profit (Agiza, 2003, pp. 512-514; Naimzada, 2006, pp. 707-722). Structurally, the boundedly rational expectation is given by:

$$Q_{i,t}^e = Q_{i,t-1}\left(1 + \alpha_i \frac{\partial \pi_{i,t-1}}{\partial Q_{i,t-1}}\right)$$

(4)

where α is positive constant reflecting the speed of adjustment. Unlike adaptive expectation, bounded rationality motivates to increase expected profit and thus plays a role in absence of stable Nash Equilibrium.

2.2 Suppliers with homogeneous adaptive expectation

The adaptive expectation model is obtained by replacing the actual quantity produced in equation (3) from equation (2).

$$Q_{1,t}^e = (1 - \lambda_1)Q_{1,t-1}^e + \lambda_1 max\left(\sqrt{\frac{Q_{2,t-1}^e}{c_1}} - Q_{2,t-1}^e, 0\right)$$

(5)

$$Q_{2,t}^e = (1 - \lambda_2)Q_{2,t-1}^e + \lambda_2 max\left(\sqrt{\frac{Q_{1,t-1}^e}{c_2}} - Q_{1,t-1}^e, 0\right)$$

(6)

Puu (Puu, 1991, pp. 573-581) calculated the Nash equilibrium for the model with naive expectation ($\lambda = 1$). Nash equilibrium appears when each player does not have any incentive to deviate from the equilibrium strategy unilaterally.

In the present work Nash equilibrium arises when both firms simultaneously and rationally choose their respective quantities in the expected quantity space such that $Q_{i,t}^e = Q_{i,t+1}^e$. The equilibrium quantity thus produced, same as the equilibrium expected quantity, is given by

$$Q_1^* = \frac{C_2}{(C_1+C_2)^2}, Q_2^* = \frac{C_1}{(C_1+C_2)^2}$$

(7)

Due to the presence of nonlinear term in equation (4), the above Nash Equilibrium does not remain globally stable. To analyze the stability of Nash Equilibrium, the linearized Jacobian matrix, J, is calculated about equilibrium points (7):

$$J = \begin{bmatrix} (1-\lambda_1) & \lambda_1 \dfrac{(C_2-C_1)}{2C_1} \\ \lambda_2 \dfrac{(C_1-C_2)}{2C_2} & (1-\lambda_2) \end{bmatrix}$$

From the Routh Hurwitz stability criteria for the two dimensional linearized Jacobian, the following conditions arise (Iwaszczuk, 2013, pp. 29-37):

1. $\det(J) \geq tr(J) - 1$
2. $\det(J) \geq -tr(J) - 1$
3. $\det(J) < 1$

To obtain the stability condition a symmetric expectation can be assumed, i.e, $\lambda_1 = \lambda_2 = \lambda$ and define $c_r = \frac{c_2}{c_1}$. Thus the parameter space reduces to (c_r, λ). As the first two stability conditions are always met by Jacobian, J, the equilibrium quantity (5) loses stability when $\det(J) = 1$. Figure 2 shows range of parameters for which NE is stable.

For $c_r > c_r^*$, equilibrium (7) is unstable. c_r^* is a bifurcation point. Further increase of parameter leads to rapid period-doubling cascade. This leads to the loss of period-1 stability and multi-period orbit comes into existence.
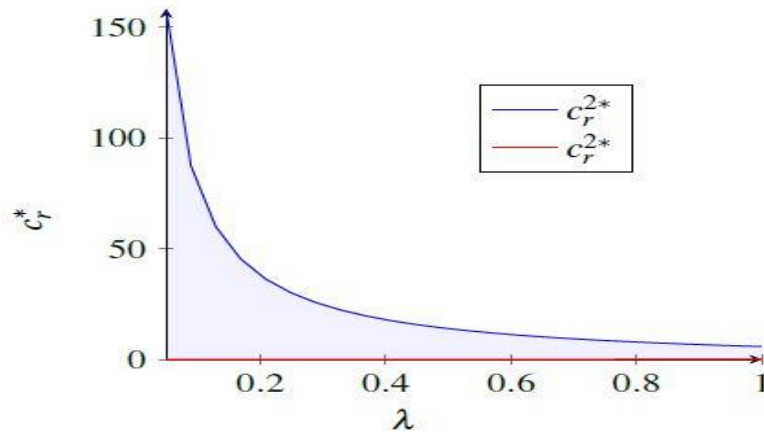
Figure 2: Region of stability for Nash Equilibrium in homogeneous expectation model

The flexible stability criteria obtained for adaptive expectation is consistent with the work of Hommes (Hommes, 1994, pp. 315-335), where equilibrium has stringent stability for naive expectation and flexible stability for adaptive expectation.

2.3 Heterogeneous Suppliers

Heterogeneous supplier oligopoly models have already been studied and the existence of chaotic orbit has been reported (Agiza, 2003, pp. 512-514). In the present work it is assumed that when one of the suppliers follows adaptive expectation and other is a boundedly rational. In adaptive expectation an agent extrapolates the past expectation and realization to decide the current expectation. On the other hand boundedly rational agents learn from their immediate

past and incorporate the learning to construct the current expectation. If heterogeneous expectation of suppliers is assumed following dynamics emerge:

$$Q_{1,t}^e = Q_{1,t-1}\left(1 - \alpha_1 c_1 + \alpha_1 \frac{Q_{2,t-1}}{(Q_{1,t-1}+Q_{2,t-1})^2}\right)$$

(8)

$$Q_{2,t}^e = (1 - \lambda_2)Q_{2,t-1}^e + \lambda_2 \max\left(\sqrt{\frac{Q_{1,t-1}^e}{c_2}} - Q_{1,t-1}^e, 0\right)$$

(9)

Again, Nash Equilibrium (7) arises but does not remain stable for all values of parameters. Jacobian around equilibrium (Q_1^*, Q_2^*) for the above dynamical system is given by:

$$J = \begin{bmatrix} -\alpha_1 \dfrac{(C_1 - C_2)^2}{2(C_1 + C_2)} & \dfrac{(C_2 - C_1)}{2C_1}\left(1 - \dfrac{2\alpha_1 C_1 C_2}{(C_1 + C_2)}\right) \\ \lambda_2 \dfrac{(C_1 - C_2)}{2C_2} & (1 - \lambda_2) \end{bmatrix}$$

Routh Hurwitz criteria for stability of NE of equation 8-9 give the following constraint for stability,

$$-\alpha_1 \frac{(c_1 - c_2)^2}{2(c_1 + c_2)} + \lambda_2 \frac{(c_1 - c_2)^2}{4c_1 c_2} - 1 < 0$$

Let λ^* be the bifurcation point of λ for chosen parameters and define $\beta := \alpha_1 c_1$. Thus the regions of stability lie above the limiting surface in figures 3 and 4 whereas positive parameter space below critical region is the region of instability. The regions of instability exist (except for points where parameters vanish) for the heterogeneous expectation model whenever the firms differ in their cost inefficiency. As inefficiency difference increases, the stability range of both adaptive expectation weight and speed of adjustment increases. It is clear that a large gap in production technology diminishes the possibility of stable equilibrium.
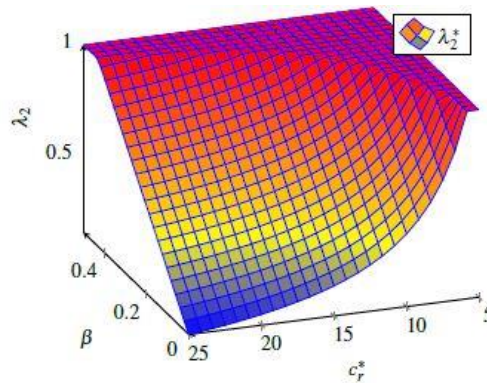
Figure 3: Critical region of stability for Nash Equilibrium in heterogeneous expectation model (cost efficient firm with bounded rationality). Non-negative parameters below the surface give unstable NE

61
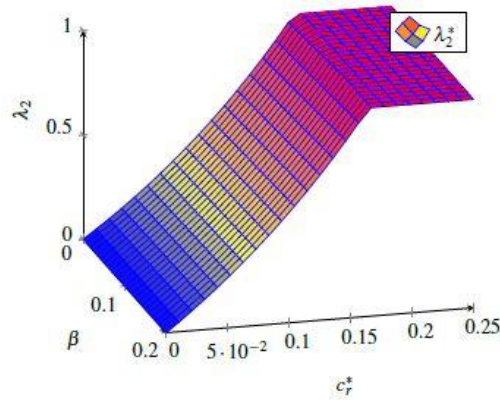
Figure 4: Critical region of stability for Nash Equilibrium in heterogeneous expectation model (cost inefficient firm with bounded rationality)

3. NUMERICAL RESULTS

After the loss of NE stability multiperiodic orbits emerge and some orbits are chaotic; however it is required to prove that aperiodic orbits diverge in the bounded space. This can be done by computing of Largest Lyapunov exponent (Schuster, 2006; Sandri, 1996, pp. 78-84).

3.1 Lyapunov Exponent

Sensitive dependence to initial conditions is captured by showing the diverging property of close trajectories. Lyapunov exponent characterizes the rate of separation of close trajectories (Sandri, 1996, pp. 78-84). However, unlike the case of 1-dimensional map, the 2-dimensional maps possess two Lyapunov exponents. Thus the evolution of quantities in the model may exhibit expansion of neighborhood volume in one eigen-direction while contraction in the other such that overall volume of neighborhood of an orbit is contracting. The expansion and contraction of volume can be characterized by their Lyapunov exponents while an overall change in neighborhood volume of a trajectory is estimated as the average of determinant of Jacobian along the orbit.

For difference equations, the sum of Lyapunov exponents determine the (exponential) rate of expansion/ contraction of neighborhood area. As the change in area in linear transformations is determined by the determinant of transformation matrix (Jacobian matrix in case of nonlinear systems), the average rate of change of area of a map is calculated by the average of determinant over an orbit (Sandri, 1996, pp. 78-84; Sprot, 2004).
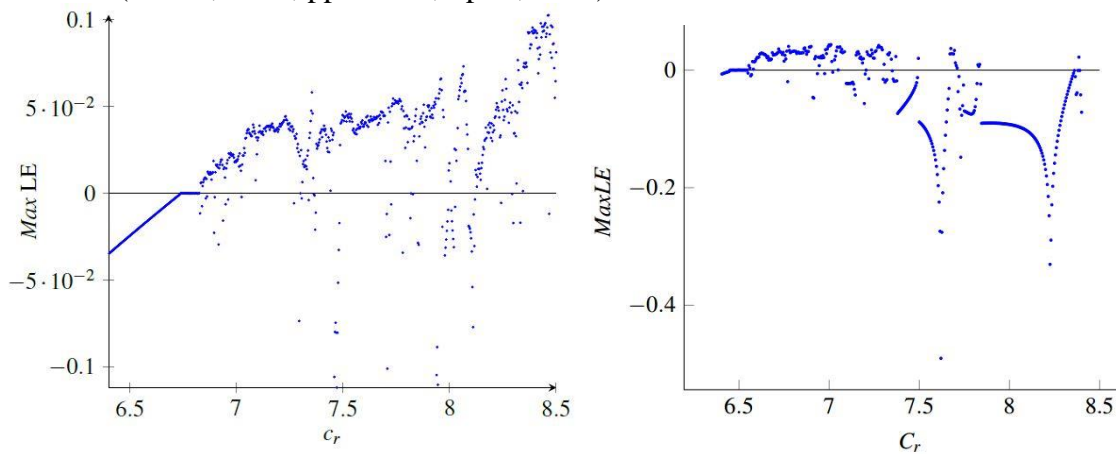
Figure 5: a. Maximum Lyapunov Exponent for adaptive expectation model at expectation and heterogeneous expectation model at weight=0.4. b. Maximum Lyapunov Exponent for heterogeneous expectation model at expectation weight=0.9 and speed of adjustment=0.02.

Largest Lyapunov exponent for different models are obtained and shown in figure 5. Since the Lyapunov exponents are positive for certain parameter values, the orbits are chaotic.

3.2 Dimension of chaotic attractor
In order to estimate the complexity of map the Kaplan- Yorke Dimension for chaotic attractors has been calculated. Kaplan and Yorke conjectured that Haursdorff dimension of a strange attractor can be estimated by the dimension calculated from its Lyapunov exponent (Frederickson, 1983, pp. 185-207).

According to Kaplan Yorke conjecture, the fractal dimension of the attractor is given by:

$$D_{KY} = k + \frac{\varepsilon_1 + \varepsilon_2 + .. + \varepsilon_k}{|\varepsilon_{k+1}|}$$

where ε_i is the ith largest Lyapunov characteristic exponent.

Kaplan-Yorke dimension of chaotic attractor in the present model, with one positive Lyapunov exponent and contracting neighboorhood volume, can be estimated from:

$$D_{KY} = 1 + \frac{\varepsilon_1}{|\ln(|\det(J)| - \varepsilon_1|}$$

The estimated values of Kaplan-Yorke dimension for attractors in the given models are shown in table 1-2.

Table 6: Lyapunov Exponent and Kaplan-Yorke Dimension of attractors (Homogeneous expectation model)

λ	c_r	**Largest LE**	**Kaplan-Yorke Dim**
0.9	7.5	0.045	1.19
0.9	8.0	0.017	1.09
0.8	7.9	0.016	1.05
0.7	14.3	0.056	1.13

Table 2: Lyapunov Exponent and Kaplan-Yorke Dimension of attractors (Heterogeneous expectation model) at $\lambda_2 = 0.9$, $\boldsymbol{\alpha_1 = 0.02}$

$\boldsymbol{\alpha_2}$	c_r	**Largest LE**	**Kaplan-Yorke Dim**
0.02	6.6	0.021	1.01
0.02	6.8	0.036	1.02
0.02	6.9	0.040	1.02

4. AVERAGE PROFIT
Chaotic orbits are unpredictable due to sensitive dependence on initial conditions. Different control methods such as OGY and DFC have been used to control chaotic trajectory in nonlinear models (Iwaszczuk, 2013, pp. 108-123; Iwaszczuk, 2013, pp. 29-37) . Huang showed that chaotic trajectories can be beneficial for firms. It was found that chaos increases total profit in a nonlinear duopoly game (Huang, 2008, pp. 1332-1355). However it is difficult for firms to tradeoff between unpredictability and profit. The tradeoff can be reduced when firm is aware of its expectation behavior and relative cost inefficiency.

Controlling chaos locally stabilizes the 1-period NE (Iwaszczuk, 2013, pp. 108-123; Iwaszczuk, 2013, pp. 29-37; Masumoto, 2006, pp. 379-392) and firms obtain profit at equilibrium:

$$(\Pi_1 \Pi_2)^* = (\frac{c_2^2}{(c_1 + c_1)^2}, \frac{c_1^2}{(c_1 + c_1)^2})$$

Assuming, for the sake of simplicity, that is no additional cost for controlling chaos, the net profit firms obtain equals Nash equilibrium profit. However if the firms don't attempt to control chaos they will remain in chaotic orbit and if the process is ergodic then the long run average

will be independent of initial choice of quantities (Huang, 2008, pp. 1332-1355). For $\lambda \in (0,1), \alpha > 0$, the chaotic orbit obtained in the above models remain ergodic. Thus, the long run average profit along chaotic orbit can be numerically estimated for the models.

The numerical results for average profit are shown in figure 6-8 for different models. From figures 6-8, it can be observed that irrespective of expectation for quantity of production, the inefficient firm in the model is benefited by not controlling the chaotic (unpredictable) regime. On the other hand the multi-periodicity is less profitable for efficient firm.
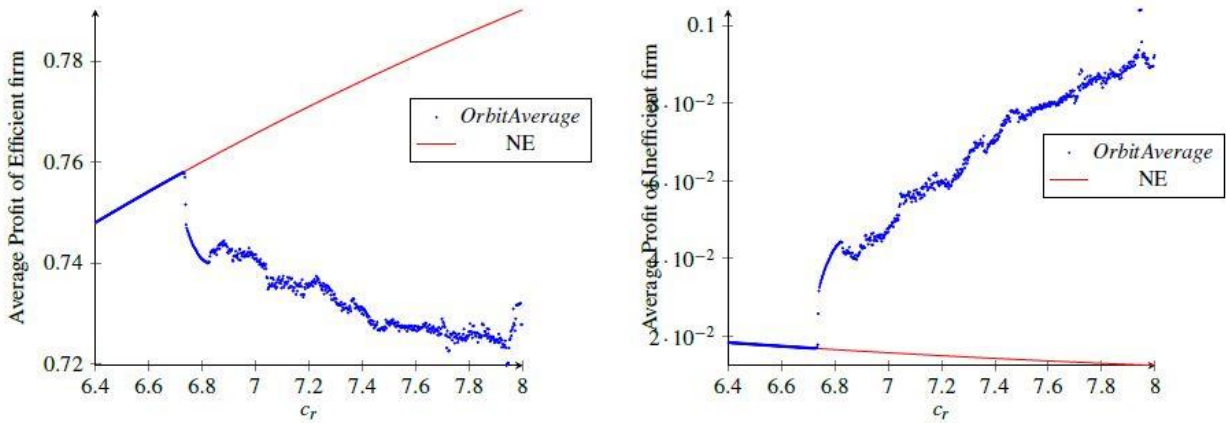
Figure 6: Average profit for homogeneous expectation model at weight = 0.9
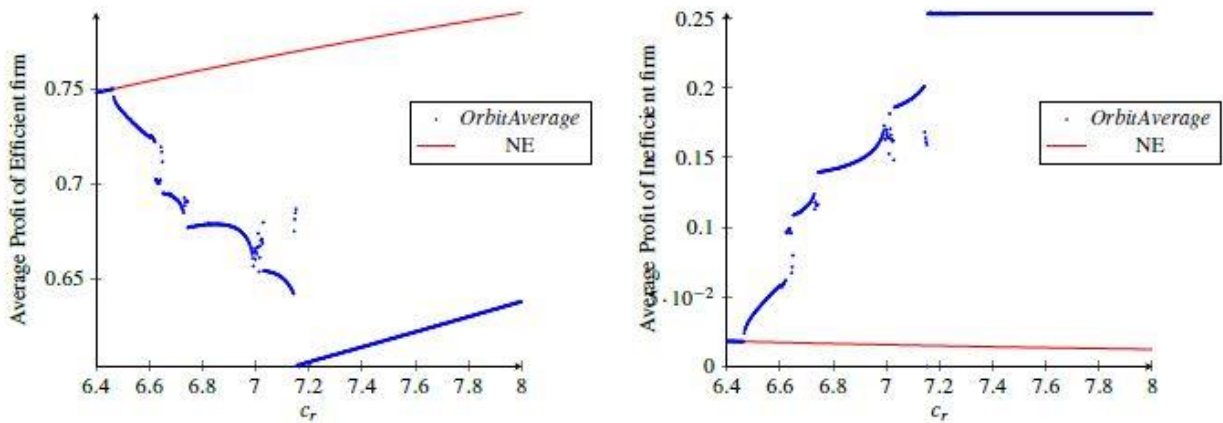
Figure 7: Average profit for heterogeneous expectation model at λ = 0.9 and α = 0.02
(efficient firm following bounded rationality)

Figure following on the next page
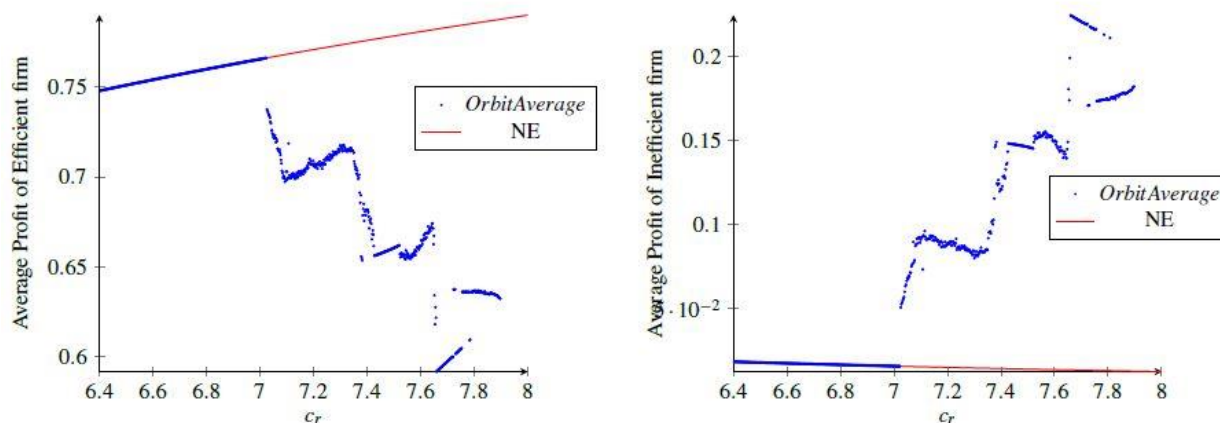
*Figure 8: Average profit for heterogeneous expectation model at λ= 0.9 and α = 0.02
(inefficient firm following bounded rationality)*

5. CONCLUSION

The Nash Equilibrium does not always remain stable for both homogeneous and heterogeneous expectations. The loss of stability leads to existence of other periodic orbits and chaotic orbit. The results of present work strengthen the notion of long run benefit of multi-periodicity by investigating the Cournot Duopoly model with isoelastic demand function. The complexity of chaotic orbits for different expectation hypothesis has been investigated. For both expectations (homogeneous and heterogeneous), it is found that cost inefficient firms are benefited by long run chaotic behavior while a situation of controlled chaos is more beneficial for an efficient firm.

LITERATURE

1. Agiza, H. N. (1999). *On the analysis of stability, bifurcation, chaos and chaos control of Kopel map.* Chaos, Solitons & Fractals 10.11: 1909-1916.
2. Agiza, H. N., Elsadany, A. A. (2003). *Nonlinear dynamics in the Cournot Duopoly game with heterogeneous players.* Physica A: Statistical Mechanics and its Applications 320: 512-524.
3. Chiarella, C., Khomin, A. (1996). *An analysis of the complex dynamic behaviour of nonlinear oligopoly models with time delays.* Chaos, Solitons & Fractals 7.12: 2049-2065.
4. Fanti, L., Gori, L. (2012). *The dynamics of a differentiated duopoly with quantity competition.* Economic Modelling 29.2: 421-427.
5. Frederickson, P., Kaplan, J., Yorke, E., Yorke, J. (1983). *The Liapunov dimension of strange attractors.* Journal of Differential Equations 49.2: 185-207.
6. Hommes, C. H. (1994). *Dynamics of the cobweb model with adaptive expectations and nonlinear supply and demand.* Journal of Economic Behavior & Organization 24.3: 315-335.
7. Huang, W. (2008). *The long-run benefits of chaos to oligopolistic firms.* Journal of Economic Dynamics and Control 32.4: 1332-1355.
8. Iwaszczuk, N., Kavalets, I. (2013). *Delayed feedback control method for generalized Cournot-Puu oligopoly model,* Selected Economic and Technological Aspects of Management, ed. N. Iwaszczuk, Krakow: 108-123.
9. Iwaszczuk, N., Kavalets, I.. (2013). *Some features of application the delayed feedback controlmethod to Cournot-Puu duopoly model.* ECONTECHMOD: International Quarterly Journal on Economics of Technology and Modelling Processes 2: 29-37.
10. Kopel, M. (1996). *Simple and complex adjustment dynamics in Cournot Duopoly models.* Chaos, Solitons & Fractals 7.12: 2031-2048.

11. Matsumoto, A. (2006). *Controlling the cournot-nash chaos.* Journal of optimization theory and applications 128.2: 379-392.

12. Naimzada, A. K., Sbragia, L. (2006). *Oligopoly games with nonlinear demand and cost functions: two boundedly rational adjustment processes.* Chaos, Solitons & Fractals 29.3: 707-722.

13. Puu, T. (1991). *Chaos in duopoly pricing.* Chaos, Solitons & Fractals 1.6: 573-581

14. Sandri, M. (1996) *Numerical calculation of Lyapunov exponents.* Mathematica Journal 6.3: 78-84.

15. Schuster, H. G., Wolfram J. (2006). *Deterministic chaos: an introduction.* John Wiley & Sons.

16. Sprott, J. C. (2004). *Numerical calculation of largest Lyapunov exponent.* Retrieved 8.12.2015 from http://sprott. Physics. wisc. edu/chaos/lyapexp. htm

17. Tuinstra, J., Wegener, M., Westerhoff, F. (2014). *Positive welfare effects of trade barriers in a dynamic partial equilibrium model.* Journal of Economic Dynamics and Control 48: 246-264.

APPENDIX
NUMERICAL CALCULATION OF MAXIMUM LYAPUNOV EXPONENT AND KAPLAN-YORKE DIMENSION

The method of calculating largest Lyapunov exponent (Sandri, 1996, pp. 78-84) and Kaplan-Yorke (Frederickson, 1983, pp. 185-207) dimension of Henon Map have been explained by Sprott (Sprot, 2004). The steps to calculate largest LE and KY dimension for map (4-5) are as follows:

1. Take any initial set of quantity in the basin of attraction
2. Iterate the map so that trajectory is on the attractor at Q_0
3. Take a close nearby quantities, Q_0^c separated by small distance d_0 from Q_0
4. Iterate the two nearby quantity vectors in map to get the next iterates, $f(Q)$ and compute the distance $d_1 = ||f(Q_0) - f(Q_0^c)||$
5. Calculate $\log\left|\frac{d_1}{d_0}\right|$.
6. Calculate the determinant of Jacobain evaluated at d_1 and take its logarithm.
7. Find the next normalized neighborhood point, Q_{n+1}^c, using following transformation:

$$Q_{n+1}^c = f(Q_n) + \frac{d_0}{d_1}(f(Q_n^c) - f(Q_n))$$

8. Repeat step 4-7 and take arithmetic mean of step 5 with large number of orbit points to get largest Lyapunov exponent. Take arithmetic mean of values of step 6 to get the logarithm of exponential expansion/contraction.

Using the above calculated values, the Kaplan Yorke dimension of chaotic attractor is evaluated as:

$$D_{KY} = 1 + \frac{\varepsilon_1}{|\ln(|\det(J)| - \varepsilon_1|}$$

where $\ln(|\det(J)|)$ is averaged over the orbit and ε_1 is maximum Lyapunov exponent.

THE RELATIONSHIP BETWEEN DEMOCRACY AND CORRUPTION IN MENA COUNTRIES

Kamel Si Mohammed
Ain Temouchent university, Algeria
simohammed_k@yahoo.fr

ABSTRACT

The goal of this study is to investigate the relationship between democracy and corruption in 13 MENA countries through an empirical analysis using a panel GMM during the period 1984-2013. Results show that a higher corruption is affected on democratic structures such as the Arab countries (Omgba (2015); Haber and Menaldo (2011)). Thus, a certain democratic and the high income states of the oil exporting countries would not have been decreased corruption level, (See Jetter (2015), Rachdi and Saidi (2014)).
Keywords: *Corruption, Democracy, MENA Countries, Panel GMM*

1. INTRODUCTION

Much attention has been explained the relationship between to democracy and corruption.

The goal of this study is to investigate the relationship between democracy and corruption in 13 MENA countries through an empirical analysis using a panel GMM dynamic during the period 1984-2013

The rest of the paper is organized as follows. In section 2, we shall present a literature review on the impact. Section 3 deals with the model and the methodology, followed by the results and discussion in Section 4, and finally, section 5 sets out the main findings.

2. LITERATURE REVIEW

Ross (2001) investigated the democracy in oil Middle East Countries pooled time-series cross-national data from 113 states between 1971 and 1997. He found negatively correlated between oil and democracy, while oil resources don't exploited to boost political reforms. In the same sense, Jensen and Wantchekon (2004) supported Ross (2001) results when they found that oil and mining countries are failed to democratize their political systems

Saidi and Rachdi (2015) examined the effect of democracy on economic growth beginning in 1983 by applying a panel and GMM methodologies in 17 MENA countries. They found negative impact democracy on economic growth

JETTER et al (2015) reported the ambiguous relationship between democracy and corruption during the period from 1998 to 2012 using a 3SLS framework. They results confirmed that Democracy reduces corruption in countries with higher per capita GDP and increase of corruption in the poorer nations.

More specifically, Billger and Goel (2009) captured the greater democracy and more economic freedom are reduce corruption in least corrupt nations and failed in highly corrupt countries. Kurzman et al., 2002 tested the role of government consumption to GDP on democracy and finds positive effect such as (Baum and Lake, 2003; Helliwell, 1994).

Rota (2015) documented the relationship between military spending and democracy over the sample (1880 – 1938) through a Pooled regression. This study establishes positive association between military spending and the components of democracy in long run. Aisen and Veiga (2013) indicted a small negative effect of political instability on democracy using GMM model of 169.

On other sense of democracy, many studies highlighted the relationship between democracy and religion. La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997, 1999) studied the correlation between religious affiliation and corruption. In this context, several papers achieved similar results of negative relationship between Islam and democracy see barro (199 Huntington1984, 1991; Lipset 1994). Midlarsky (1998) pointed in his study that Muslim countries is less democratic than non-Muslim states. Indeed, in the contrary, Toros (2010) observed the coexistence relationship between Islam and democracy in turkey. In other region and exactly in Central Asia, Collins and Owen (2016) focused on this relationship and shown that Muslims want democracy. In other side, Saha et al (2014) point out in their analysis that the higher income inequality, tertiary level of education and unemployment lead to increase corruption during the period from 1995 to 2008. Kotera et al (2012) examined the effect of government size on corruption using annual data of 82 countries between 1995 and 2008. This study showed positive effect of government size on corruption in the countries high democracy and negative effect in the countries less democracy as well as Treisman, 2000; Fisman and Gatti (2002); Adserà et al., 2003. Iwasaki and Suzuki (2012) using panel date in for 32 transition economies from 1998 to 2006. They put the progress of structural reform, comprising marketization, rule of law, and democratization as determinants of corruption in transition economies. Serra (2006) tested the main determinants of corruption of 62 countries over the period (1950–1995).she used 16 variables including four economic variable, five sociocultural and seven political variables. She found significant impact on corruption of economic development, Protestant religion, British colonial heritage and democracy.

3. MODEL AND METHODOLOGY
A) Data source
The sample comprises 30 annually data for the period 1984 – 1913.The sources of GDP per capita, government expenditure and education variables are collected from different issues of International financial Statistics and world development indicators**.** The sample of Economic Freedom is unbalanced when begin in 1996. It comes from The Heritage Foundation, where the rest variables (as democracy, Corruption …) sourced from International Country Risk Guide.
This study covers a sample of 13 countries in the MENA countries: Algeria, Bahrain, Egypt, Iraq, Iran, Kuwait, Lebanon, Morocco, Qatar, Saudi Arabia, Tunisia, Turkey and United Arab Emirates.
B) Definition of the model
For checking the relationship between democracy and corruption in MENA countries, we use Dynamic Generalized Method of Moments (GMM) proposed by Arellano and Bond (1991). Generalized method of moments (GMM) can help avoid serial correlation among variables which use the least square method (GLS) see Crakovic and Levine,(2002). Also, this approach sidesteps the need for structural modeling by treating every endogenous variable in the system as a function of the lagged values of all of the endogenous variables in the system. Indeed, the GMM method can be help avoid false results through stationary time's series and avoid producing spurious regression by using instrumentals variables with their own lagged values. See more; Arellano and Bond (1991), Nkurunziza and Bates, (2003), Buonanno, (2005)**.**
The mathematical representation of our specification is:

$$CPI_{it} = \alpha + \beta1\, dem_{it} + \beta2 lngdp_{it} + \beta3 ef_{it} + \beta4\, govz_{it} + \beta5\, er_{it} + \beta6\, law_{it} + \beta7\, rel_{it} + \beta8\, bur_{it} + \beta9\, mil_{it} + \varepsilon_{it} ....(1)$$

Where: (CPI) is Corruption Perceptions Index. (Dem) is democracy variable, (Law) is Law and Order. (Bur), (mil) and (Rel) are bureaucracy, Military in Politics and Religion in Politics (all these indices bellow are ranging from zero to 6). For other variables, (lngdp) presents GDP per capita, (Govz) measured government expenditure as percent of GDP, and (Er) is Gross enrollment ratio. the Index of Economic Freedom (Ef) range from 0 to 100 and calculus on

based 10 quantitative and qualitative factors ((property rights, freedom from corruption, fiscal freedom, government spending, business freedom, labor freedom, monetary freedom, trade freedom, investment freedom, financial freedom. finally, ε is the disturbance term, i and t represents countries and time.

4. CONCLUSION: RESULTS AND DISCUSSION

Table 01: Democracy and corruption using DGMM approach

corruption			democracy		
variable	confessions	P-value	variable	confessions	P-value
DGDPPH	0.73	2.15 **	DCPI	0.46	2.55**
DDMC	0.54	3.85**	DGDPPH	-0.32	-2,63**
DEF	-0,45	-2,25**	DEF	2.93	1.68*
DBUR	0.57	2,45**	DBUR	1.77	1.91*
DGOV	-0.01	1,81*	DGOV	-0.14	-2.95**
DLAW	0.29	1.74*	DLAW	-0.56	-1.90*
DRELG	-0.30	-2.05**	DRELG	1.13	2.65**
Constant	-0.12	-3.68**	Constant	0.04	0.85**
AR (2)	-1.588		AR (2)	-1.403	
P-value	0.112		P-value	0.161	
Sargan test	218		Sargan test	24.97	
P-value	0,99		P-value	0,99	
Wald χ2	27.78		Wald χ2	27.78	
Number of instruements	17		Number of instruements	9	

* and **indicate statistical significance at the 10% and 5% level.

- Column 2 and 5 are reported the coefficients effect on corruption and democracy respectively where column 3 and 6 present P-value. Our results captured the GDP per capita is feed corruption in MENA countries, while one percent of per capita GDP rise corruption about 0.73 and lead to lose more than 2 point in the 0–6 corruption index in MENA net oil and gas exporting countries except United Arab Emirates (these countries are Algeria, Bahrain, Iraq, Iran, Kuwait, Qatar, Saudi Arabia). In this context, magnitude of impacts in countries non-oil producers is less dependent with corruption over the last decade compared the two early decades and compares an oil and gas exporting countries.
- Columns one and two present a positive significantly associated between democracy and corruption. We observe the sign coefficient is broadly unchanged in two columns, which indicates, the influence of positive feedback around about 0.5 points in regressors. According to this estimation, the lower democratization process in MENA countries highly depends to high levels of corruption. A certain democratic and the high income states of the oil exporting countries would not have been decreased corruption level, (See Jetter (2015), Rachdi and Saidi (2014))**.**
- The government size confession is statistically significant and relatively near to zero that can be reveal a small expenditure composite on GDP (less than 15% except GCC countries) and does not have any effect on corruption. Despite the inefficient government spending in MENA countries but continual improvement on education spending argues the modest affected on corruption.

- Also, we note that the bureaucracy quality is relatively very larger and does not reduce corruption (significantly positive), when one standard deviation of bureaucracy increase 0.57 corruptions. (See Mauro (1998), Treisman (2000), Anderson& Gray (2006), Brown et al. (2007), Prasch (2007)…)

- Furthermore, the Index of Economic Freedom is to be significant and negative sign in regressions in MENA countries, that may help explain the inhibit Economic Freedom to reduce CPI (especially in Qatar, turkey, UAE) thought many channels including the improvement market competition, boost private business and investments flow in this region except Iran and Iraq. Indeed, Economic Freedom leads to produce 1.6 points lose on corruption index; see: Paldam, 2002b; Shen and Williamson, 2005; Carden and Verdon, 2010; Pieroni and d'Agostino 2013.

- However, Law and Order variable has important sign impact on corruption because the main reason of this positive reaction between high corruption and weak Law and Order variable can be explains the ineffectuality of legal and juridical systems to reduce level of corruption as consequence in MENA countries during 1984 to 2013, see more Levin and Satarov (2000), Jain (2001), T. Herzfeld, C. Weiss (2003)

- Finally, religion had a negative significant on corruption index and proves to reduce 0.3% corruption against one percent use Islam (Sunni and Shea Muslims) as a proxy of religion in MENA countries, see La Porta etal. (1997); Lambsdorff (2005); Samanta (2011). But we distinguish in this certain paradoxes of the more corrupt in the countries Islamic government than laity government.

- In the democracy columns, the effect of GDP per capita on democracy indicating that increasing ten percent growth reduces democracy about 3% in MENA countries over the period 1983 to 2013 and that can be explained by using oil rents to buy social peace and avoid a popular decisions   See: Karl, 199; Ross (2001), Ngodi, 2005; Tsui (2010), Haber and Menaldo (2011)

- Thus, the non oil counties in MENA region (Tunisia , Morocco, Turkey, Lebanon, Egypt) do not seem the higher income compared the others countries but they are not least democratic countries in MENA compared the countries name : Algeria, Bahrain, Iraq, Iran, Kuwait, Saudi Arabia, and United Arab Emirates.

- It should be noted same negative sign as impact of government size, Law and Order variables on democracy. The weak rule and government expenditure Incompetence are incompatible with well-functioning democracy in Mena countries. Therefore, we note that religion and Economic Freedom are relatively very significant and larger effect on democracy (full elasticity). Both democracy and religion have association direction with liberal democracy in Lebanon, Morocco, Tunisian and turkey , while in countries whose have Islamic militant form as Iraq and Iran can't boost the democracy, equality and improves transparency in their institutions see (Lewis,1994; Midlarsky, 1998). Adding the evidence of economic freedom allows nourishing democracy in many MENA countries in recent year as Bahrain, Kuwait and turkey on the contrary, a free society in Qatar, Arabic Saudi cannot give sustenance to democracy.

- Finally, expansive bureaucracy is positively significant associated with lower democracy in MENA countries, which indicates a one standard of bureaucracy causes 1.77 standard deviation of MENA democracy

Our results of Sargan test and AR (2) test of Arellano and Bond (1991) seems to be good with high P-values more than 5 percent that meaning there no serial-correlation. According to the Wald tests result, when it low p-values appear significant and lower than 5%, well estimation allow us to determine whether the instrumental variables are significant affected to dependent and regressors variables.

LITERATURE

1. Aisen, A. and Veiga, F.J., (2013). How does political instability affect economic growth? European Journal of Political Economy 29, pp 151– 167

2. Arellano, M. and Bond, S. (1991), "Some Test of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment to Employment Equation", Review of Economic Studies, 58: 277-297.

3. Barro, R., & Lee, J. (1993). International comparisons of educational attainment. Journal of Monetary Economics, December, 363–394.

4. Baum, Matthew A. and Lake, David A. (2003). "The Political Economy of Growth: Democracy and Human Capital," American Journal of Political Science 47: 333–47.

5. Billger, S. M., & Goel, R. K. (2009). Do existing corruption levels matter in controlling corruption?: Cross-country quantile regression estimates. Journal of Development Economics, 90(2), 299–305.

6. Buonanno, P. (2005), "Crime and Labour Market Opportunities in Italy (1993-2002)", http://www.unibg.it/dati/bacheca/273/14929.pdf

7. Carden, A., Verdon, L.L., 2010. When is corruption a substitute for economic freedom? Law and Development Review 3, 40–63

8. Emre Toros (2010),The RelationshipBetweenIslam and Democracy in Turkey:Employing Political Cultureas an Indicator, Soc Indicres 95:253-26

9. Go Kotera, Keisuke Okada, Sovannroeun Samreth (2012), Government size, democracy, and corruption: An empirical investigation, Economic Modelling 29 (2012) 2340–2348

10. Haber, S., & Menaldo, V. (2011). Do natural resources fuel authoritarianism? A reappraisal of the resource curse. American Political Science Review, 105(1), 1–26.

11. Helliwell, John F. (1994). "Empirical linkages between democracy and economic growth," British Journal of Political Science 24: 225–48.

12. Houssem Rachdia, Hichem Saidi (2015) Democracy and Economic Growth: Evidence in MENA countries, Procedia - Social and Behavioral Sciences 191 , 616 – 621

13. Huntington, S. P.(1984).Wil lmorecountries become democratic? Political Science Quarterly, 99(2), 193- 218.doi:10.2307/2 150402. Huntington, S. (1991). Democracies: Third wave. Journal of Democracy, 2(1), 12-34.

14. Iwasaki, I., & Suzuki, T. (2012). The determinants of corruption in transition economies. Economics Letters, 114(1), 54–60.

15. Jain, A.K., 2001. Corruption: a review. Journal of Economic Surveys 15, 71–121.

16. Karl, T. (1997). The paradox of plenty: Oil booms and petro-states. Berkeley: University of California Press

17. Kurzman, C., Werum, R. and Burkhart, R.E., (2002). Democracy's Effect on Economic Growth: A Pooled Time-Series Analysis, 1951-1980, Studies in Comparative International Development 37, No. 1, pp 3-33.

18. L. Pieroni, G. d'Agostino, (2013), Corruption and the effects of economic freedom, European Journal of Political Economy 29 (2013) 54–72

19. La Porta, R., Lopez-de-Silanes, F. Shleifer, A. and Vishny, R. (1999). The quality of government. Journal of Law, Economics and Organization 15 (1): 222-279.

20. Lambsdorff, J.G. (2005) 'Consequences and Causes of Corruption: What Do We Know form a Cross Section of Countries?' Discussion Paper No. V-34-05. Passau: University of Passau.

21. Levin, M., Satarov, G., 2000. Corruption and institutions in Russia. European Journal of Political Economy 16, 113–132.

22. Lipset,S. M. (1994). Thesocial requisites of democracy revisited. American Sociological Review,59(1), 23-45.

23. Mauro, P. (1995). Corruption and growth. Quarterly Journal of Economics 110 (3), August: 681-712.

24. michael Jetter , Alejandra Montoya Agudelo and Andre ´ S rami ´rez Hassan (2016), The Effect of Democracy on Corruption: Income is Key, World Development Vol. 74, pp. 286–304, 2015

25. Midlarsky,M. I. (1988) Rulers and the Ruled: Patterned Inequality and the Onset of Mass Political Violence, American PoliticalScienceReview82:491-509.

26. Ngodi, E. (2005). Gestion des ressources pe ´trolie `res et de ´veloppement en Afrique, Pre ´sentation a ` la 11e `me Assemble ´e ge ´ne ´rale du CODESRIA, 6-10 de ´cembre 2005, Maputo, Mozambique.

27. Nkurunziza, J. D. and Bates, R. H. (2003), "Political Institutions and Economic Growth in Africa", http://www.bepress.com/cgi/viewcontent.cgi?article=1186&context=csae

28. Paldam, M., 2002a. The cross-country pattern of corruption: economics, culture and the seesaw dynamics. European Journal of Political Economy 18, 215–240.

29. Paldam, M., 2002b. The big pattern of corruption, economics, culture and the seesaw dynamics. Economics Working Papers 1999–11. School of Economics and Management, University of Aarhus.

30. Rock, M.T., (2009). Has Democracy Slowed Growth in Asia? World Development 37, No. 5, pp. 941–952

31. Ross, M. (2001). Does oil hinder democracy?. World Politics, 53, 325–361.

32. Samanta, Subarna K. 2011. "Corruption, Religion and Economic Performance in OPEC Countries: An Analysis." International Journal of Economics, Management and Accounting, 19(2): 187-208.

33. Serra, D. (2006). Empirical determinants of corruption: A sensitivity analysis. Public Choice, 126(1–2), 225–256

34. Shen, C., Williamson, J.B., 2005. Corruption, democracy, economic freedom, and state strength: a cross-national analysis. International Journal of Comparative Sociology 46, 327–345.

35. Tavares, J. and Wacziang, R., (2001). How democracy affects growth, European Economic Review 45, Issue 8, pp 1341–1378

36. Thomas Herzfelda, Christoph Weiss (2003), Corruption and legal (in)effectiveness: an empirical investigation, European Journal of Political Economy Vol. 19 (2003) 621–632

37. Treisman, D. (2000). The causes of corruption: A cross-national study. Journal of Public Economics 76: 399-457.

38. Tsui, K. (2010). More oil, less democracy? Theory and evidence from crude oil discoveries. Economic Journal, 121, 89–115.

LOCAL DILEMMA ABOUT LIBERALISATION OR INTERVENTION

Maris Pukis
Latvian Association of Local and Regional Government, Latvia
maris@lps.lv

ABSTRACT
Public sector economics describes algorithms of public authorities' decisions about liberalisation of their tasks or intervention in the private issues. Such theory mainly concerns national or supra-national level decisions. Aim is to propose algorithm of similar decisions locally, taking into account individual specific of local situation. Methods of policy analysis for this aim are applied.
Local governments have dual nature - they are executors of national policy as well as autonomous policy-makers and executors of own policy. General principles, formally recognised by all members of the Council of Europe (this concerns also 100% of the EU countries) are: 1) for dividing of competences among national and local authorities - the principle of subsidiarity; 2) for scope and content of intervention - principle of proportionality. The same principles could be applied for decisions about liberalisation or intervention of local issues, which concerns obligatory or voluntary local governments' competences.
Factors, which has to be taken into account to decide about intervention, are presence or absence of several types of local market failure and several types of government failure. Proposed algorithm of decision includes testing of sustainability of private activities, testing of main types of market failures, EU failure, national government failure, local government failure. That first cycle of procedure is practical implementation of the principle of subsidiarity. If intervention is necessary, then there are several options, how to impact on situation. The choice could be done among 1) regulation of private activities with corresponding administration; 2) supplying of public services for free; 3) supplying services or goods for partial payments of beneficiaries; 4) direct entrepreneurship; 5) facilitating private entrepreneurs or organised civil society organisations; 6) outsourcing of corresponding local government activities. That second cycle of procedure is practical implementation of the principle of proportionality to ensure as minimal intervention, as possible.
Keywords: *Local government, Intervention, Subsidiarity, Proportionality, Failure*

1. INTRODUCTION
There is difference between decision making about liberalization or intervention by central politicians and local politicians. That difference is based on the dividing of competences among public authorities. That difference very much depends on national traditions and diversity of values and beliefs.

Question about liberalization or intervention traditionally is topic about presence or absence of market failure. The problem can be discussed also from more general point of view – taking into account main principles of public administration.

Local governments have dual nature - they are executors of national policy as well as autonomous policy-makers and executors of own policy. General principles, formally recognised by all members of the Council of Europe (this concerns also 100% of the EU countries) are: 1) for dividing of competences among national and local authorities - the principle of subsidiarity; 2) for scope and content of intervention - principle of proportionality. The same principles could be applied for decisions about liberalisation or intervention of local issues, which concerns obligatory or voluntary local governments' competences.

Public sector economics describes algorithms of public authorities' decisions about liberalisation of their tasks or intervention in the private issues. Such theory mainly concerns

national or supra-national level decisions. Aim of this paper is to propose algorithm of similar decisions locally, taking into account individual specific of local situation.

Several methods of policy analysis for this aim are applied. Experience of the Latvian Association of Local and Regional Governments (LALRG) to facilitate strategical management of local authorities (Pukis, 2015; LALRG, 2013) is used.

2. MAIN CASES OF GOVERNMENT FAILURE FROM LOCAL POINT OF VIEW

Sources of government failure can be external to local governments (EU legislation, national legislation, regional legislation or over-bureaucratization of any of mentioned governments) as well as internal. Previous decisions of local government can be harmful from the actual point of view.

Government failures can be well explained applying theory of public choice (Buchanan, 1962). Government failures can occur when politicians try to be popular among voters and accept policies and legislation, which is supported by majority. Government failures can occur when bureaucrats try to be fairy, to implement laws as much as possible. And for many other honest motives.

Over- regulation.

Idea of the "state of law" is not so productive, as it looks like. European, national and regional parliaments issue new and new primary legislation, but executive brunch used to be more "productive" than parliaments to accept new peace of secondary legislation. Increasing of the amount of different binding regulations achieve critical amount, when it leads to legal nihilism. Multilevel governments have not enough money to fulfil requirements of legislation. In practice civil servants have relatively high degree of freedom - in several cases they acts according the requirements of law, but in other cases do it partly, "as closer as possible" to the requirements of law.

Difference between attention to regulation, based on national interests and necessity, based on local interests, are difference between average uniform solutions and solutions, based on full evaluation of local circumstances.

Example of over-regulation is practice of the implementation of the EU public procurement rules in Latvia. Goal of EU is to ensure competition in the common market. Complicate procurement procedures are binding for certain level of prices. National implementation apply those complicate procedures for much lover levels of prices, therefore administrative burden increases and local governments lose much time and money.

One of the sources for over-regulation is fundamentalism. Unlimited belief in competition is example of fundamentalism. Balance of belief in competition and belief in protectionism is art of politics.

Harmful restrictions.

There is large amount of different restrictions, accepted by parliamentarians in order to achieve ideals, beliefs and wrong economics' theories. According to public choice theory civil servants used to support new introduction of restrictions for their selfish interests - to increase importance of their office.

For example, in Latvia such harmful restrictions for local governments are:

- Prohibition to be owner of enterprise, except several limited cases. This means, that opportunity of local government to apply in its territory reinventing government approach (Osborn, Gaebler, 1992) is under question.
- Prohibition to alienate ownership, which is necessary for implementation of local government competences. This means, that optimisation of actions with property in order to decrease expenses and to increase efficiency is very limited.

- Payments for services is limited to covering of operational expenses. That leads to necessity to cover capital investments from budget even in cases, when beneficiaries are solvent etc.

Excessive control.
Excessive control is based on wrong idea that any case of law implementation has to be controlled. That leads to tendency of organisation of new and new government agencies or directly to increase of ministerial structures. Each of those structures invent new regulations and prepare plans of improvement of co-ordination, monitoring, audit and punishment.
Increase of excessive control induce increase of reporting. Local governments, instead of public services supplying, spend more and more time to reports for newly organised controllers. Proportion of production of public goods is decreasing.
For example, in Latvia such excessive control is actions of State Audit Office, which deals with the same scope of auditing, as private audits, which are chosen according results of competition and have 22 years practice to evaluate finance report of all local governments, their agencies and enterprises.
Principle of subsidiarity can be used to make choice among preserving (returning to) private responsibility or taking responsibility by local government.

3. MAIN CASES OF MARKET FAILURE FROM LOCAL POINT OF VIEW
Generally, in all cases, when market can't ensure public hopes, there is room for discussion about potential government intervention. Traditionally market failures are discussed from national point of view – if in the national economics and through international trade corresponding good, service, workforce or capital is available, then absence of market failure can be find.
From local point of view market failure means absence of necessary goods, services or resources in local government territory.
If administration is centralised, then dominates national point of view on market failure. Policy makers discuss among themselves in wider categories – absence of positive results in localities seems not so important, free market forces will distribute goods and resources according to demand.
Vice versa - sense of decentralised administration is try to develop each particular territory on the basis of competition among local governments, their residents, entrepreneurs and their organised civil society organisations. Waiting, when market forces after 50 years will solve local problems is not way, how local politicians decide.
Decision about presence or absence of market failure is based on belief in one or another social or economic theory. Different local governments express diversity of values, therefore it is normal to give different answers on the same questions in different territories.

   ➤ Public goods.
Traditionally ideal public goods are divided from private goods by two qualities: a) availability to everywhere (or to every person, according to certain conditions); b) non-sufficiency (where use by one individual does not reduce availability to others). In practice ideal public goods doesn't exist.
For example, availability of kinder-gardens is public good, which is not fully available in all territories of Latvia.
Public good for one part of public used to be public bad for another part. Then we can speak about general public interests, which prevail under individual interests.
In the case of local government it is important the dependence of public good from the local interests. Representative local democracy means, that local ideals (goals, recognized by the

local politicians) not always correspond to the interests of private goods, services, capital or workforce suppliers. In such cases politicians can decide about presence of local market failure. So, there is local deficit of employers, who have capacity to facilitate structural reforms in several administrative territories of Latvia. If local government needs to improve wealthy of its residents, then absence of capable employers and skill workforce could be regarded as substantial market failure.

➢ Negative externalities

Negative externalities rise, when working for profit leads to negative impact to thirst persons. In many cases negative externalities are characteristic namely for local level. Effects, which looks not dangerous from national point of view, can be inacceptable for local society and local elected representatives.

For example, local government can exclude some economic activities by its spatial planning. That also includes private economic activities, if they are protected by national legislation and if private entrepreneurship worse public services.

➢ Monopoly

Monopoly arise in local level very often. Firstly, monopoly can be based of local government decision about organization of public utilities (natural monopoly). Privatization is allowed, but situation not always satisfy to hopes of local residents. It could happen, then for one or another reason involvement of local government is reasonable.

Nature of pubic authorities is service to public interests. Competition among for profit entrepreneurs can lead to concentration of resources with negative effect to diversity. Local governments are normally interested in diversity as much as possible.

➢ Non symmetric information

Non symmetric information is typical in real market. Naturally, it doesn't means that local government has to involve in any such case. For local government very principal is cases of disinformation about local government policy and about local government decisions. That leads to necessity of active information, including not only publication of official policies, local legislative acts and local administrative decisions, but also explanation of reasons, goals and potential impact of local policy.

➢ Strategical interests

Recognizing of the strategic interests of local government as reason for involvement in competition with private sector is achievement of Latvian Association of Local and Regional Governments (LALRG). Principle of self-government (Council of Europe, 1985, Art.3) is recognised by all member states of European Council, but in majority of those states dominate central policy, strategic management of public sector is mainly recognized as prerogative of national government.

Situation, when diversity of politics, which may be based on diversity of ethical beliefs and diversity of economics theories, is not very characteristic. During last years LALRG develops bench-learning method (LALRG, 2013) for facilitating individual approach to development problems in each administrative territory.

Local governments are in permanent situation of competition with other local governments about:

- human resources (there is interest to attract smart and skilful workforce);
- central earmarked grants (in order to develop basic infrastructure);
- private investors (in order to facilitate structural changes of local economy);
- centrally financed projects (in order to improve administrative capacity) etc.
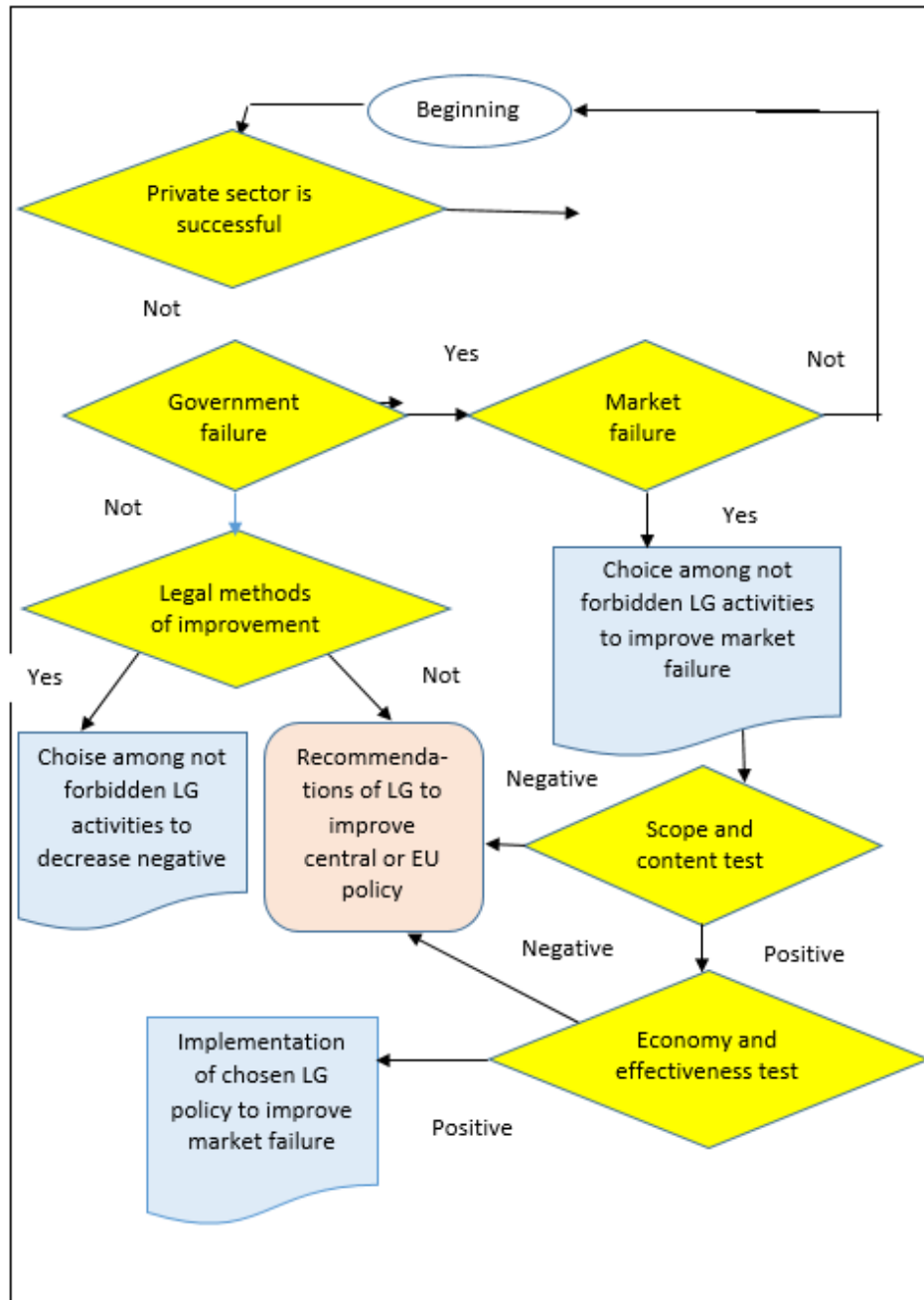
Fig.1. Applying of the principle of subsidiarity for the reaction of local governments to the government failure or to the market failure (Auth.)

4. APPLICATION OF THE PRINCIPLE OF SUBSIDIARITY

The principle of subsidiarity gives preference to decentralisation. That means not disturbing private sector, if private sector is successful. That is starting point for algorithm, (Fig.1). Opportunity of intervention shall be evaluated, if any kind of failure - government failure or market failure occurred. In both cases local government decide how to improve situation. Analysis can lead to two solutions:

- to find legal, appropriate and effective action, which will be performed by oneself;
- to make proposal for appropriate changes in the state policy, national legislation or in state administrative procedures.

To improve government failure local government can perform own action, if it concerns autonomous competences. In such case choice will be among actions, not forbidden to local governments by law. If there is necessity to improve situation with delegated competences, then local politicians can approve recommendations for central government or for EU. Such recommendations can be included in the process of negotiations between local governments association and the central government.

The same concerns cases of market failures. Here problem could be "sent" to central government in two cases:
- When action for improvement is forbidden (as in previous case);
- When preference shall be for centralisation.

Centralisation is preferable in several cases:
- When scope of problem is too large for one administrative territory (executive institutions are more effective in larger territory, including several or many municipalities);
- When majority of residents believe, that equity is preferable for the content of problem, for example - in the case of socialist ideology dominance;
- When economy of scale is applicable - calculations show, that execution in national scale will be cheaper;
- When qualitative efficiency in the larger scale can be achieved.

Final decision, how to react on failure depends on many aspects, all forms of potential local government could be compared. Good solution can be done only after several iterations of both - subsidiarity principle and proportionality principle applying.

5. MAIN FORMS OF LOCAL GOVERNMENT ACTIONS

Local government can react to both types of failures in different ways. Depending on purpose of analysis classification of local government actions can be different. In this case detailed classification (LALRG, 2013), which was used for application of bench-learning method to facilitate smart local government (Pukis, 2015) can be applied:
- regulation by local legislation, when application of those regulations is enough to decrease impact failures substantially;
- administration of local, national or EU regulations - sometimes failures arise by inefficient central administration, which can be improved by local attempts;
- public services for free, if necessary public good equally relates to majority of local government residents;
- subsidised public services for partial payment, if participation by payments substantially increase efficiency and public money is spend in the better way;
- facilitating of private entrepreneurship or organised civil society organizations, that allows to deform private relations not so much, as in case of direct involvement in market; facilitating can be temporary and could be stopped after performing of its mission;
- (for profit) entrepreneurship, which deforms market maximally; that form also can be evaluated as temporary - privatization after performing of its mission;
- social entrepreneurship, when public services or social aid is provided by companies in local government ownership;
- public-private partnership, which allows to distribute responsibility of local government with private partners; this form allows to avoid negative effect of public procurement

rules on the efficiency of entrepreneurship (wasting public money by wasting of time, applying old-fashioned technologies etc.);
- outsourcing - action, which facilitate private entrepreneurship but can deform market and can increase expenditure of public money.

Legal status and financing of above mentioned 9 kinds of action is different. Each of them can be used to minimize negative impact of failures. Efficiency of those actions depend not only on external factors (which used to be similar for different municipalities), but also on internal factors (capacity of staff, available investors etc.).

It shall be underlined, that for profit entrepreneurship is only one of options. For example, local government owned hospitals in Latvia only formally relates to for-profit enterprises. In practice they works as social enterprises, profit is last among several goals of such activity.

Attention to for profit public entrepreneurship depends on economic beliefs. Local government property is collective property of the administrative territory residents, that property is background of local governments' economics and shall be increased. For profit entrepreneurship is tool for communal property increasing. On another hand, local entrepreneurs traditionally think, that increasing of local government property reduce room for private property increasing.

In any case, in lucking behind regions local governments need to be economically more active (Council of Europe, 1998, 2002), made attention to benefits from protectionism additionally to benefits from competition. Here proportionality is the most substantial element. Decision makers had to answer the question - is really impact from intervention is proportional to achieved public benefits?

6. APPLICATION OF THE PRINCIPLE OF PROPORTIONALITY

Text of Art 5, Para 4 of Treaty of the European Union (2007) shoves tendency to organize minimal public administration: "Under the principle of proportionality, the content and form of Union action shall not exceed what is necessary to achieve the objectives of the Treaties". Opposition of bureaucrats to that idea can be find, for example, in the translation of that text to Latvian (where "shall not exceed" is omitted). Fight of bureaucrats against minimalism starts from the distorting of the principles formulation!

Compliance with the principle of proportionality used to be tested by three steps Presence or absence of market failure is not sufficient for final decision about taking responsibility by local government. Potentially applied action has to be tested to:
- legality of public goal;
- suitability to approximate necessary public goal;
- proportionality to achievable public good.

If previously described procedure of application subsidiarity was performed, then legality is evaluated. It shall be underlined, that content of legality depends on character of local government competence. In the case of delegated competence legality is based on national legislation - actions will be allowed by law. In the case of own (autonomous) competence legality means, that local legislation about potential public goal is not controversial to national or EU legislation.

Suitability to approximate necessary public goal is good instrument to filter previously described options (types of local government actions). After that filter only part of potential actions (among 9 types, mentioned in the previous chapter) will remain.

The last element is test proportionality applied actions to achievable public good. After test of suitability normally will stay one or several opportunities to be compared between themselves and with current situation without changes.

Experience of Latvian local government networks (Pukis, 2015; LALRG, 2013) shows that for majority of local territories main problem is depopulation. Among factors, increasing negative mobility away from territory, is old-fashioned structure of local economics. Therefore, structural changes have to be facilitated. Skilled entrepreneurs and corresponding changes in the skills of workforce are necessary.

For several territories, where interest from potential investors is small, it could be reasonable to establish municipal enterprises in order to attract high qualified work force in order to increase of availability of such workforce in local territory. Such actions could be temporary - after increasing of perspective investors' interest local government could privatize his undertaking. In certain circumstances such intervention in market is proportional.

For other territories such measure is not proportional, because there is interest from private entrepreneurs and necessary restructuration of local economics can be achieved by co-operation, without artificial organization of qualified workforce demand.

7. CONCLUSION

Local dilemma about liberalization or intervention shall be solved by each local government by applying principles of subsidiarity and proportionality to local values and circumstances.

Principle of subsidiarity leads to liberalization if private sector can sufficiently solve its problems.

Local governments can take responsibility in the cases, when local government failure or local market failure takes place.

Reaction of local government to government failure or to market failure can be regulation, administration, providing of services for free or for partial payment, facilitation of private sector activities (including privatization), for profit or social entrepreneurship, public and private partnership, outsourcing.

If analysis shows, that central government actions could be more suitable to public opinion or more effective, then principle of subsidiarity leads to centralisation.

Type of local government reaction has to be chose according to principle of proportionality.

LITERATURE

1. Buchanan J.M., Tullock G., 1962. The Calculus of Consent: Logical Foundation of Constitutional Democracy, www.econlib.org; 15.03.2016
2. Council of Europe, 1985, European Charter of Local Self Government, www.coe.org; 15.03.2016
3. Council of Europe, 1998, Economic Intervention by Local and Regional Authorities, No.57
4. Council of Europe, 2002, Neighbourhood Services in Disadvantaged Urban Areas and in the Areas of Low Population, No.75.
5. European Union, 2007, Treaty of European Union
6. LALRG, 2013, Latvian Bench Learning Model, www.ms.lps.lv; 15.03.2016
7. Pius XI, 1931, Encyclical Letter Quadragessimo Anno (May 15): AAS 23, pp.177-228
8. Pukis M., 2015, Local Government Networks for Sustainable Growth of Local and Regional Economy: European Integration Studies, No.9, pp. 60-72
9. Osborne, David, and Ted Gaebler. 1992. Reinventing Government: How the Entrepreneurial Spirit Is Transforming the Public Sector.

THE IMPACT OF REMITTANCES ON ECONOMIC GROWTH AND ACCESS TO FINANCE

Mirjana Gligoric
Faculty of Economics, University of Belgrade, Serbia
gligoric@ekof.bg.ac.rs

Irena Jankovic
Faculty of Economics, University of Belgrade, Serbia
irenaj@ekof.bg.ac.rs

ABSTRACT
In Western Balkan countries, personal remittances make a substantial part of foreign capital inflow. Even though remittances represent an important source of income for households and individuals, reducing poverty and increasing consumption and welfare, there is a great potential of directing these funds in order to achieve long-run benefits regarding economic growth and development. Economic policies should be implemented to create better conditions for higher investment of remittances into production and human capital accumulation, which can yield greater benefits from both micro and macroeconomic perspective. Recipient country financial development may often be negatively affected by remittances, since they help reduction of existing financial constraint and are mostly directly oriented to consumption. In order for the positive link between remittances and financial development to emerge, development of new remittance-linked financial products is advisable. They would help remittance directing into official transmitting channels and increase remittance receivers' access to other banking products, health insurance and education.
Keywords: Economic Growth, Financial Development, Remittances

1. INTRODUCTION

Personal remittances, by definition of the International Monetary Fund (IMF), include: personal transfers, compensation of employees[1] and capital transfers between households. According to data from the World Bank and The United Nations Conference on Trade and Development (UNCTAD), personal remittances are defined as a sum of values distributed in the first two aforementioned categories: personal transfers and compensation of employees[2]. Personal transfers consist of all current transfers made or received by resident households to or from nonresident households. Personal transfers include workers' remittances, including current transfers made by migrants *working* in a country who have resident status in that country, and who are sending money to residents of another country[3]. Compensation of employees represents the total remuneration, in cash or in kind, earned during the accounting period, recorded in international accounts when the employer and the employee are resident in different economies[4]. According to balance of payments data, based on methodology consentaneous with international guidelines from the IMF's Balance of Payments and International Investment Position Manual (BPM6), personal transfers are a part of secondary income account, and compensation of employees is a part of primary income account.

---

[1] More specifically: compensation of employees less expenses related to border, seasonal, and other short-term workers. See IMF's *Balance of Payments* and International Investment Position *Manual* (IMF BPM6, 2010), https://www.imf.org/external/pubs/ft/bop/2007/pdf/bpm6.pdf.

[2] The World Bank, http://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS and UNCTADstat, http://unctadstat.unctad.org/wds/TableViewer/summary.aspx.

[3] IMF's *Balance of Payments* and International Investment Position *Manual* (IMF BPM6, 2010), p. 210.

[4] IMF's *Balance of Payments* and International Investment Position *Manual* (IMF BPM6, 2010), p. 185.

In Western Balkans countries (WBC), personal remittances represent a large part of foreign capital inflow. According to the World Bank data, in WBC (Bosnia and Herzegovina, Albania, Serbia, Montenegro, FYR Macedonia and Croatia) personal remittances inflow as a part of GDP is above average of other Central Eastern European countries (CEE)[5]. Out of six WBC, four are distinguished for having rather high percentage of remittances in GDP. In the period from 2007 to 2014, yearly remittances inflow to Bosnia and Herzegovina (BIH) made up 12.4% of GDP on average, in Albania remittances accounted for 10.0% of GDP, in Serbia 9.0%, and in Montenegro 7.6% (Table 1). At the same time, average remittances inflow to 10 CEE countries accounted for 2.5% of GDP. Even though the remittances inflow to FYR Macedonia and Croatia is lower compared to inflow to BIH, Albania, Serbia, and Montenegro – making it approximately 4.0% and 3.3% respectively – it is still above CEE average. Thus, data on yearly remittances inflow point to considerable scope of foreign assets "pouring" into WBC every year, placing them on the very top of the world list of countries ranked by remittances inflow as a part of GDP (BIH, Albania, Serbia, and Montenegro are in the first 35 countries on the list, according to the World Bank data for 2013[6]). According to the newest World Bank data regarding remittances inflow level, Serbia is ranked second on the list of countries in the region of Europe and Central Asia[7].

Table 1. Remittances inflow in % of GDP in West Balkan countries, 2007-2014 (World Bank and for CIE authors' calculation based on World Bank)

	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
BIH	17.4	14.5	12.3	10.8	10.7	10.9	10.9	11.4
ALB	13.7	11.6	10.9	9.7	8.7	8.3	8.6	8.6
SER	9.3	7.2	10.9	10.4	8.5	8.7	8.8	8.4
MNE	5.4	6.6	7.3	7.3	7.6	8.1	9.5	9.4
MCD	4.1	4.1	4.1	4.1	4.1	4.0	3.5	3.2
CRO	3.1	2.9	3.0	3.2	3.4	3.7	3.8	3.8
CEE	2.8	2.5	2.3	2.3	2.3	2.4	2.6	2.6

Note: BIH - Bosnia and Herzegovina, ALB - Albania, SER – Serbia, MNE – Montenegro, MCD – FYR Macedonia, CRO - Croatia, CEE – other countries of Central and Eastern Europe (Bulgaria Romania, Estonia, Latvia, Lithuania, Czech Republic, Poland, Hungary, Slovenia, Slovakia).

WBC are also distinguished as countries with high level of remittances inflow seen as a part of export and import of goods and services and their negative balance – trade deficit. Compared to the average in CEE countries, all WBC have higher level or remittances in the value of products and services export. According to that indicator for 2014 (Figure 1), especially distinguished are BIH (32%), Albania (29%) and Serbia (23 %). Although this indicator is partly high because of relatively low denominator in the quotient (of the export in these countries), it still shows that the fifth to third of foreign exchange earnings that these countries receive through exporting goods and services comes into countries via remittances. If we compare the value of remittances with the value of imported goods during 2014 we come to the

---

[5] Bulgaria, Romania, Estonia, Latvia, Lithuania, Czech Republic, Poland, Hungary, Slovenia, Slovakia.

[6] According to existing data for 2014, these four countries are among first 30, but considering there are no available data about all high ranked countries yet for 2014, we chose to show data from 2013 in the text.

[7] The World Bank. (2016). *Migration and Remittance Factbook 2016*. World Bank Group, 3rd edition, http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1199807908806/4549025-1450455807487/Factbookpart1.pdf

percentage of 5% in Macedonia to near 18% in Albania and Serbia and 19% in BIH (Figure 1). That means that in Albania, Serbia and BIH these funds are approximately equivalent to the value of two months' import of goods and services. The quotient of the remittances and import in CEE countries is around 3.4%.
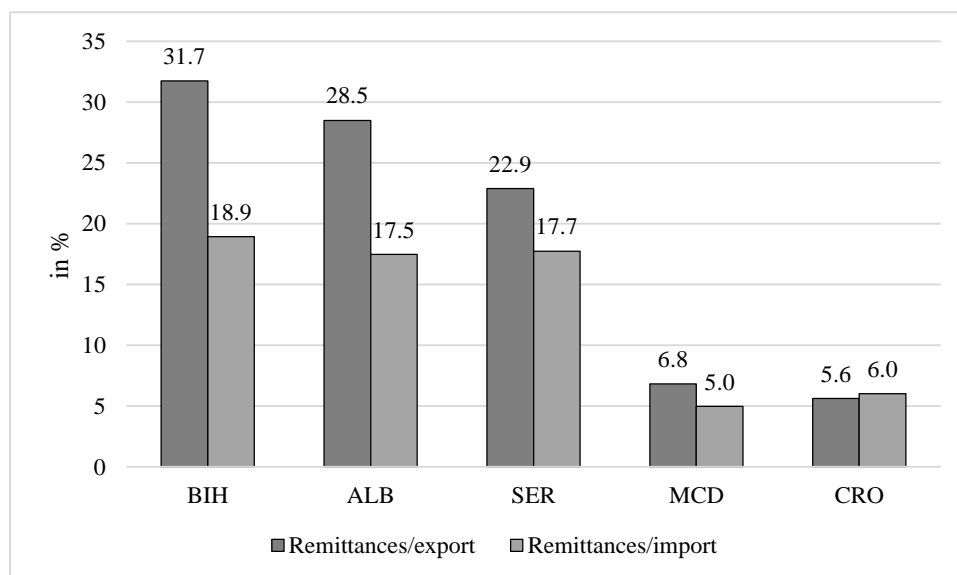
Figure 1. The remittances inflow as a part of goods and services export and import in West Balkan countries, 2014 (Authors' representation based on data from UNCTAD)

Note: BIH - Bosnia and Herzegovina, ALB - Albania, SEB – Serbia, MNE – Montenegro, MCD – FYR Macedonia, CRO – Croatia.

Thus, from macroeconomic aspect, the remittances are an important source of income because in large part they ensure the coverage of trade deficit. In Serbia in 2014, 80% of trade deficit was covered by remittances, which places Serbia on top spot among WBC. In 2014 in BIH that percentage was 47%, in Albania 45% and in FYR Macedonia 18% (Figure 2) [8].

Figure following on the next page

---

[8] In the database of UNCTAD, there are no available data about goods and services import in Montenegro. For that reason we were not able to calculate the level of remittances in import and in trade deficit. Data about the level of remittances in export in Montenegro are, however, available and that level is rather high, on average 70% in the period 2008-2014, with the highest level (92%) in 2014 (Source: UNCTAD).
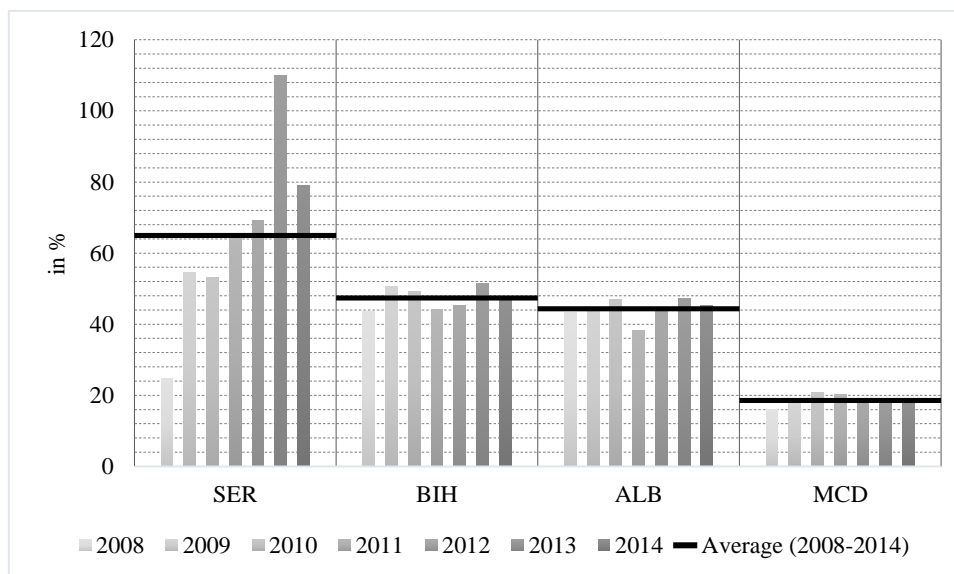
Figure 2. The remittances inflow as a part of trade deficit in WB countries, 2008-2014
(Source: Authors' representation based on data from UNCTAD)
Note: BIH - Bosnia and Herzegovina, ALB - Albania, SER – Serbia, MCD – FYR Macedonia.

2. REMITTANCES AND ECONOMIC GROWTH

Considering that remittances add to earnings of individuals/families, they reduce poverty in developing countries. In their research, Adams and Page (2005) have estimated the model on a sample of 71 developing countries and proved that remittances inflow growth of 10% per capita through official channels leads to poverty reduction by 3.5%. Positive impact that remittances have on poverty is proved in a number of other papers too (e.g. Acosta et al. 2008, Adams et al. 2008), even though newer researches indicate that remittances have more effect on reducing the severity of poverty than the scale of poverty[9]. The insurance hypothesis – weather sending remittances is determined by altruistic motives or individuals have migrated exactly with the goal of diversifying risks of creating shocks in the income of their home country[10] - additionally suggests that remittances contribute to reducing poverty. On examples of numerous countries it is confirmed that remittances inflow was higher when the receiving country registered slower economic activity or periods of recession, political or social crisis and natural disasters[11]. Nevertheless, not all households receive remittances and they are not distributed according to the needs of citizens for additional income but according to personal ties with the ones who send them, which means remittances are not by nature assigned to the poorest or the most vulnerable – as is case with public aid, and thus they can lead to reducing inequality (v. Acosta et al. 2008), but also to the growth of inequality – which is confirmed in some papers (Adams et al. 2008).

From the macroeconomic aspect, the effect that remittances have on economic growth in long term is very important. Empirical researches that study the effect of remittances on sustainable economic growth and development have come to different, even contradictory conclusions.

---

[9] Quoted from Ratha, D. (2013). *The Impact of Remittances on Economic Growth and Poverty Reduction*. The Migration Policy Institute Policy Brief No. 8, p. 5.
[10] Bettin, G., Presbitero, A. F., and Spatafora, N. L. (2015). Remittances and Vulnerability in Developing Countries. *The World Bank Economic Review* Advance Access published September 29, 2015, 1-29, p. 2.
[11] Ratha, D. (2013). *The Impact of Remittances on Economic Growth and Poverty Reduction*. The Migration Policy Institute Policy Brief No. 8, p. 5.

On the one hand, remittances can negatively impact economic growth. Firstly, remittances inflow means higher disposable income for individuals, which can lessen their motivation for work and thus damage economic growth. Remittances can also lead to currency appreciation which negatively influences trade balance, which is an example of the so-called Dutch disease. Still, it is proved that in case of remittances this effect is less evident than in case of discovering natural resources, because remittances represent relatively stable asset inflow, are more predictable and it is easier to control their influence on the economy of the country receiving them[12]. Besides, remittances usually have "consumer effect", contributing to the growth of demand and thus inflating prices.

On the other hand, remittances can contribute to macroeconomic stability in the country because they represent very stable foreign inflow, which can have wider positive effects on the readiness of investors to make bigger investments (FDI, portfolio investments) in the country.

Besides inflating disposable income in many countries and, as already mentioned, reducing poverty, remittances can be a source that individuals/families use for savings and investments. If used for investments, both into physical and human capital, remittances lead to acceleration of economic growth, which can affect income and welfare growth in long term. The research conducted by the authors Catrinescu et al. (2009) shows that remittances positively influence economic growth and that the opposite conclusions in some researches are a result of the problem of endogeneity in the estimated models which is not adequately controlled or the omitted variable bias. Namely, these authors point out and prove the importance of quality of institutions in the country that receives remittances. In fact, stronger institutions contribute to the efficiency of remittances usage[13], thus increasing positive effect these assets have on economic growth.

Having that in mind, we would like to point out a few factors that the creators of economic policy might want to consider when discussing higher (long term) benefits that remittances inflow has on economic growth: a) better briefing/education of the receivers of remittances about using disposable financial products (see the next part of this paper), b) lower cost of sending remittances via formal channels, which would increase assets availability in the financial system (see the next part of this paper) and the resistance of the country to exogenous shocks, c) raising the quality of the institutions which can influence channeling remittances into investments into both human and physical capital, which would open up an array of possibilities and thus bring more benefits to the population of a country that has an exceptionally high remittances inflow, such as many developing countries do.

3. REMITTANCES AND FINANCIAL DEVELOPMENT

Remittances reduce poverty in developing world. By increasing income for individuals and families, besides higher direct consumption, these cash flows are associated with human capital development through higher education. They also increase health protection level in receiving countries. Remittances show countercyclical behavior. Their inflow increases in times of crises, helping receiving households to buffer external shocks, representing a special form of insurance.

---

[12] Ratha, D. (2013). *The Impact of Remittances on Economic Growth and Poverty Reduction*. The Migration Policy Institute Policy Brief No. 8, p. 7.

[13] Catrinescu, N., Leon-Ledesma, M., Piracha, M., and Quillin, B. (2009). Remittances, institutions, and economic growth. *World Development*, *37*(1), 81-92, p. 90.

In addition, there are also some positive effects of these inflows when receiving entities channel them to investments. These invested remittances flows can often have broader community impact.

For significant number of developing countries remittances in absolute amounts surpass the level of official aid and FDI inflows. Remittances increase the creditworthiness of receiving countries and can provide more favorable borrowing terms. By reducing a risk of default, as World Bank's analyses show, countries with higher remittances inflows can borrow more.[14]

Policymakers should do more to maximize the positive effects of remittances by reducing the costs of official transfer of these inflows and by channeling them to productive activities on both, micro and macro level.[15]
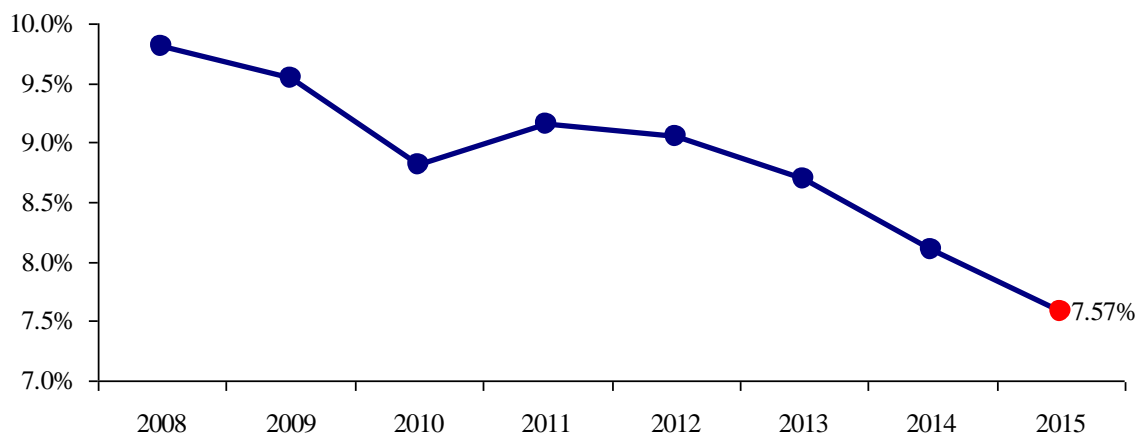
Figure 3. Global Average Total Costs for sending USD 200, annual averages
(https://remittanceprices.worldbank.org)

Although the global average costs of remittances transfer are steadily decreasing (see Figure 3), the situation is not the same in each developing country. While high-volume remittance transfer trajectories face cost reduction, costs remain high in low-volume paths. Some countries face significant resistance to cost reduction by money transfer agencies and banks operating on their financial markets.[16]

In addition to necessity of remittances' transfer cost reduction, policy measures should be applied that assure that receivers of these inflows can more easily approach to other financial services, such as health insurance or education financing. Governments should certainly not impose to migrants and their families the way they will use their money, but they should provide enough incentives, financial schemes and products that can help remittances investment into human and physical capital and projects beneficial to the whole economy.

In some countries remittances represent more than 1/5 of the GDP. And that is just a recorded part of inflows. Total inflows are estimated to be significantly higher due to unofficially sent and unrecorded amounts. Thus, the potential of these flows for possible investments is even more significant if they could be properly channeled. The stability of these flows over time is the additional advantage of remittances in comparison to private debt, portfolio equity investments and FDI inflows to developing countries.

---

[14] The World Bank. (2013). *Migration and Development Brief 20*,
http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-
1288990760745/MigrationDevelopmentBrief20.pdf

[15] Ratha, D. (2013). *The Impact of Remittances on Economic Growth and Poverty Reduction*. The Migration Policy Institute Policy Brief No. 8.

[16] The costs of transfer of USD 200 via Western Union to Serbia reach 13.6% of the sent amount taking into account FX conversion to local currency, RSD.

One of the often stated critics against remittances development potential is that, although they are among least volatile inflows of capital to developing countries, they are not sustainable in investment terms since they are mostly channeled to consumption. On the other side, many household surveys in developing countries show that income increase due to remittances is mostly spent in human capital-building areas (health care and education) compared to other forms of income spending.[17]

Evidences show that households receiving remittances are financially better of in many dimensions. Remittances are countercyclical flows that increase in times of economic crises, financial markets declines, political and social crises and natural disasters when migrants help their families in country of origin. Their role is macro-economical too. Since they are stable flows, they reduce investors panic and buffer current account reversals during stress periods.[18] Remittance receivers have on average higher savings in comparison to other households that is a special form of insurance against a loss of income and shocks on household welfare. Consumption smoothing effect of remittances allows households to focus on more profitable economic activities. Countries that are high remittance receivers demonstrate higher self-employment and increased small business investments (asset accumulation in farm and other equipment).

The extent to which countries benefit from remittances' inflows depends on the strength of institutions and macroeconomic conditions. Although some studies show that recipient country financial development may often be negatively affected by remittances since they are mostly directed to consumption[19], if properly supported by economic policymakers, remittances may increase domestic savings and financial intermediation.

In order for the stronger positive link between remittances and financial development to occur, development of new remittance-link financial products is advisable. They would help remittance directing into official transmitting channels and increase remittance receivers' access to other banking and financial market products, health insurance and education.

Issuance of specific financial instruments such as diaspora bonds or remittance-linked notes can help a country to reduce existing financial constraint. In crisis periods migrant investors are expected to be more loyal and to leave capital in the country of origin in comparison to other foreign investors that usually withdraw their money. The issuance of this specific debt instruments helps developing country to start infrastructure, housing, health and education projects.[20]

In addition, future inflows of remittances can be used as collateral for government or private sector borrowing in international markets. The proper macroeconomic framework for remittance channeling can increase credit rating of the receiving country and its external debt sustainability. New World Bank-IMF debt sustainability framework starting from 2009 allows countries that receive significant remittances - more than 10 percent of their GDP and 20 percent of exported goods and services - to have higher level of debt.[21]

---

[17] Valero-Gil, J. (2008). *Remittances and the household's expenditures on health.* MPRA Paper No. 9572, posted 19. July 2008.

[18] Ratha, D. (2013). *The Impact of Remittances on Economic Growth and Poverty Reduction*. The Migration Policy Institute Policy Brief No. 8, p. 5-6.

[19] Bettin, G., Presbitero, A. F., and Spatafora, N. L. (2015). Remittances and Vulnerability in Developing Countries. *The World Bank Economic Review* Advance Access published September 29, 2015, 1-29.

[20] Ratha, D., Mohapatra, S., and Plaza, S. (2008). *Beyond Aid: New Sources and Innovative Mechanisms for Financing Development in Sub-Saharan Africa.* World Bank Policy Research Working Paper 4609.

[21] The World Bank. (2013). *Migration and Development Brief 20,*
http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1288990760745/MigrationDevelopmentBrief20.pdf

Main policy goals that would increase positive effects of remittances on financial development and stimulate growth by making them safer, less costly and more productive include among other:

- better international institutional cooperation in remittance data monitoring of both formal and informal flows,
- further lowering of costs of official money transfer and passage to flat rates instead of percentage of the amount sent especially in the era of almost costless electronic transfers,
- stronger connectivity of remittances and broader financial access for receiving households through basic and specialized remittance-based financial products development (transaction and saving bank accounts, remittance backed loans for microfinance and agriculture, education accounts and credits, health insurance products, etc.),
- using remittances to boost capital market development – governments of both sending and receiving countries and international financial institutions should develop new channels for productive remittance usages on both micro and macro level. Creation of diaspora bank, and instruments such as remittance linked loans, diaspora bonds, securitization of remittance flows, can help both financial and broader economic development.
- Inclusion of remittances in calculation of sovereign credit rating and borrowing capacity that could reduce existing financial constraint.

4. CONCLUSION

We believe there is a considerable potential for channeling remittances in a way that could make a bigger contribution to accomplishing long term economic growth and development in developing countries, including Western Balkan countries. Economic measures should be applied with the goal of creating better conditions for bigger investments of remittances in production, and also in accumulation of human capital, which can result in more benefits, both from microeconomic and macroeconomic point of view.

The national governments of receiving and sending countries together with financial institutions should provide remittance channeling framework that would make these resources safer, cheaper and more efficiently used in productive activities. These could fortify financial development of developing countries with positive impacts on their growth and development prospects.

LITERATURE

1. Acosta, P., Calderon, C., Fajnzylber, P., and Lopez, H. (2008). What is the impact of international remittances on poverty and inequality in Latin America?. *World Development*, *36*(1), 89-114.
   http://www.sciencedirect.com/science/article/pii/S0305750X07001945
2. Adams, R. H., Cuecuecha, A., and Page, J. (2008). The impact of remittances on poverty and inequality in Ghana. *World Bank Policy Research Working Paper Series, Vol.*2008, 1-41.
3. Adams, R. H., and Page, J. (2005). Do international migration and remittances reduce poverty in developing countries?. *World development*, *33*(10), 1645-1669.
4. Bettin, G., Presbitero, A. F., and Spatafora, N. L. (2015). Remittances and Vulnerability in Developing Countries. *The World Bank Economic Review* Advance Access published September 29, 2015, 1-29.
   http://wber.oxfordjournals.org/content/early/2015/09/29/wber.lhv053.full.pdf+html

5. Catrinescu, N., Leon-Ledesma, M., Piracha, M., and Quillin, B. (2009). Remittances, institutions, and economic growth. *World Development*, *37*(1), 81-92.
6. Donovan, T. (2013). *Istraživanje i studija izvodljivosti formalnog sektora za prenos novca i alternativnih sistema za prijem i slanje doznaka u Srbiji.* Savet Evrope.
7. IMF's Balance of Payments Manual, 6th edition (IMF BOPM6, 2010), https://www.imf.org/external/pubs/ft/bop/2007/pdf/bpm6.pdf.
8. Ratha, D. (2013). *The Impact of Remittances on Economic Growth and Poverty Reduction*. The Migration Policy Institute Policy Brief No. 8.
9. Ratha, D., Mohapatra, S., and Plaza, S. (2008). *Beyond Aid: New Sources and Innovative Mechanisms for Financing Development in Sub-Saharan Africa*. World Bank Policy Research Working Paper 4609.
http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2008/04/28/000158349_20080428101826/Rendered/PDF/wps4609.pdf
10. Suki, L. (2006). *Remittances in Serbia and Financial Sector Development: Business Opportunities and Priorities for Investment*. Program on Remittances and Development, Center on Globalization and Sustainable Development, The Earth Institute at Columbia University, September 2006.
11. The World Bank Data, http://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS
12. The World Bank. (2013). *Migration and Development Brief 20*, http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1288990760745/MigrationDevelopmentBrief20.pdf
13. The World Bank. (2015). *Remittance Prices Worldwide*. Issue No. 16. https://remittanceprices.worldbank.org/sites/default/files/rpw_report_december_2015.pdf
14. The World Bank. (2016). *Migration and Remittance Factbook 2016*. World Bank Group, 3rd edition
http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1199807908806/4549025-1450455807487/Factbookpart1.pdf
15. UNCTADstat, http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=86
16. Valero-Gil, J. (2008). *Remittances and the household's expenditures on health.* MPRA Paper No. 9572, posted 19. July 2008. https://mpra.ub.uni-muenchen.de/9572/

A MULTIFARIOUS, MULTIFACETED APPROACH TO THE MULTIPOLAR WORLD: A NECESSITY

Petar Kurecic
University North, Koprivnica, Trg Žarka Dolinara 1, Croatia
petar.kurecic@unin.hr

Binoy Kampmark
The Royal Melbourne Institute of Technology University
124 La Trobe Street, Melbourne, Australia
bkampmark@gmail.com

ABSTRACT

If we compare today's world with the World(s) from 1914, 1929 or 1939, some similarities occur: multiple powerful actors on the global and regional levels with conflicting interests, economic difficulties of a large number of economies, and the inability of "the international community" to put a stop on the world's most intense conflicts or rivalries. The Great Recession, which hit the developed, especially European economies the hardest, has shifted more economic power into the direction of emerging economies, thereby accelerating an inevitable economic and political change. Various states have managed to accelerate the change in the distribution of economic wealth. These states, grouped mainly in the BRICS, and in the Next Eleven (N11) have shown, contrary to the Western, "culturally superior" geopolitical thought, that they are neither backward nor incompetent, thereby challenging the developed states. After the paradigm of American Empire, which ended in the worst economic crisis in 70 years, it is time for a new paradigm. Since it would be an illusion to think that multipolarity would be shaped by all the parties concerned, it has to be shaped by those most important. However, the current relations between most powerful states are all but cooperative. The pragmatic relations and the common goals of the BRICS states should not be overestimated. The relations between the USA and the EU, which show a high level of homogeneity because of the Ukrainian crisis, may not in the future be so close. A clear difference would exist between the arranged and the accepted multi-polarity, and a multi-polarity in which one side is not inclined but compelled to accept multipolarity, concurrently limiting its achievements. An approach to the present and the future multipolarity and multipolar world that would be multifarious and multifaceted is therefore a necessity.
Keywords: Multifaceted and Multifarious Approach, World Economy

1. INTRODUCTION

Hegemony historically has operated to soften the tensions between the internationalist imperatives of capitalism and the nationalist interests of nation-states. A hegemonic power has an incentive to force other nations to abandon their national capitalism and economic controls and to accept a world of free trade, free capital flows, and free currency convertibility. This is so because as the world's dominant economic power, it has the most to gain from such a free world and the most to lose from nationalist efforts to limit the free movement of capital, goods, and currencies[1] (Mercille, 2008: 57-58). After the fall of the Soviet Union, the international democratic order was rewritten by the US. By openly appropriating the universal in its national interest, it started seeing in itself an undisputed world power, capable of mobilising military-

---

[1] The hegemonic power is therefore self-interested in creating and spreading the rules, institutions and values that will foster the internationalization of capital. Moreover, it often finds it necessary to use its military power as "global policeman" to protect the international system against external threats and internal rebellions (Mercille, 2008: 58).

technological facilities in any region and securing control of any resource by dominating its allies, isolating adversaries and sustaining the client regimes. Analytically, the massacre of September 11 became a starting point for the US to launch the second version of the New World Order (Petras, 2002). The ascent of new great powers is the strongest evidence of incipient multipolarity, and the two most important indicators of whether new great powers are rising are relative growth rates and shares of world GDP (Kennedy 1987; Gilpin 1981) (in Layne, 2011: 151). The contemporary world is a world of multiple powerful actors on the global and regional levels, with conflicting interests, economic difficulties of large number of economies, and the inability of the "international community" to put a stop on the world's most intense conflicts or rivalries. The world is unable to solve some of its worst security crises – that is a fact that represents a repetition of modern history. Is the fact that the world has becoming more multipolar responsible for its inability to solve the most serious crises? And what are the causes of this multipolarity?

The main hypotheses of the paper are the following:
1) Multipolarity can in its large part be connected with asianisation in the economy, and consequently political power. The asianisation of the popular culture and the military power is far slower, albeit the fact that large Asian states are narrowing the gap on that fields too;
2) The future will bring the continuation of the present processes. For us, two are the most important: The rise of contenders will be more rapid than the rise of dominant states, and the role of the nation state/national economy will not decrease, thereby creating conditions for a truly multipolar world in the first half of the 21st century.
Multipolarity, as an ever changing process (and a condition which represents a timeframe of this continuous process), essentially functions as a struggle between dominant and contender states, through processes of uneven development (Harvey, 1995) or simultaneous processes of uneven and combined development (see Desai, 2013). In the 20th century, historical shifts between attempted unipolarity/hegemony and resulting multi-polarity exactly witnessed the struggle between national economies of the dominant, developed states and the contender states (in the contemporary world, so-called emerging economies of the large non-Western states).
Considering the hypotheses that are set forth in this paper, in studying and explaining multipolarity, it will be viewed primarily as an outcome of combined development caused shifts in the geographical (from Europe and North-America to Asia, and in a less degree Latin America) and cultural (from Western to non-Western states i.e. societies) distribution of economic power and consequently political and military power.

2. DISCUSSION
2.1 The origins of the contemporary multipolarity: geographical and cultural re-distribution of economic power
The unipolar era already is visibly drawing to a close. Three main drivers explain the impending end of the Pax Americana. First, the rise of new great powers—especially China—is transforming the international system from unipolarity to multipolarity. Second, the United States is becoming the poster child for strategic over-extension, or as Paul Kennedy (1987) dubbed it, imperial overstretch. Third, the United States' relative economic power is declining. In particular, mounting US fiscal problems and the dollar's increasingly problematic role as the international financial system's reserve currency are undermining US hegemony (Layne, 2011: 150). The question of possible US decline could not be answered using the dominant International Political Economy (IPE) paradigms of the day, but that a thorough rethinking of how to make sense of US power in the global political economy was necessary. Gill (1990: 42) also broke from the theory of US decline. His neo-Gramscian perspective revised the category

of hegemony not as simply a physical capability such as military might and economic weight, but as 'intellectual and moral leadership' (Parisot, 2013: 1160). The economic power of the world has undeniably spread outside of (Western) Europe and North America, making the East, South and Southeast Asia the workshops of the world. China has to be credited for that the most[2]. That does not mean that the era of Western role has shifted to China and East Asia exclusively. Nevertheless, it has spread and it now include several centers other than the West: We do not see so much a recentring of the global economy in East Asia, as Arrighi and Silver (1999: 219) claim, as much as a decentring of the global economy; its fragmentation and the rise of several zones of intense global accumulation (Robinson, 2005 :9). Demographic capacity outside the Western, developed world, has become economic power. Hundreds of millions of people have become industrial workers, albeit very large proportions of the people in these regions still sustain on agriculture. Therefore, if we consider the economic power and its distribution around the world, maybe it is better to speak of an "asianisation" instead of a globalization[3]. The current economic crisis, which hit the developed, especially European economies the hardest, has shifted more economic power into the direction of emerging economies, thereby accelerating an inevitable economic and political change. This crisis can be characterized as a manifestation and a booster of combined development. The crisis also has unavoidable cultural implications, since some, mainly Asian, ex-colonies have managed to accelerate the change in the distribution of economic wealth. These states, grouped mainly in BRICS, and in the Next Eleven (N11), have shown, contrary to the Western, culturally "superior" and racist geopolitical thought, that they are not backward or incompetent, thereby challenging the developed states. The globalization paradigm also has to be rejected since the role of dominant and contender states in contemporary world has remained firm, and the world is marked by the struggle between these two groups of states and not "flattening by the globalization". Besides that, the inequality (measured by GINI index) in most of the states of the world has increased and not decreased, and is increasing. Therefore, the notions about the "flat world" (see Friedman, 2008) do not describe the reality of the present day world. The authors that can definitely not be characterized as the proponents of globalization, Harvey, as well as Hirst and Thompson, agree with T. Friedman on the existence of three globalizations: For Harvey (1995) and for Hirst and Thompson (1996), the geography of capitalism has constantly experienced a process of globalization since its emergence in the sixteenth century (during the Age of Exploration), and a careful historical analysis would suggest that the period from 1870 to 1914 experienced even greater attributes of globalization than the current period of supposed interdependencies. Thus, for Harvey (1995: 8), a more appropriate term for the current "globalization" would be the "*process of production of uneven temporal and geographic development*"[4]. Yet as Harvey also acknowledges in a cautionary tone, contemporary capitalism has witnessed a "limited qualitative change" in comparison to the era of previous globalization in the late 19th and early 20th century (Ibid: 12) (in: Samers, 1999: 168). From the citation, we can see that the current globalization can be characterized as even a bit less globalist, considering the level of supposed interdependencies. Nevertheless, what is more important for

---

[2] When Germany industrialized in the late 19th century, it transformed the geography of world capitalism. When Japan recovered from the devastation of World War II, the geography of the world economy was similarly transformed. We are at the beginning of another such transition. Given the size of the country involved, it is likely to be bigger and more important than the transitions associated with the emergence of either Germany or Japan (Kellogg, 2015: 287).

[3] By 2025, six emerging economies— Brazil, China, India, Indonesia, South Korea, and Russia—will collectively account for about one-half of global growth. (Lin, 2011: 30).

[4] While neoliberal proponents suggest that absolute poverty levels have declined since the early 1980s (Dollar and Kraay, 2002), the reliability of such statistics has come under fire (Wade, 2003). Poverty reduction statistics do not recognize spatial and temporal variations in inflation or purchasing power, and if China is excluded, the 1990s actually show an increase in global poverty (UNDP, 2002).

the purpose of this paper is Harvey's thesis of the "*process of production of uneven temporal and geographic development*". Capitalism has indeed experienced a "limited qualitative change", adopting itself to contemporary conditions, mainly in the developed states of Europe and North America. However, its goals have remained the same, since they are comprised in its own nature. Besides that, in the underdeveloped states of Africa and Asia, where neoliberalism has quickly spread[5], capitalism has remained brutal. In many developing states, the working conditions and living standard look like the working conditions and standard of the workers and miners of the 19th century Europe.

Desai (2013: 2-3, 10-11) uses the term "*uneven development*" adding to it the term "*combined development*", stating that the processes of *uneven and combined development* (UCD) predominantly characterize the modern world, and states are the ones that hold the dominant role in these processes in spite of the paradigm of globalization that claims otherwise. States dominate the political economy on the domestic level, and geopolitical economy on the international level. Therefore, Desai's thesis on geopolitical economy is that it is a product of uneven and combined development. UCD refers to the fact that on the one hand, dominant states tend to, including through means of formal and informal imperialism, preserve existing uneven configurations of capitalist development which favor them; whereas on the other hand, contender states accelerate capitalist and, such as in the case of the USSR, have accelerated communist development, all in order to contest the imperial projects of the dominant states[6].

Robinson (2002) however argues that globalization has arisen as a product of the rise of transnational capital and a transnational capitalist class, and has been facilitated by the revolution in communications technologies and transportation, which has created a genuinely global, as opposed to international economy. This global economy is characterized by capital mobility, globalized circuits of accumulation, and the fragmentation of production. Globalisation thus mainly refers to new forms of organizing capitalist production beyond the territorial boundaries of the nation state, and is therefore related to post-Fordist restructuring since the 1970s. This is reflected in increased direct foreign investment, including mergers and acquisitions between firms originating in different countries, the increased practice of subcontracting and outsourcing by companies to (local and foreign) suppliers, and the increase in trade between two or more subsidiaries of the same parent company (Robinson 2004, 18, 23-24, 58, 55) (Kiely, 2006: 206). Nevertheless, Robinson's theses about transnational capital and class do not stand in opposition with the thesis of Harvey. Harvey (2005: 11) broadly frames neoliberalism as a project primarily aimed at freeing capital from the constraints imposed by these "embedded liberalisms", and more directly as a process ultimately focused on restoring the class power of economic elites (Buckley, 2013: 259). What we are left with is a transnational capitalist class (Harvey, 2005: 11). The fact that the contender states are rising more rapidly and that the state had to intervene (and still has in many countries) during the present economic crisis does not mean that transnational capitalist class is not pursuing its interests. Most interventions of the state in developed countries, such as the U.S.A. and the countries of the European Union (especially the European Monetary Union) were actually aimed at saving this class, through bailouts of mostly privately owned banks.

---

[5] 'The expansion of neo-imperialism occurred not only through the policies of states, but also through the actions of corporations and the mechanisms of trade, finance and investment' (Magdoff, 2003: 15).

[6] Such hothouse development is called combined development because it combines or compresses many development stages into shorter and more intense bursts. Despite the economic, geopolitical, military and ideological power marshalled by dominant states, UCD has so far been dominated by the latter – sometimes against great odds and with apparently interminable delays.

2.2 The contemporary multipolarity

Multipolarity, an object of study of the geopolitical economy (Desai, 2015: 2), can in historical sense be viewed as the next step in the process of hegemonic decline of a particular dominant state (the United Kingdom, and then the United States), considering the fact that their economic growth has experienced slowing down, stagnation, and in some shorter historical period even recession or depression. The inability to change i.e. adapt to new conditions had produced the downfall of hegemonic states[7], transforming hegemony/unipolarity into multipolarity.

The process of combined development has been the primary accelerator of multipolarity, since the contender states have managed to shrink the gap between the developed states and themselves. On the other hand, the dominant states, are not willing to give up on their position, even in the various international institutions, especially financial.

As an example, we can emphasize that the fact that emerging economies are rapidly narrowing the gap that divides them from the developed states has not yet reflected in the voting mechanisms of the Bretton Woods financial institutions. Desai and Vreeland (2010: 110) state: In 2003, for the first time since the nineteenth century, the share of the global economy held by the 21 richest countries fell below 50%. The US share has fallen below 20%. More importantly, while the wealthiest countries' share of global economic growth remained at around 50% between 1960 and 2000, it has fallen to just over 25% in the past decade. Change at the IMF has not kept pace (Buira 2005; Woods 2005)[8]. Therefore, the fact that contenders have made remarkable progress, does not mean that the dominant states are ready to surrender their position. They are revoking only a bit of their power[9], slowly, while doing everything to slow the contenders' pace.

The economic crisis also produced criticism of another feature of the international monetary system: the central role of the dollar[10]. During the 2008–2009 financial crisis, China's criticism of the dollar's role appeared to aim at a strengthened multilateral system, not an overthrow of that system. The Chinese monetary agenda included many ideas that were familiar from earlier discussions of monetary reform, paralleling European criticisms from the Bretton Woods era. Chinese representatives did not raise these issues forcefully at G20 summits, however; nor did China or the other emerging economies appear to aim at a new global monetary architecture. A more significant option, promoted by China (though not by India or Brazil), was the internationalization of its currency with the aim of creating an alternative to the dollar (Kahler,

---

[7] With the collapse of the Soviet Union in 1991, the United States stood tall—militarily invincible, economically unrivalled, diplomatically uncontestable, and the dominating force on information channels worldwide. The next century was to be the true "American century," with the rest of the world moulding itself in the image of the sole superpower. Yet, with not even a decade of this century behind us, we are already witnessing the rise of a multipolar world in which new powers are challenging different aspects of American supremacy—Russia and China in the forefront, with regional powers Venezuela and Iran forming the second rank. These emergent powers are primed to erode American hegemony, not confront it singly or jointly (Dilip Hiro, 2008: 109).

[8] Although the wealthiest countries' voting shares on the IMF's Executive Board are now roughly on par with their economic power (that is about 41%), there are notable imbalances: in particular, the fastest-growing developing nations with large economies are woefully underrepresented. China has about three quarters the vote shares of France even though China's economy is larger by a factor of four. Yet, the G-20 is not a viable alternative. It is not much more representative than the current Executive Boards of the IMF and the World Bank. In addition to a European Union seat, there are seats for Germany, France, the United Kingdom, Italy, and the next largest economies of Europe, the Netherlands and Spain, have lobbied for de facto representation at G-20 summits (Desai, Vreeland, 2010: 111).

[9] In bargaining with the incumbent powers, China and other emerging economies have possessed one key asset: their large levels of reserves, accumulated as insurance against international financial shocks and as an effect of undervalued exchange rates. China's reserves in particular have exploded in size over the past decade. Although growing monetary power awarded it greater influence at the IMF, China's efforts to use its reserves as bargaining assets in bilateral negotiations with the United States have been largely ineffective (Kahler, 2013: 720).

[10] The dollar's vulnerability presents 'potentially significant and underappreciated restraints upon contemporary American political and military predominance' (Kirshner, 2008: 418).

2013: 714)[11]. Nevertheless, the BRICS states are pursuing their own investment bank and solutions that would break the dominant position of Breton Woods's institutions.

At the same time, there are voices even in the West who are advocating different solutions to the economic crises, present and future: A key factor for any global solution will be the inclusion of the powerful emerging economies of the South. Growing sectors of transnational capitalists have been accepting the need to bring China, India, Brazil and other countries into the inner circles of decision making. This will be easier to accomplish under the multilateral approach of the Obama globalists than the Bush unilateralists. Even World Bank president Robert Zoellick and IMF chief Dominique Strauss-Kahn have spoken on the need to give more say to the South in their respective institutions. This is a necessary recognition of a changed world (Harris, Davidson, 2010: 225).

Haass (2008) argues that the global system has now embarked on a 'quasi-anarchic journey' that involves more than state actors and includes NGOs, large corporations, terrorists and energy providers. He concludes that an open challenge by a single emerging power or coalition of powers "is unlikely to arise anytime soon". He calls this system nonpolarity (Haass, 2008: 44).

2.3 Present and future developments: the state is definitely back, further gradual shift of power towards Asia-Pacific, the rising importance of multipolarity

In 2008, Zakaria published a book "The Post-American World", just when the financial meltdown has taken momentum. He predicted a relative decline of American power in the next couple of decades, mainly because of the rise of the contenders. He also advised the orientation towards soft-power to the U.S. policy-makers.

In 2009, Clark still believed that a concentration of power will still last for a couple of decades: At present, no single version of hegemony[12] seems viable on its own. As a composite, these types map out a hegemonic project that is respectful of the diversity in international society, its traditional nervousness about too much concentration of power, and its already existing expressions within the highly developed western system. At the same time, it acknowledges that a concentration of power is, whether we like it or not, an inescapable constituent of contemporary order. (…) A different world may possibly emerge in the next 20–30 years, but what is needed is an effective blueprint for action in the interim. In meeting this challenge, hegemony has its own distinctive contribution to make (Clark, 2009: 36).

The most frequently cited vision of a competitive multipolar system is Robert Kagan's The Return of History (2008), which argues that the ability of the US to maintain the international order is declining (Kagan, 2008: 3). He points out that after the Cold War, the US pursued "an expansive, even aggressive global policy", and that "in shaping a world to suit their values, they have compelled others to bend to their will" in ways that were bound to create a backlash. The logic is that all great powers are arrogant – it just so happens that, for a while, the US was the

---

[11] The meltdown has amplified doubts about the dollar's future in two key respects. First, the other big players in the international economy now are either military rivals (China) or ambiguous 'allies' (Europe) that have their own ambitions and no longer require US protection from the now-vanished Soviet threat. Second, the dollar faces an uncertain future because of concerns that its value will diminish over time. Indeed, China, which has vast holdings of American dollars (more than $2 trillion) is worried that America's fiscal incontinence will leave Beijing holding the bag with huge amounts of depreciated dollars. (Layne, 2011: 156-7).

[12] What is meant by this hegemony? It does not refer simply to a set of material conditions in which one state is predominant: it is not, in other words, primacy alone. Neither is it something that is unilaterally possessed by the hegemon, nor something that the dominant state has in its pocket, to save or squander at will. Rather, it is a status bestowed by others, and rests on recognition by them. This recognition is given in return for the bearing of special responsibilities. In short, by hegemony is meant an institutionalized practice of special rights and responsibilities conferred on a state with the resources to lead. (Clark, 2009: 23).

only one around. For this reason, rising powers will tend to create a balance against the US (Toje, 2010: 12)[13].

In the 2025 Global Report: A Transformed World, published by National Intelligence Council (NIC) in November 2008, the resurgence of the state in economic affairs, particularly for the rising powers, is pointed. As with previous countries whose economies had taken off, such as South Korea and Taiwan in the 1960s and 1970s, the state is playing an important economic role not just in authoritarian states like China, but arguably even in rising democracies like Brazil and India. The financial crisis would seem to have further heightened the role of the state, potentially even more so where governments in the West are funding bailouts and coordinating stimulus packages[14].

This development is in the accordance with the notion about "the crisis of neoliberalism": Since the 2007 financial meltdown, the neoliberal project has been in crisis. Even some of its most ardent supporters have begun to rethink its legitimacy. Yet neoliberalism remains hegemonic, underpinning a host of policy rhetoric and initiatives aimed at stemming recessionary declines (Lauermann, Davidson, 2013: 1277). Nevertheless, Hess (2011: 1058-59) stated: Although the effects of the Great Recession on politics and economics are not yet known, some of the policies associated with the Democratic Party's control of the US government in 2009 suggest a partial turn away from neoliberalism[15]. Deficit spending, health-care reform, regulation of the financial sector, new educational programs, green economic development, and carbon-trading are all policy directions that suggest at least a partial return to higher levels of state intervention in markets, albeit ones that often cede significant ground to neoliberal approaches in the construction of policy instruments[16]. So, neoliberalism has been on the retreat in some areas,

---

[13] In Kagan's argument, the twenty-first century international system will resemble mid-nineteenth-century Europe. That would mean a period of bare-knuckle national interest politics with a minimum of postmodern padding. This is the scenario that the US National Intelligence Council has labelled "multipolarity without multilateralism". From this perspective, great power geopolitical rivalries will deepen in the same patterns as ideological rifts between autocracies and democracies. Rising powers will seek to improve their relative positions and establish hegemony along their borders. As the emerging powers grow in strength, the area they define as their national interest will expand, causing friction with other powers. Because their envisioned spheres of influence will overlap, the relationship between the great powers is likely to be competitive. This is a classic balance-of-power argument. It draws on the classical realist view of history and a neorealist focus on structure (Toje, 2010: 12).

[14] The question is whether this enhanced economic role for the state will be a permanent, enduring feature of the future economic landscape or one that is transitory until some economic stability is achieved and growth resumes. The answer may be slow to emerge, as none of these models of state and market appear close to a steady equilibrium. As those ''newly rich'' states that willingly collapsed distinctions of public and private now bleed reserves, and as Western governments come to wrestle the costs of fiscal stimulus amid continued economic uncertainty, societies everywhere will repeatedly confront the need to define and redefine the desired role of the state in markets (Burrows, Harris, 2009: 30-31).

[15] While remaining supporters of expanding trade and transnational integration, Nobel prize-winning economists Joseph Stiglitz and Paul Krugman have, for the past decade, called for greater financial regulation and attention to global inequalities. Although having limited representation in the Obama administration, progressives exert constant pressure through their voice to the broader public. Krugman suggests the global slump can be fixed, at least in part, with public works' spending. As he says: 'The answer, almost surely, is good old Keynesian fiscal stimulus.' (Harris, Davidson, 2010: 217).

[16] The United States' traditional partners, Europe and Japan, would increasingly be challenged to maintain economic growth in view of their aging populations. While the rising states would want seats at the international high table, the report anticipated that they would be cautious about assuming global burdens, despite a packed agenda composed of new challenges like climate change and energy security in addition to growing threats such as nuclear proliferation and weapons of mass destruction (WMD) terrorism. By 2025 the international order, although unrecognizable from its post-World War II contours, would remain in transition and be one in which the United States, though still preeminent, would be less dominant even as others would still look to it to shoulder many of the global burdens (see Burrows, Harris, 2009: 27).

but it is still advancing – are the rescue attempts done by the state in order to save private banks really a retreat of neoliberalism or its final victory?

The crisis has underscored the importance of globalization as the overriding force or ''mega-driver'' as it was characterized in both the NIC's 2020 and 2025 Global Trends works. Developing countries have been hurt as decoupling theories, assertions that the emerging markets have appreciably weaned themselves from the U.S. economy, have been dispelled. At the same time, globalization itself may be transformed because of the financial crisis. The spectacular growth in global liquidity that took effect in the past decade, allowing for an era of free money, may be ending. Recent data suggests that the NIC may have underestimated the extent and pace of the contraction in global trade, at least in the short term, and the corresponding diminished appetite for Chinese manufactures (Burrows, Harris, 2009: 27-28).

The latest NIC report, *Global Trends 2030: Alternative Worlds*[17], published in December 2012, at the very beginning clearly states: The world of 2030 will be radically transformed from our world today. By 2030, no country—whether the US, China, or any other large country—will be a hegemonic power. The empowerment of individuals and diffusion of power among states and from states to informal networks will have a dramatic impact, largely reversing the historic rise of the West since 1750, restoring Asia's weight in the global economy, and ushering in a new era of "democratization" at the international and domestic level[18].

Relative weight of top corporations (by number, sales, assets, and profits) – remains quite low (although higher in Russia and South Africa than in the other three) – rising in all cases, but low nonetheless. This suggests that we are at the beginning, not the end of a process. China's "leap" into prominence in the world system has only begun the process of addressing the massive unevenness characteristic of that system (Kellogg, 2015: 289).

If we take into account the fact that China and Russia, as main contender states, are rapidly modernizing and continuing to build their own military arsenal, especially navy and air transport capabilities, we cannot exclude the possibility of a future arms race between the U.S.A. on one side, as the main dominant state, and these two contender states. The U.S.A. could again go through the period of what Seymour Melman called "Pentagon capitalism", as the "state management" typified by the actions of Secretary of Defense Robert McNamara drew an ever-tighter loop around economic, military, and political authority (in: Farish, Vitale, 2011: 778). The US military-industrial complex could again be the main driver of capitalist economy and the pursuit of the United States for military presence in any part of the world. Especially is a particular region is considered to be of the interest for the United States (that is actually almost the whole world, although some regions hold a special importance, such as the Middle East[19] and the North Africa region and the Asia-Pacific region).

---

[17] https://globaltrends2030.files.wordpress.com/2012/11/global-trends-2030-november2012.pdf.

[18] (…) We believe that two other megatrends will shape our world out to 2030: demographic patterns, especially rapid aging; and growing resource demands which, in the cases of food and water, might lead to scarcities. These trends, which are virtually certain, exist today, but during the next 15-20 years they will gain much greater momentum.

[19] The Middle East has been the major focus of American foreign policy and will continue to be so. During the Cold War, the US, for the sake of security and stability, did not hesitate to back up repressive regimes in the region. After the Cold War, the US continued to support pro-West regional dictators out of the fear that Islamic fundamentalists would seize the power if democracy was allowed. In the post-September 11 era, the US policy in the MENA countries was shaped by "the fight against terrorism" (Monshipouri and Assareh, 2011, p. 123). The Bush Doctrine and its application to first Afghanistan and later Iraq change the balance of power and the social structure in the region forever creating serious destabilizing effects in the region. (…) The existence of only one superpower, call it a hegemon or an empire, does not guarantee security and stability. Furthermore, as is the case for American involvement in the Middle East, it can be the source of insecurity and instability (Bozdağlıoğlu, 2013: 2).

3. CONCLUSION

No matter what version of *hegemonic stability theory* (HST) we accept or completely reject (with its main thesis that hegemonic power brings stability and order in the system, from which not only the hegemon, but also smaller states benefit, more or less[20]), and instead accept multipolarity and a contestation between the dominant and contender states as an inevitable condition in the 21st century, it is very difficult to imagine that the U.S.A. will not continue to pursue its own hegemony, albeit the success of this pursuit would definitely not be positive. However, we have to keep in mind that HST also claims that instability occurs in the system when a certain hegemon is losing its grip on hegemony (HST finds confirmations in the situation that preceded the two World Wars, and stagflation in the 1970ies). Nevertheless, a real hegemony, understood in a neorealist, neoliberal or even Gramscian sense, would not be possible in the future.

The current economic crisis could also be viewed as a process in which former hegemon continues to lose its grip on the world order, after a period in the 1990ies and the first half of the 2000ies, when it tried to exploit the power vacuum after the collapse of the U.S.S.R. and desired to establish a hegemony through the paradigms of Globalization and Empire.

Multipolarity is a realism of the contemporary and the future world (increasingly). What is needed is a multifarious, multifaceted approach to multipolarity, which would accept that the hegemony of one power (if there ever was one) is outdated, never to return.

LITERATURE

1. Arrighi, G., Silver, B. J. (1999). *Chaos and Governance in the Modern World System.* University of Minnesota Press, Minneapolis.
2. Bozdağlıoğlu, Y. (2013). Hegemonic (in)Stability Theory and Us Foreign Policy: The Legacy of the Neocons in the Middle East. *Anadolu University Journal of Social Sciences*, 13 (3) 1-12.
3. Buckley, M. (2013). Locating Neoliberalism in Dubai: Migrant Workers and Class Struggle in the Autocratic City. *Antipode*, 45 (2) 256-274.
4. Buira, A. (2005). *Reforming the Governance of the IMF and the World Bank*. Anthem Press, London.
5. Clark, I. (2009). Bringing hegemony back in: the United States and international order. *International Affairs*, 85 (1) 23-36.
6. Cox, R. W. (1987). *Production, Power and World Order: Social Forces in the Making of Modern History*. Columbia University, New York.
7. Desai, R. (2013). *Geopolitical Economy: After US Hegemony, Globalization and Empire. The Future of World Capitalism*. Pluto Press, London, and Fernwood Publishing, Halifax and Winnipeg.
8. Desai, R. (2015). Geopolitical Economy: the Discipline of Multipolarity. *Valdai Papers*, (24) 1-12.
9. Desai, R. M., Vreeland, J. R. (2010). *Are Davos Man's Days Numbered? Up Front Blog*. The Brookings Institution. 26 January.
10. Desai, R. M., Vreeland, J. R. (2011). Global Governance in a Multipolar World: The Case for Regional Monetary Funds. *International Studies Review*, (13) 109-121.

---

[20] Public goods version of theory or security version of theory. See: Snidal, 1985, Webb and Krasner, 1989, in: Bozdağlıoğlu, 2013: 4-5).

11. Dilip Hiro, S. (2008). The Sole Superpower in Decline: The Rise of a Multipolar World. Military Review, July-August, 109-113. Reprint of text in *Journal of the United Service Institution of India*, 137 (569).

12. Dollar, D., Kraay, A. (2002). Growth is good for the poor. *Journal of Economic Growth*, (7) 195-225.

13. Farish, M., Vitale, P. (2011). Locating the American Military–Industrial Complex: An Introduction. *Antipode*, 43 (3) 777-782.

14. Friedman, T. (2008). *The World is flat*. Farrar, Straus & Giroux, New York.

15. Gill, S. (1990). *American Hegemony and the Trilateral Commission*. Cambridge University Press, New York.

16. Gilpin, R. (1987). *The political economy of international relations*. Princeton University Press, Princeton, NJ.

17. Haass, R.N. (2008). The age of nonpolarity. *Foreign Affairs*, 87 (3) 44-57.

18. Harris, J., Davidson, C. (2010). Obama: The New Contours of Power. *Perspectives on Global Development & Technology*, (9) 211-231.

19. Harvey, D. (1995). Globalization in question. *Rethinking Marxism*, 8 (4) 1–17.

20. Harvey, D. (2005). *A Brief History of Neoliberalism*. Oxford University Press, New York.

21. Hess, D. J. (2011). Electricity Transformed: Neoliberalism and Local Energy in the United States. *Antipode*, 43 (4) 1056-1077.

22. Hirst, P., Thompson, G. (1996). *Globalization in Question*. Polity Press, Oxford.

23. Joseph, J. (2002). *Hegemony: A Realist Analysis*. Routledge, London and New York.

24. Kagan, R. (2008). *The return of history and the end of dreams*. Knopf Publishing, New York.

25. Kahler, M. (2013). Rising powers and global governance: negotiating change in a resilient status quo. *International Affairs*, 89 (3) 711-729.

26. Kellogg, P. (2015). Geographies of Capital Accumulation: Tracing the Emergence of Multi-polarity, 1980–2014. In: *Theoretical Engagements in Geopolitical Economy*. Published online: 22 Sep 2015; 259-294.

27. Kennedy, P. (1987). *The rise and fall of the great powers: economic change and military conflict from 1500 to 2000*. Random House, New York.

28. Keohane, R. A. (1984). *After Hegemony: Cooperation and Discord in the World Political Economy*. Princeton University, Princeton.

29. Kiely, R. (2006). United States Hegemony and Globalisation: What Role for Theories of Imperialism? *Cambridge Review of International Affairs*, 19 (2) 205-221.

30. Kirshner, J. (2008). Dollar primacy and American power: what's at stake? *Review of International Political Economy*, 15 (3) 418-438.

31. Lauermann, J., Davidson, M. (2013). Negotiating Particularity in Neoliberalism Studies: Tracing Development Strategies across Neoliberal Urban Governance Projects. *Antipode*, 45 (5) 1277-1297.

32. Layne, C. (2011). The unipolar exit: beyond the Pax Americana. *Cambridge Review of International Affairs*, 24 (2) 149-164.

33. Lin, J. Y., Dailami, M. (2011). The Coming Multipolar World Economy: Is the Developed World Prepared? *The International Economy*, 30-31.

34. Magdoff, H. (2003). *Imperialism without colonies*. Monthly Review Press, New York.

35. Mercille, J. (2008). Mind the Gaps: Security 'Crises' and the Geopolitics of US Military Spending. *Geopolitics*, 13 (1) 54–72.

36. Monshipouri, M., Assareh, A. (2011). The New Middle East and the United States: What to Expect after the Uprisings? *Insight Turkey*, 13 (3), 121-138.

37. Parisot, J. (2013). American Power, East Asian Regionalism and Emerging Powers: in or against empire? *Third World Quarterly*, 34 (7) 1159–1174.

38. Petras, J. (2002). 9/11: one year of empire building. *Economic and Political Weekly*, 37 (3) 504-514.

39. Prashad, V. (2012). *The Poorer Nations: A Possible History of the Global South*. Verso, New York.

40. Robinson, W. (2002). Capitalist Globalization and the Transnationalization of the State. In: Rupert, M., Smith, H. (eds.) *Historical Materialism and Globalization*. Routledge, London: 210-229.

41. Robinson, W. (2004). *A Theory of Global Capitalism*. Johns Hopkins University Press, Baltimore, MA.

42. Robinson, W. (2005). Gramsci and Globalisation: From Nation State to Transnational Hegemony. *Critical Review of International Social and Political Philosophy*, 8 (4) 1-16.

43. Samers, M. (1999). 'Globalization', the geopolitical economy of migration and the 'spatial vent'. *Review of International Political Economy*, 6 (2) 166-199.

44. Snidal, D. (1985). The Limits of Hegemonic Stability. *International Organization*, 39 (4) 579-614.

45. Toje, A. (2010). *The Tragedy of Small Power Politics: The European Union under Multipolarity*. Security Policy Library 4-2010. The Norwegian Atlantic Committee, Oslo.

46. UNDP. (2002). *Human Development Report: Deepening Democracy in a Fragmented World*. Oxford University Press, New York.

47. Wade, R. H. (2003). Is globalization reducing poverty and inequality? *International Journal of Health Services*, (34) 381-414.

48. Webb, M. C., Krasner, S. D. (1989). Hegemonic Stability Theory: An Empirical Assessment. *Review of International Studies*, 15 (2) 183-198.

49. Woods, N. (2005). Making the IMF and the World Bank More Accountable. In: Buira, A. (ed.), *Reforming the Governance of the IMF and the World Bank*. Anthem Press, London.

50. Zakaria, F. (2008). *The Post-American World*. W.W. Norton & Company, New York.

51. Zoellick, R. B. (2010). The End of the Third World: Modernizing Multilateralism for a Multipolar World. *The International Economy*. Spring 2010, http://www.international-economy.com/TIE_Sp10_Zoellick.pdf (Retrieved 16.08.2015)

52. https://globaltrends2030.files.wordpress.com/2012/11/global-trends-2030-november2012.pdf (Retrieved 14.06.2015).

ULUDAG WINTER TOURISM AND ITS IMPORTANCE IN THE ECONOMIC DEVELOPMENT

Sema Ay
Uludağ University, Vocational School of Social Sciences
semay@uludag.edu.tr

Elif Karakurt Tosun
Uludağ University, Vocational School of Social Sciences
ekarakurt@uludag.edu.tr

Hilal Yildirir Keser
Uludağ University, Vocational School of Social Sciences
hilalyildirir@uludag.edu.tr

ABSTRACT
Tourism which is a regional means of development is closely related with the local economic development. Winter tourism is a set of activities and relationships composed of trips made to the regions which are located in the heart of ski sports and accordingly with slopes and snow, accommodations and other services. Since winter tourism mainly consists of a number of activities depending on snowy environments, it requires locations with certain height and slope which will also allow the execution of other nature sports such as walking, climbing etc. besides skiing and snowboarding.
Uludağ, the most popular winter sports center which is 30 km away from the Bursa city center has significant natural advantages in terms of winter tourism. However, with the recently changing tourism demands in winter tourism, developments have been taking place in the types of tourism. Uludağ having natural advantages have not been able to sufficiently benefit from these advantages and cannot make use of its existing potential. Besides the countries having sucessful snow resorts of Europe such as Austria, France, Switzerland, Italy and Andorra, Romania and Bulgaria are also increasing their competitiveness in the international markets in recent years with ambitious investments. When Uludağ which is in the location of the largest snow resort in Turkey is compared with these resorts, it is thought that there is a way to go in the field of winter tourism.
Starting from this idea, in the research, it is aimed to identify the contribution of Uludağ to the local economic development and the potentials for increasing this contribution. Towards the mentioned aim, the study will be carried out based on field research. In the conclusion of the study, it is planned to submit the proposals focused on policy and strategy to be followed in terms of having Uludağ use its potential in the most efficient way and provide more contribution to the local economy. In addition, its thought that the results to be obtained will be a basis for another study with the subject "the comparison of Uludağ with foreign snow resorts in terms of winter tourism" which is planned to be conducted after the study is completed.
Keywords: Winter Tourism, Economic Development, Tourism Development

1. INTRODUCTION

Tourism which is a means of regional development is closely related with the local economic development. Winter tourism is a set of activities and relationships consist of the trips made to the areas located in the center of the ski sports and to the snowy and sloping areas appropriate to this, accomodation and other services. Winter tourism, because of covering a number of activities depending on snowy environments, mainly requires locations which has certain height

and slope enabling the performance the nature sports such as hiking, climbing besides skiing and snowboarding.

Uludağ which is the most popular winter sports resort being 30 km away from the Bursa city center has important natural advantages in terms of winter tourism. However, with the recently changing tourism demands in the winter tourism, developments have been happening in the types of tourism. In the face of these developments, it has been observed that Uludağ cannot sufficiently benefit from these advantages and evaluate its existing potential. On the other hand, recently Romania and Bulgaria have also been increasing their competitiveness in the international markets with ambitious investments besides the countries which have successful winter resorts of Europe such as Austria, France, Switzerland, Italy and Andorra. Uludağ which is the largest winter resort in Turkey is considered to have a way to cover in the field of winter tourism when compared with these resorts.

From this point of view, in the research, it has been aimed to determine the contribution of Uludağ to the local economic development and the potentials for increasing this contribution. The study is based on field research in the direction of the mentioned aim. In the conclusion of the study, it has been planned to present the policies and strategy-focused suggestions so that Uludağ will use its potential the most efficiently and contribute more to the local economy. So, it has been expected that an increase of competitiveness of Uludağ with the other winter resorts in the international arena will be made possible.

The study consists of four parts. In the first part, the importance of tourism activities in the local economic development will be expressed briefly. In the second part, the features that Uludağ has as a winter resort will be expressed and information will be given about the winter tourism activities here. The findings of the field research conducted to determine the importance of Uludağ winter tourism in the local rconomic development will be presented in the third part. And in the conclusion part of the study, a number of suggestions will be presented in order to benefit more from the existing potential of Uludağ by discussing the findings obtained from the field research.

2. THE IMPORTANCE OF TOURISM IN THE LOCAL ECONOMIC DEVELOPMENT

Tourism is a sector which has rapidly increased its economic importance after the World War II. In particular, tourism has almost been a starting point with its dynamic economic characteristics in the solution of the national and international economic problems and in overcoming the bottlenecks faced during first half of the 20th century. For the modern economies, tourism is an important market with supply and demand and important resource with tourism revenues.

Development comes ahead of the most important problems for the developing countries and one of the ways of overcoming this problem is determining the priority sectors of the countries for development. It is known that tourism sector is of an important place within the framework of realization of the regional development. Since industrialization is not sufficient in the developing countries, in the context of development goals, evaluation of the touristic supply potential being owned becomes more important (Sinclair ve Tsegaye, 1990: 498).

The tourism and travel industry is one of the sectors which creates the most of employment in the world. As the year of 2015, this sector in which 276.845.000 people are employed all over the world constitutes the 9.4% of the total employment. In the year of 2025, it is estimated that the share tourism and travel industry with the number of employees of 356.911.000 will rise to 10.7% (Travel and Tourism Economic Impact 2015). The tourism sector is accepted as a pioneering sector not only for bringing foreign currency and creating employment but also for its dragging the socio-cultural change, expanding the economic prosperity to wide masses of people, contribution to the balanced development all over the country, interaction with other

sectors and publicity of that country (Bahar ve Baldemir, 2008, p. 56).. Tourism is included in the services sector in the triple sector classification in the form of agriculture-industry-services. As its structure, it is the sector which has its weight felt in the services sector since it directly influences all of the three sectors during both establishment and management phases. Thus, its impact is quite enourmous with its multiplying and increasing effects.

Numerous studies have been conducted in order to measure the relationship between economic development and the tourism sector which is accepted as a means of regional development. The literature related with that tourism will lead to economic development emphasizes the three benefits (direct, indirect and directed economic benefits) of tourism. A group of studies in the literature on the subject puts forth the benefits arising from establishment expenditures made for tourism which is defined as direct benefits (Lanza et al, 2003; Sequeira and Campos, 2005; Değer, 2006; Eceral and Özmen, 2009). The second group studies draw attentions to the direct benefits caused by the expenditures of the suppliers and for enabling the continuation of the establishment expenditures (Henry and Deane, 1997; Allman et al 2009; Kazan et al 2015). In the literature, the third group studies related with that tourism leads to economic development emphasize the directed benefits arising as the result of that the employees in the sector spend their income and that the direct/indirect economic benefits increase (Perry et al, 1997; Sinclair, 1998; Fayissa et al, 2007; Risso and Brida, 2009).

Turkey as a rich country in the subject of touristic product supply has an important place in winter tourism as well. Uludağ, 30 km away from the Brsa city center, is one of the most popular snow resorts of Turkey. It has important natural advantages and is a preffered location related with winter tourism.

3. ULUDAĞ and WINTER TOURISM

Winter tourism is a set of activities and relationships consist of the trips made to the areas located in the center of the ski sports and to the snowy and sloping areas appropriate to this, accomodation and other services. Since it mainly covers the activities depending on the snowy environments, it requires locations having certain height and slope. Uludağ which is the most popular winter sports resort being 30 km away from the Bursa city center has important natural advantages in terms of winter tourism. It is the highest mountain of the Western Anatolia with its peak (Kar Tepe) reaching up to 2,543 meters. In the center of which skiing area is located at an altitude of 1750-2543 meters, the snow thickness goes up to 3 meters from time to time. There are 25 accommodation facilities in the center 18 of which belong to the private sector and 7 of which belong to the public institutions. A total of 21 mechanical systems as of 10 tele-siege and 11 tele-ski and T bars are available. There are 13 different tracks on the facility having the capability of carrying 11,000 person/hour. It is possible to rent ski, snowboard and outfit from the ski offices, to take ski and snowboard lessons from the professional ski instructors, to have snow trips with paletted vehicles such as snow motors and atv's. The most appropriate time for skiing on Uludağ which has a temperate climate as of the region is the period between the months of December-March. These advantages make Uludağ attractive especially for the skiers. The center which attracted people mainly from Istanbul during the previous years has recently been crowded by Russian, Dutch and Arab tourists as well. As of the year 2014, a total of 139 476 tourists 116.082 of which are natives and 23 394 of which are foreigners have visited Uludağ (Bursa Provincial Culture and Tourism Directorate).

Winter sports such as skiing and snowboarding are on the basis of the Uludağ winter tourism. Winter tourism and winter sports require costly investments in terms of both economic and environmental aspects. Uludağ has industrial infrastructure in terms of making large investments. These investments are of great importance in order to prevent the number of tourists vary from year to year. The remarkable characteristics of the investments on Uludağ can be listed as follows:

-the centrality of ski lift technology: Fast and comfortable ski-lifts carrying a great number of skiers up to the slopy hills without waiting in the lines.are available

-the centrality of snowmaking technology: In order to diminish the effects of the amount of the snowfall on performing this sport, artificial snow machines are utilized.

-a mass tourism model: Since the ski-lift and snow machine investments burden the investors with giant costs, the marketing strategy of the ski-lifts is carried out as weekly or seasonal sales.

-a high rate of innovation: In order to have the region maintain its attractiveness, the ski-lifts, tracks and services are constantly improved. Tracks and lifts are diversified according to the slope. Besides, mechanisms connecting the close tracks to each other are established.

-rahat ve hızlı ulaşım: In addition to the land way providing access from the city center to the region located on mountainous and elevated area, a cable car line is available.

It is expected that all of these characteristics should present significant income resources and contribute to the local economic development. Under these circumstances, the evaluation of the uludağ winter tourism in terms of revealing its importance in the local economic development and increasing its contribution to the economic development presents great importance.

4. THE IMPORTANCE OF ULUDAG WINTER TOURISM IN THE   LOCAL ECONOMIC DEVELOPMENT
4.1. Aim of the Study
The aim of the study is to reveal the importance of winter tourism on Uludağ which has significant natural advantages in the local economic development and provide solution suggestions on the detected problems related with winter tourism. For this purpose, primarily the determinations on the demographic features of the participants and on the reasons of preference of Uludağ as an important winter tourism resort in Turkey have been cited. Then, by giving details about the accomodations and spending amounts of the tourists coming to Uludağ, it has been discussed whether or not this situation is contributing to the economy of the city of Bursa where Uludağ is located. Finally, by examining the issues which have not been satisfied with on Uludağ when tourism services are demanded, various suggestions for of solutions have been tried to bring about.

4.2. Method of Study
A field research has been carried out towards the visitors coming to Uludağ within the framework of the contribution of the Uludağ winter tourism to the economic development. Within the scope of the field research, a face-to-face survey has been conducted with the visitors coming to Uludağ for taking advantage of the winter tourism activities. The studies performed previously for the aims of the research have been examined. The questions are the ones aiming to reveal the reasons for the preference of Uludağ as a snow resort and points of dissatisfaction, so the contribution of the tourism activities here to the provincial economy.
In determining the sampling to be taken, it is important to represent the main mass with which the study will be carried out. Because there is a problem of which size of sampling will represent the main mass. Therefore, the size of the main mass which is the subject of the the survey to be conducted to visitors coming to Uludağ and the number of the sampling to be withdrawn from the main mass are quite important. In order not to fall into sampling error, the table 1 has been utilized on which the sampling sizes required to be withdrawn from the main mass sizes are calculated for the □= 0.05 için - 0.03, - 0.05 and - 0.10 sampling errors.

Table 1: Sampling sizes for α = 0.05, (Yazıcıoğlu ve Erdoğan, 2004: 50)

Size of the Space	+ 0.03 Sampling Error			+0.05 Sampling Error			+0.10 Sampling Error		
	p=0.5 q=0.5	p=0.8 q= 0.2	p=0.3 q=0.7	p=0.5 q=0.5	p=0.8 q= 0.2	p=0.3 q=0.7	p=0.5 q=0.5	p=0.8 q= 0.2	p=0.3 q=0.7
100	92	87	90	80	71	77	49	38	45
500	341	289	321	217	165	196	81	55	70
750	441	358	409	254	185	226	85	57	73
1000	516	406	473	278	198	244	88	58	75
2500	748	537	660	333	224	286	93	60	78
5000	880	601	760	357	234	303	94	61	79
10000	964	639	823	370	240	313	95	61	80
25000	1023	665	865	378	244	319	96	61	80
50000	1045	674	881	381	245	321	96	61	81
100000	1056	678	888	383	245	322	96	61	81
1000000	1066	682	896	384	246	323	96	61	81
100 million	1067	683	896	384	245	323	96	61	81

Theoretically, for the population of which main mass volume is 139.476, it is enough to take 1023 sampling the most at the 5% significance level. However, in our survey conducted with the visitors coming to Uludağ a sampling consisting of 1500 visitors has been used in order to raise the significance level and thus to obtain as accurate results as possible.

4.3.Findings of the Research

The demographic findings of the survey research carried out with 1500 visitors who came to Uludağ during the 2015 winter season has been summarized in Table 2. The 53.1% (797) of the survey participants are male and the 46.9% (703) of them are female. The 41.8% (627) of these visitors are in the age range of 18-28, and the education status of 67.9% (1018) them is at the associate degree level. While the 30,4% (456) of them are officials, the 50.5% (758) of the visitors who came to Uludağ for winter tourism live in Bursa.

Table 2: Profile of the Visitors Coming to Uludağ

Gender	Frequency	%	Age	Frequency	%
Male	797	53,1	18-28	627	41,8
Female	703	46,9	29-38	391	26,1
Education Status	**Frequency**	**%**	39-48	249	16,6
Primary School	21	1,4	49-58	135	9,0
Secondary School	315	21,0	59 and over	98	6,5
Associate Degree	1018	67,9	**City lived**	**Frequency**	**%**
Bachelor	146	9,7	Bursa	758	50,5
Profession	**Frequency**	**%**	İstanbul	326	21,7
Official	456	30,4	İzmir	110	7,3
Student	340	22,7	Ankara	96	6,4
Manager	166	11,1	Adana	50	3,3
Retired	104	6,9			
Free Lance	103	6,9			

In the Table 3, the factors that the visitors demanding tourism services on Uludağ take into considiration in their decisions for coming to Uludağ and to the winter tourism centers in general are displayed. In the survey, ıt has been determined that mostly "easy and convenient access", secondly "suitable prices", thirdly "the beautiful and different tracks and nature" concerning the winter sports have been effective on decisions of the participants responding the related question and that the other reasons take place in the following orders. With only one difference, Similar situation is observed on their coming to Uludağ as well. On the decision of coming to Uludağ, "beautiful and different tracks and nature concerning the winter sports" has passed before the justification of "suitable prices".

Table 3: Distribution According to the Justifications Effective on the Coming Decision

Justifications Effective on the Coming Decision	For Any Winter Tourism Center (%)	For Uludağ (%)
Easy and Comfortable Access	33,8	37,3
Suitable Prices	21,4	13,3
Beatiful and Different Tracks an Nature Concernin the Winter sports	18,9	21,0
Sufficient Snow Thickness	7,6	5,9
Lots of Options for Accomodation	4,1	4,3
Sufficient Facilities for Winter Sports	3,9	3,9
The High Quality of Accommodation	3,7	3,0

NOTE: When the participants of the field research are asked the questions, more justifications related with their coming decisions to Uludağ than the ones included in the table have been provided but the ones below 3% have not been included in the table.

That Uludağ is far from the city center and that the land access is through forested area have caused Uludağ to experience hardships regarding the transportation for many years. However, thanks to the alternative land road completed recently, transportation has been easier and its time has been shortened. Besides the land road, the Bursa Metropolitan Municipality has established a cable car line from the city center up to Uludağ, so the time has been shortened even more and transportation has become easy and enjoyable. All of these have made Uludağ which is already rich in terms of its nature and tracks more attractive for the visitors who consider the "easy and comfortable access" when coming to winter tourism resorts.

It is thought that the easy and short access influences the availability of accomodation. With a small margin though, the daily comers are more than the accomodated comers. In fact, while the 52.3% (784) 1500 participants responded the survey are the daily coming visitors, the 47,7% (716) of them are the accomodated visitors (chart 1). The daily comers also have demands for a number of services related with catering and winter sports (ski rentals, taking ski lessons etc.). Accomodated guests need more comprehensive service packages. They would like to take advantage of the special services such as the health-related thermal services etc. in addition to the quality accomodational condtions.

Chart 1: Distribution According to the Form of Coming to Uludag
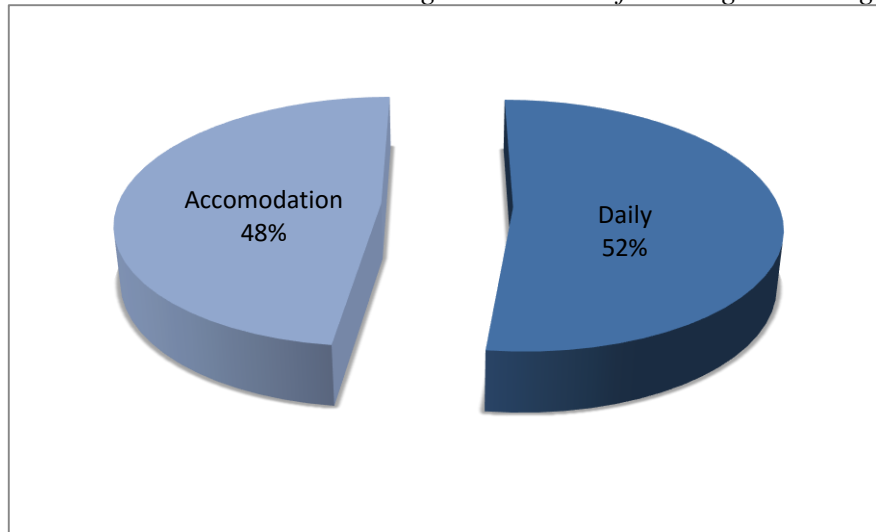
The length of staying period of the visitors who come to Uludağ for accomodation is not too long. According to the Chart 2, the 33% of the 716 participants who came to Uludağ for accomodation have stated that they stayed on Uludağ for 1-3 nights, the 58% 4-6 nights, the 7.1% 7-9 nights, and the 2% 13 and more nights. None of the participants stayed on Uludag for 10-12 nights.

Chart 2: Distribution According to the Number of Nights Stayed on Uludağ
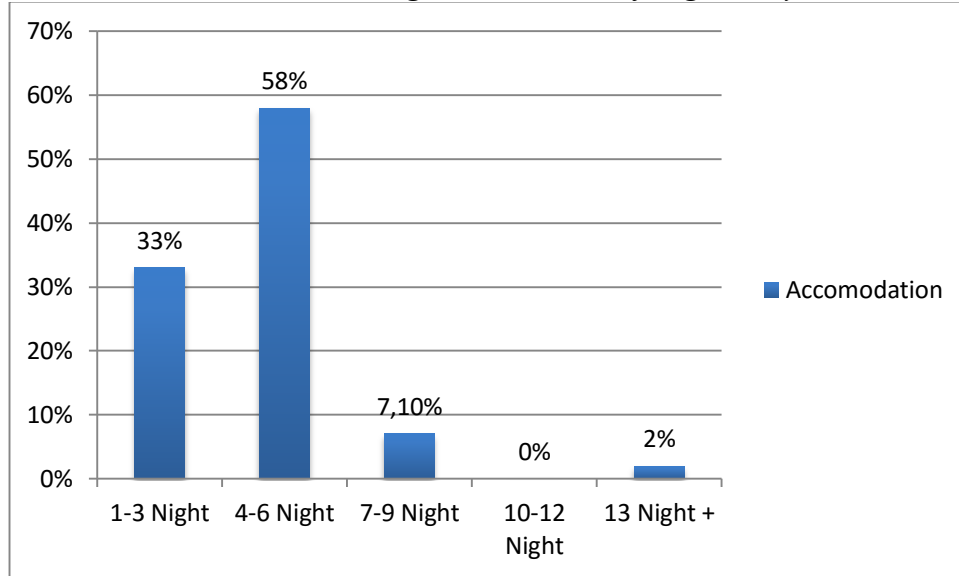
It is considered as important in terms of economic development whether or not the ones who come to Uludağ for accomodation in order to benefit from the winter tourism go to the Bursa city center, and the reason of going of the ones who go. Bursa, once being the capital of the Ottoman Empire, has a lot of historical artifacts and an authentic view. Its geographical location is interesting with Uludağ on the south and the Sea of Marmara on the north. Its rich cuisine is famous throughout the country. Under these circumstances, it is thought that the local wealth will also attract the ones who come to Uludağ for taking advantage of the winter tourism activiyies and that they would like to see Bursa.

The 63.8% of the 716 participants who came to Uludağ for accomodation have stated that they did not go to Bursa during their visit To Uludağ, and the 36,2's% have stated that they did (Chart 3).

Chart 3: Distribution According to Going to Bursa During the Uludağ Visit
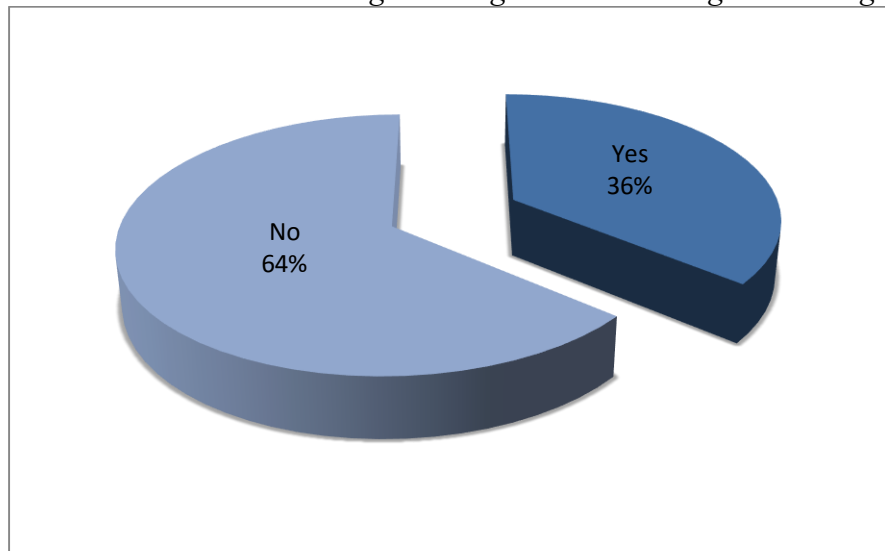
The reasons for going to Bursa of the 259 participants who came to Uludağ for accommodation and went to Bursa during their visits, the reasons for not going of the 457 participants have been summarized on Table 4. According to Table 4, among the reasons for going to Bursa of

the participants, "visiting Bursa" has been in the first order with a ratio of 52.5%. This is followed by "visiting the acquaintances" with the ratio of 35.5% and "tasting the Bursa local flavors" with the ratio of 15.1% respectively. "Accomodation" has taken the last order among the for ging to Bursa with the ratio of 3.9%.

Table 4: Distribution According to the Reasons for Going/not Going to Bursa

Reasons for Going	%	Reasons for not Going	%
Visiting Bursa	52,5	No need for going	32,4
Visiting the acquaintances	35,5	Having previously seen Bursa	17,9
Tasting the Bursa local flavors	15,1	Having the possibily to stop by Bursa during coming to and going from Uludağ	17,1
Shpping	5,0	Already living in Bursa	15,5
Accomodation	3,9	Having come to Uludağ for the purpose of skiing/holiday	9,8

NOTE: When the participants of the field research are asked the questions, more justifications related with their going/not going decisions to Bursa than the ones included in the table have been provided but the first five most effective justifications have been included in the table.

Among the reasons of not going to Bursa, "feeling no need to go" has been the one in the first rank with the ratio of 32.4%. The 83% of the accomodational facilities work with full-board or all-inclusive system and almost all needs of the visitors are met in the hotel. Therefore, the ones who come to Uludağ feel no need to go to Bursa. On the other hand, the reasons "having seen Bursa before" with a ratio of 17.9%,and "having possibility to stop by in Bursa during coming and going to Uludağ" with ratio of 17.1%, "already living in Bursa" with a ratio of 15.5%, and "having come to Uludağ for the purpose of skiing/holiday" with a ratio of 9.8% follow respectively. Either Uludağ is reached on highway or by cable car, many people may not have needed to go to Bursa during time of stay on Uludağ since it is on the coming and going route. Since a great portion of the visitors who come to Uludağ come from Bursa and/or they would like to allocate more time for winter sports instead of going for sightseeing during their stay. In terms of its contribution to the economic development, the amount of the daily average spending of the visitors in Bursa besides their reasons for going to Bursa is considered to be important. The responses related with the amounts of spending are listed in Table 5.

Table 5: Distribution According to the Amount of Daily Average Spending

Amount of Spending	On Uludag (%)	In Bursa(%)
100 TL and less	12	6,2
101 TL – 500 TL	79,2	81,9
501 TL – 1000 TL	7,3	10,4
1001 TL – 1500 TL	0,1	1,5
1501 TL and more	0,5	0,0

The 12.9% of the 1500 survey participants have stated that they have spent an average of "100 TL and less", the 79.2% of them "between 101 TL -500 TL" and the 7.3% "between 501 TL – 1000 TL" per day for themselves during their stay on Uludag. The 6.2% of the participants who came to Uludag and went to Bursa during their visit have spent an average of "100 TL and less", the 81.9% of them "between 101 TL – 500 TL¨, the 10.4% of them "between 501 TL – 1000 TL¨ and the 1.5% of them "between "1001 TL – 1500 TL¨ per day during the time they were in Bursa. Nobody has spent "1501 TL and more". It is remarkable that the people taking advantage of the winter tourism activities on Uludag spent at a great extent between "101 TL – 500 TL" either on Uludag or in Bursa.

Table 6: Distribution According to the Subjects of Dissatisfaction

Subject of Dissatisfaction	%
Parking Problem	46,1
High level of Prices	15,4
The lack of night entertainment programs	6,1
The lack of wide variety of activities related to winter tourism	6,0
The lack of sports trainers on winter sports	4,6
The lack of pleasant and diverse tracks for winter sports and the nature	3,5
the lack of convenient and easy access	3,2
The lack of adequate facilities related to winter sports	2,9

On the other hand, there are also issues that the visitors coming to Uludag for taking advantage of winter tourism activities are dissatisfied with. According to Table 6, the most important issue which is dissatisfiaed is related with parking. The first dissatisfaction of the 1,500 survey participants is the limited parking facilities with a ratio of 46.1%. Travelling back and forth by the cable car has not been a solution to the parking problem. As the result of solving the parking problem, it is expected that Uludag will both be more preferable and its natural beauties will come in view better. The second issue of dissatisfaction is the "High level of prices" with a ratio of 15.4%. The tourist who come to Uludağ on a daily basis are compulsorily supposed to meet their requirements such as eating-drinking, renting ski-snowboard, utilizing the mechanical facilities from the accomodational facilities. The prices of these services offered to the daily guests by the accomodational facilities are kept higher compared to the accomodated guests. Direct dissatisfactions related to the winter sports are not at a large ratio and take place in the last ranks.

In fact, All of these indicate that Uludağ winter tourism based on winter sports has an important place in the local development, but, that it does not adequately benefit from its existing advantages and potential and that its competitivenes has been decreased compared to other winter tourism resorts.

5. CONCLUSIONS AND RECOMMENDATIONS

Turkey, as a rich country in the field of touristic product supply, has also an important place in the winter tourism. Uludag which is located in the province of Bursa is one of yhe most popular snow resorts in Turkey. It has important natural advantages and a preferred place for winter tourism. It is expected that these advantages will offer significant income resources and asist the economic development. Under these circumstances, revealing the importance of Uludag winter tourism in the local economic development and increasing its contribution to the economic development is of great importance. Within the framework of the contribution of the Uludag winter tourism to economic development, a field research has been carried out towards visitors coming to Uludag. Within the scope of the research, a face-to-face survey has been conducted with the visitors who come to Uludag for taking advantage of the winter tourism activities.

On the profile of the visitors coming to Uludag, it atrracts attention that young people are the majority and they mostly come from Bursa. In prefering Uludağ for winter tourism, easy and comfortable access has been considered to be important.to a large extent. It is thought that the recently constructed highway and cable car investments have played a role. The easy access has led more than half of the visits to be daily basis visits. The duration of stay of the ones who come for accomodation is not too long. The visitors did not feel any need to go to Bursa during their stay due to the "full board" and "all inclusive" applications. On the other hand, that Bursa is on the coming-going route to Uludag has led the visitors to get more concentrated on winter sports instead of going for sightseeing during times of accomodation. Despite this, there are also people who go to Bursa for sightseeing and for tasting the local flavors of Bursa. The ones who come to Uludağ for taking advantage of winter tourism activities have stated that they

spent approximately "between 101 TL – 500 TL" per day during the time of their stay here or in Bursa. All of these indicate that Uludağ has an important place in the local development.

On the other hand, there are issues that the visitors who come to Uludag for taking advantage of the winter tourism activities are dissatisfied with. The most important issue of dissatisfaction is related with parking. As the result of solving the parking problem, it is expected that Uludag will both be more preferable and its natural beauties will come in view better. The second issue of dissatisfaction is the "High level of prices" The tourist who come to Uludağ on a daily basis are compulsorily supposed to meet their requirements such as catering, renting ski-snowboard, utilizing the mechanical facilities from the accomodational facilities. The prices of these services offered to the daily guests by the accomodational facilities are kept higher compared to the accomodated guests. Direct dissatisfactions related to the winter sports are not at a large ratio and take place in the last ranks.

In fact, All of these indicate that Uludağ winter tourism based on winter sports has an important place in the local development, but, that it does not adequately benefit from its existing advantages and potential and that its competitivenes has been decreased compared to other winter tourism resorts.

The solution recommendations for having Uludağ contribute more to the local economic development and increase its competitiveness are as follows:

- The number of accomodated tourists from Bursa, even outside of Turkey should be increased. In order to do this, tourism promotions and intensive marketing activities sholud be focused on.

- Bursa is an attractive place with its authentic ambiance especially for the foreign visitors. The city of Bursa should be caused to attract more visitors b planning tourism organizations from Uludag to the Bursa city center.

- The opportunities for the daily visitors to meet their needs with more affordable prices should be created.

- On Uludag where the winter tourism depends on winter sports, the dissatisfied ones with the issues related with the winter sports are few. In order to take more advantage of this situation, national and international sports organizations should be organized. As an important factor effecting the demands of the consumers in tourism, "publicity" should be increased by means of sports organizations.

- Parking problem should be solved, causing the natural beauties to remain behind the vehicular traffic should be prevented..

REFERENCES

1. Allman, T., Mittlestaedt, R., Martin, B. and Goldenberg, M. (2009). "Exploring the Motivations of BASE Jumpers: Extreme Sport Enthusiasts". Journal of Sports and Tourism. 14(4), p. 229-247.

2. Bahar, O. and Baldemir, E. (2008). "Uluslararası Ticaret ile Uluslararası Turizm Arasındaki Nedensellik İlişkisi: Türkiye Örneği". Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi. 10(4), p. 97-111.

3. Değer, M. K. (2006). "Turizme ve İhracata Dayalı Büyüme: 1980-2005 Türkiye Deneyimi". Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi. 20(2), p. 66-86.

4. Eceral, T. Ö. and Özmen, C. A. (2009). "Beypazarında Turizm Glişim ve Yerel Ekonomik Kalkınma". Ekonomik ve Sosyal Araştırmalar Dergisi. 5(2), p. 46-74.

5. Fayissa, B., Nsiah, C. and Tadosse, B. (2007). "The Impact of Tourism on Economic Growth and Development in Africa". Department of Economic and Finance Working Paper Series. August, p. 1-21.

6. Henry E. W. and Deane, B. (1997). "The Contribution of Tourism to Economy of Ireland in 1990 and 1995". Tourism Management. 18 (8), p. 535- 553.

7. Kazan, H., Hobikoğlu, E. H., Karademir, H., Dalyancı, L. and Turguter, Y. (2015). "Economic Development of Ski Industry in Experimental Innovation: Example of Palandöken Turkey and ALP Switzerland". Procedia-Social and Behavioral Sciences. 195, p. 487-492.

8. Lanza, A., Temple, P. and Urga, G. (2003). "The Implications of Tourism Specialization In the Long Run: An Econometric Analysis for 13 OECD Economies". Tourism Management. 24, p. 315-321.

9. Perry J. M., Steagall, J. W. and Woods, L. A. (1997). "Cuban Tourism, Economic Growth, and the Welfare of Cuban Worker: ASCE Cuba in Transition". Association for the Study of the Cuban Economy von ASCE (7), p. 141-149.

10. Risso, J. G. and Brida, W. A. (2009). "Tourism as a factor of long-run economic growth: An empirical analysis for Chile". European J. of Tourism Research. 2(2), p. 178-185.

11. Sequeira, T. N. and Campos, C. (2005). "International Tourism and Economic Growth: A Panel Data Approach". FEEM Working Paper. No: 141, p. 1-14.

12. Sinclair, M. T. (1998). "Tourism and Economic Development: A Survey". Journal of Development Studies. 34 (5), p. 1-51.

13. Sinclair, M. T. and A. Tsegaye (1990). "International Tourism and Export Instability. Journal of Development Studies". 26(3), p. 487-504.

14. T.C. Kültür ve Turizm Bakanlığı, Bursa İl Kültür ve Turizm Müdürlüğü, Bursa-Turkey, Retrieved from 12.02.2015 http://www.bursakulturturizm.gov.tr

15. World Travel and Tourism Council, Travel and Tourism Economic Impact-2015, Retrieved from 12.02.2015 https://www.wttc.org

16. Yazıcıoğlu, Y. and Erdoğan, S. (2004). SPSS Uygulamalı Bilimsel Araştırma Yöntemleri. Detay Yayıncılık, Ankara.

ANALYSIS OF MSME ECOSYSTEM IN SERBIA AND IDENTIFICATION OF KEY STRATEGIC SECTORS FOR ITS DEVELOPMENT

Stefan Komazec
Faculty of Organizational Sciences, University of Belgrade, Serbia
komazec@fon.bg.ac.rs

Ivan Todorovic
Faculty of Organizational Sciences, University of Belgrade, Serbia
todorovic.ivan@fon.bg.ac.rs

Milos Jevtic
Faculty of Organizational Sciences, University of Belgrade, Serbia
jevticm@fon.bg.ac.rs

ABSTRACT
Serbia's economy is one of the least developed economies in Europe and for the Government it is crucial to find the drivers of economic growth. The transition process has not fulfilled the expectations of governments and citizens in the past 15 years. As an especially bad part of the transition process emerges privatization of former industrial giants, where the vast majority of these enterprises ceased to exist. The companies that have survived are now far from the former size and production power. Because of this privatization process, the majority of large enterprises currently operating in Serbia are the result of foreign direct investment. However, the total amount of foreign direct investment in Serbia is decreasing from year to year, and it becomes clear that economic growth cannot be based solely on that.
These are the reasons why drivers of Serbia economic growth have to been sought in the development of entrepreneurship and small and medium-sized enterprises. The Government must create programs of institutional support for development of MSME sector in order to create new jobs, increase employment and generally renew economic activity in the country. However, a key elements of each of the Government programs are strategic sectors that should be supported.
The aim of this paper is identification of strategic sectors and the value chains that have the greatest potential for development of the whole MSME ecosystem. Key strategic sectors should be supported by the Government through a more favorable financing, administrative support, training programs etc. A comprehensive analysis MSME sector has been conducted in order to identify key strategic sectors in Serbia, and a part of this analysis will also be shown in the paper.
Keywords: entrepreneurship, MSME, development, strategic sectors, institutional support,

1. INTRODUCTION

The level of economic activity in Serbia has dropped significantly in recent years. In a Serbian society people still feel profound consequences the global economic crisis has left on the economy. The authorities in Serbia are searching for the drivers of economic growth and rising employment. Serbian Government has set the development of entrepreneurship as one of the strategic objectives, and the year 2016 was declared "Year of entrepreneurship" in Serbia.

The Government's decision is consistent with the results of numerous studies and with opinion of many economists that can be summarized in saying that SME development directly influence the state opportunities to take part in world economical processes, which are influenced by globalization, integration and hyper competition forces, and general welfare of the citizens

(Acs, Morck, Yeung, 1997). Special attention is given to the development of small and medium enterprises in transitional and developing countries. Such countries are facing major challenges in terms of tackling high unemployment and unequal distribution of earnings. (Erić, Beraha, Đuričin, Kecman & Jakšić, 2012). If one looks only youth unemployment as one of the criteria, it can be seen that there is a huge gap in youth unemployment rate between EU and Serbia. The 2013 statistics show that the youth unemployment rate in the EU was 23.4% for young people aged 15-24, while in August 2014 the youth unemployment rate in Serbia was 41.7% for young people aged between 15 and 24 and 33.27% for young people aged between 15 and 30 (Ministry of Youth and Sport, 2015)

The experience of countries with developed market economies shows that solving socioeconomic problems depends largely on the level of development of MSME category enterprises (Ratanova, Reshina, Bruna, & Gross, 2014). Their major role is accelerating the economic growth and alleviating consequences of structural unemployment through self-employment of the unemployed (Płaziak & Rachwał, 2014).

Development of MSMEs and entrepreneurship in Serbia involves on the one hande, the identification of key strategic sectors which should be supported, and on the other hand defining a program to stimulate entrepreneurs and companies. Purpose of this paper is to evaluate potential of economical strategic sectors for development of MSME ecosystem in Serbia.

2. SUPPORT TO THE MSMEs

The availability of finance has been highlighted as a major factor in the development, growth and successfulness of MSMEs (Ou & Haynes, 2006). As the numerous reasearches in developed countries shows, small and medium size business is one of a few major forces of state economy and SMEs abundance is the feature of growing and competitive economy. The range of MSMEs support forms and methods is very large and this issue is an important part of the government policy (Adamonienė & Trifonova, 2015). In both developed and developing countries, governments have recognized that the SME sector faces constrained access to external financing which may negatively affect its crucial role in achieving national development goals. As such, many governmental initiatives and programs have been implemented to ensure MSMEs have easier access to financing, of which credit guarantee loans, factoring programs and subsidised fees are typical examples (Abdulsaleh & Worthington, 2013). Lack of export activities emerges as one of the basic problem of Serbian economy. According to official data from Statistical Office of the Republic of Serbia, national foreign trade deficit in the past 4 years has varied between 4.3 and 7.7 billion dollars. Export was and still is untapped potential of Serbian economy - currently accounts for over 40% of GDP, but it is still far below the average of comparable new EU member states (Bulgaria near 70%, Czech Republic 80%, Hungary, Slovakia and Slovenia 90%) (Chamber of Commerce and Industry of Serbia, 2015). It is clear that the Government should create a support programs in purpose of promoting export among all types of enterprises. Previous researches has shown that, considering MSMEs, government-designed export promotion service could significantly improve export performance in multiple ways (Durmuşoğlu, Apfelthaler, Nayir, Alvarez & Mughan, 2012). It can be concluded that the government support programs are crucial for the development of MSMEs. However, it is necessary to identify the key strategic sectors in which the state can expect the fastest economy growth, and the best results of the support programs.

3. MSME ECOSYSTEM IN SERBIA

In terms of number of enterprises, small and medium enterprises and entrepreneurs (MSME) are significant factor in Serbian economy. According to the Report on SME provided by the Ministry of Economy, Republic of Serbia (2013), they represent 99.8% of total active enterprises in Serbia. This high percentage is in line with the situation in the European Union,

in which MSME represents 99% of the business (EC, 2009). However, the difference between Serbia and developed European countries can be seen in the share of MSMEs in total national GDP. Namely, the Strategy for support to the development of SMEs, entrepreneurship and competitiveness from 2015 to 2020 it is indicated that their share in total GDP of Serbia is arround 34%, while the contribution of MSMEs to the GDP could be above 50% in high-income countries (Edinburgh Group, 2014). Following table shows number of enterprises per each category in Serbia.

Category	Number	Share (%)
Entrepreneurs	222,152	70.3
Micro	81,775	25.9
Small	9,353	3.0
Medium	2,132	0.7
MSMEs	*315,412*	*99.8*
Large	494	0.2
Total	*315,906*	*100.0*

Table 1: Number of MSMEs in Serbia, according to the Report on SME 2013

It has been pointed out that unemployment is one of the biggest problems of Serbian economy. Therefore, it is important to compare the number of employees in MSME sector in Serbia with the European Union. MSMEs in Serbia in 2013 had 768,550 employees in total (Ministry of Economy, 2013) Share of number of employees in each category to total number of employees in MSMEs in Serbia is presented in next table (Serbian Business Registers Agency, 2014):

MSMEs	Share (%)
Entrepreneurs	6.02
Micro	28.76
Small	37.29
Medium	27.93
	100

Table 2: Distribution of employees in MSMEs per category in Serbia

Next table shows the share of employees from MSMEs in total number of employees in Serbia:

Number of employees	2013
MSMEs	768.550
Serbia total	2,310,718
Share of MSMEs in Serbia total	*33.26%*

Table 3: Share of number of employees from MSMEs in Serbia total

Presented data indicate that one third of total employees in Serbia work in MSMEs. If only non financial sector in Serbia is observed, MSMEs have share of around two thirds in number of employees, as presented in next table (Ministry of Economy, 2013):

Number of employees	2013
MSMEs	768.550
Large	416,394
Total in non financial sector	*1,184,944*
Share of MSMEs in non financial	*64.9%*

Table 4: Share of MSMEs in total number of employees in non financial sector in Serbia

According to Annual Report on European SMEs by European Commission, the share of employees from MSMEs in total number of employees varies varies greatly across Member States, from 54% in United Kingdom to 87% in Greece, which is presented in next figure:
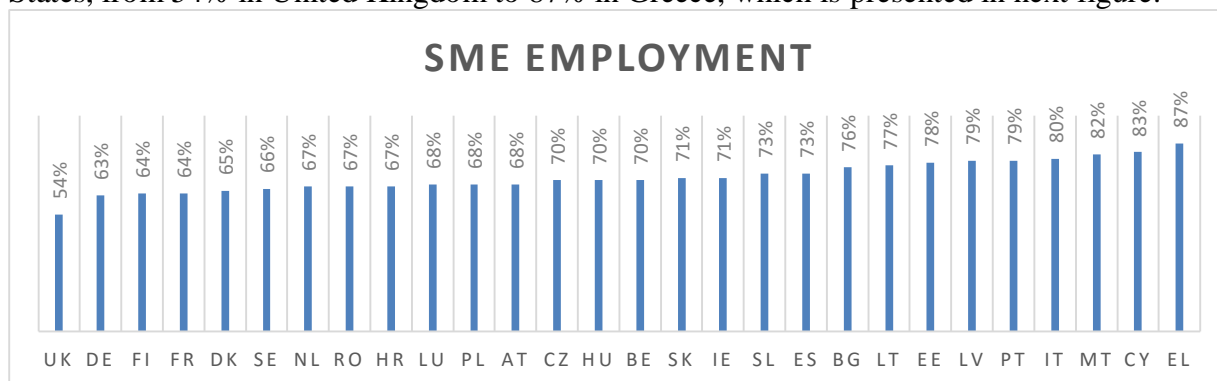
Figure 1: Share of SMEs in total number of employees in non financial sector EU (European Commission, 2016)

Analyzing the data presented, it can be seen that MSMEs in most EU countries have a higher percentage of total employess than it is a case in Serbia. It can be concluded that the development of MSME sector should move in the direction of increasing employment and that one of the criteria for the selection of key strategic sectors should be an opportunity for employment growth.

4. DEVELOPMENT POTENTIAL INDEX OF TRADABLE SECTORS IN SERBIA

The basis for this research and determination of the relevant strategic sectors and value chains was the document called Development potential index of tradable sectors in Serbia. The study was prepared by the Serbian Chamber of Commerce and the Center for Advanced Economic Studies. The aim of study is precisely to "shed light on the way" to decision-makers - through report are identified strengths on which Serbia needs to build its development, and in the case of a pair of the most prosperous branches more detailed are presented factors that should be encouraged and addressed in order to discovered potential as much as possible will be used.

Development potential index measures the ability of companies in the sector to directly and indirectly generate added value and high quality jobs, through healthy and sustainable channels. For the purpose of measuring all components, such as systematicity, ability, health and sustainability of the development and direct and indirect contribution to the creation of value and jobs, an index comprised of multiple sub-indexes was formed (Chamber of Commerce and Industry of Serbia, 2015).

The index is a composite character and is based on four main components: the performance achieved, the potential for economic development, the contribution of socio - economic objectives and expert opinions. Thus, the index aims are to rank the sectors according to their actual results and the potential to maintain and improve the results, especially through the provision of contributions to national priorities. These components can be further broken down

into nine main pillars: (1) the general performance, (2) the export performance, (3) sustainable performance, (4) the potential for growth, (5) the potential for spillover effects, (6) the potential for sophistication (7) the creation of employment, (8) attracting investments and (9) promotion of entrepreneurship and development of micro and small enterprises. Pillars branch out on more detailed figures, which are then described in indicators. As the research by by the Serbian Chamber of Commerce used more comprehensive and extensive analysis, it was decided to retain only some of the components / pillars during the process of key strategic sector identification. Here will be listed all components, but later it would be covered in detail only used and observed aspects of the analysis.

Component 1: Measuring the achievement of competitiveness (performance achievement)

> **Pillar (1) - general performance** - the ability of firms in the sector to grow fast, productive, and profitable, creating added value and jobs. Here we should mention income, employment, profitability and productivity, the success of business.

> **Pillar (2) - export performance** - analysis of export performance separates those sectors that have the resources and knowledge necessary for a strong, dynamic, diversified, inclusive and sustainable export. There is described the scope, pace, diversification, sustainability and inclusiveness exports.

> **Pillar (3) - sustainable performance** - despite a profitable and productive business, and the successful marketing of products on foreign markets, financial management is often a burning issue of firms. Therefore, it is important to bear in mind the indebtedness and liquidity of the business.

Component 2: Economic development - analysis of economic development at the sector level of one country are focusing on potential of the sector to primarily accelerate and improve their own growth, and to push for parallel development of other sectors and thereby achieve the broader development contribution.

> **Pillar (4) - the potential for growth** - it says about crossing two streams of information: what is the demand for the products on domestic and international market and are we able to produce them Serbia.

> **Pillar (5) - potential for spillover effects** - the ability of the sector to push for the growth to others and contribute to overall economic development.

> **Pillar (6) - the potential for sophistication** - sophisticated sectors contribute to accelerating the broader economic development, by improving technology, production processes and lead to the creation of greater value-added.

Component 3: Socio-economic priorities – According to the Serbian Chamber of Commerce experts this component observes the specific priorities of economic growth, but also the quality of that growth, which is reflected in the quality of welfare of citizens.

> **Pillar (7) - contribution to employment creation** - industries differ on the ability to create jobs, but also on its ability to improve the quality of jobs.

> **Pillar (8) - contribution to attracting investment** - do not contribute all sectors equally through investments, not all sectors are equally attractive to future investors.

> **Pillar (9) - encouraging entrepreneurship** and the development of micro and small enterprises - sectors vary according to how they are "friendly" environment for MSME development.

Component 4: Corrective component – They have also used corrective measures because of the imperfection of data, with an approximate value and other "failures" of data. The integration of experts in the process of sectorial ranking aims to contribute to quality of conclusions, based on experience, which served as a results adjustment.

We have used described methodology and results of research conducted by experts of Chambers of Commerce, who have access to real data. This research should also be in line with national priorities. The next step was to identify the sectors that are most suitable for the development of entrepreneurship and small and medium-sized enterprises

5. IDENTIFICATION OF KEY STRATEGIC SECTORS FOR MSME ECOSYSTEM DEVELOPMENT IN SERBIA

Becoming acquainted with all the criteria and pillars of analysis, as well as development groups that are distributed economic sectors in, we made an independent assessment with the focus on aspects that touch the object and purpose of this research. It is carried out by selecting the most important components and pillars, and respecting the influence of all the others.

First we shortened the list of more than 100 sectors according to their total score and eliminated those with inadequate results. However, we did not simply select those with best final scores, but we further lowered the number of candidates by analyzing their score in 9th component, entrepreneurship development, and 7th component, possibility of generating new employment, due to problems of Serbian economy which are described above.

The next step was the ranking of existing criteria (pillars) in terms of importance for the development of MSME. For this purpose we have used Delphi method. Delphi method aims to lead a group of experts to the most reliable opinions and assessments, which should be made y by consensus (Dalkey & Helmer, 1963). Delphi method is conducted in several iterations, where experts in each iteration faced with the opinions of other experts and are requested to revise their opinion (Rowe, Wright & Bolger, 1991). The importance of each criteria for the experts conducting Delphi method is then multiplied by the rank given by experts Chambers of Commerce in order to obtain the final score of each sector.

Strategic sectors - Value Chains	Industry	Final rank
Production of plastic profiles	Chemical industry	2
Special purpose machine	Machinery and electronics	7
Animal food	Agriculture	9
General-purpose machines	Machinery and electronics	3
Other plastic products	Chemical industry	6
Other rubber products	Chemical industry	4
Machines for the food and beverage industry	Machinery and electronics	5
Processing and preserving of fruit and vegetables	Chemical industry	10
Plastic packaging production	Chemical industry	8
Measuring electronic instruments	Machinery and electronics	1
Service agricultural activities	Agriculture	12
Fruits	Agriculture	11

Table 5: Potential for MSME development - strategic sectors final ranking

This way we focused on sectors and value chains with high potential, with best results of the components related to entrepreneurship and creating employment, which do not demand work experience or large investments, and because of all mentioned are suitable entrepreneurs. In addition, in the selection of sectors, we have taken into account the profitability and productivity of the sector, as well as the potential for growth in the sector. A more detailed description of the components that make up the index against which we chose key strategic sectors for MSME development are given below.

Profitability and productivity of companies in the sector are among the basic prerequisites for sustainable growth. Both pillars of general performance in the long run show an efficient system and the effectiveness of the business processes of the company. This sustainability is reflected through the encouragement of owners and other stakeholders to invest more funds. High average profitability consequently attracts a large number of new investors, which further enhances the importance and growth of the sector. (Chamber of Commerce and Industry of Serbia, 2015).

According to the experts of Serbian Chamber of Commerce**, the potential for growth in certain sectors** primarily look at the trends in demand for products on the domestic and international market, its structure and dynamics. In this way, they have identified the needs, growth and sustainability of the demand of each sector, as a starting point the analysis of future potential.

From a social point of view, growth that creates employment is desirable. This general aim in particular has more importance in terms of high unemployment, which is identified in Serbia, so **job creation and job quality** are certainly one of key index komponents. Chamber experts are viewing creating employment through two lines: sector's ability to create and increase the number of jobs, and the sector's ability to create quality jobs. Only the synergy of these two directions, employment growth achieves its full contribution to improving the welfare of citizens. The extent of creating jobs is seen in a direct and indirect way. It depends, first, on the size and structure of the sector, as well as from the very need for labor and labor intensiveness. On the other hand, the quality of jobs looks at the companies' ability to provide "dignified" work for their employees.

Building a healthy economy means creating favorable conditions for **entry, survival and development** of small firms. Possibility of entry has been justified by Porter as one of 5 basic forces affecting competitivnes of the industry or sector (Porter, 2008). Sectors vary according to how many "friendly" environments for MSME development have. This is primarily reflected in the presence of a small number of dominant companies, which preferably influence performance and development of certain sectors.

6. CONCLUSION

The "small" economy (MSMEs) in Serbia is facing considerable difficulties both in business and in general survival. A large number of companies after the establishment fail to achieve its business in the long term. In the period from 2005 to the present, 66.1% from start-ups has managed to survive within three years, while only half succeeded within five years. (Chamber of Commerce and Industry of Serbia, 2015). It is clear that for the Government is crucial to identify sectors with the greatest potential for success of entrepreneurship and the development of the entire MSME ecosystem. According to the results of the our research, the strategic sectors and value chains with the greatest potential for MSME ecosystem development are:

    1) Agriculture
        a. Fruit growing
        b. Animal food
        c. Service agricultural activities
        d. Processing and preserving of fruit and vegetables
    2) Chemical industry
        a. Plastic packaging production – plastic articles for the packing of goods
        b. Plastic profiles production
        c. Prodution of other plastic products

All the data used in the analysis are from the official documents, so the scores of different components explaining sectors potential were our inputs in the selection process.

Further research in this area should be focused on defining the concrete measures and projects for developing MSME sector in Serbia, in accordance with the strategic sector potentials presented in this paper.

LITERATURE

1. Acs, Z. J., Morck, R., & Yeung, B. (1999). Evolution, community, and the global economy. In *Are Small Firms Important? Their Role and Impact* (pp. 147-157). Springer US.
2. Adamonienė, R., & Trifonova, J. (2015). The state support for small and medium sized companies: general and practical aspects of Lithuania.Engineering Economics, 51(1).
3. Chamber of Commerce and Industry of Serbia (2015). *Development potential index of tradable sectors in Serbia.* Belgrade.
4. Dalkey, N., Helmer, O., (1963) An experimental application of the Delphi method to the use of experts, Management Science, 9(3), 458-467.
5. Durmuşoğlu, S. S., Apfelthaler, G., Nayir, D. Z., Alvarez, R., & Mughan, T. (2012). The effect of government-designed export promotion service use on small and medium-sized enterprise goal achievement: A multidimensional view of export performance. Industrial marketing management, 41(4), 680-691.
6. EC (European Commission). (2009). European Small Business Portal. Retrieved from: http://ec.europa.eu/enterprise/sme/index_es.htm.
7. EC (European Commission). (2016). Annual report of European SMEs 2014/2015: *SMEs start hiring again*. Retrieved from:
8. http://ec.europa.eu/growth/smes/business-friendly-environment/performance-review/index_en.htm
9. Edinburgh Group. (2014). Growing the global economy through SMEs. Retrieved from: http://www.edinburgh-group.org/media/2776/edinburgh_group_research_-_growing_the_global_economy_through_smes.pdf
10. Erić, D.D., Beraha, I.A., Đuričin, S.O., Kecman, N.Đ. & Jakšić, B.B. (2012). Financing small and medium-sized enterprises in Serbia. Institute of Economic Sciences, Belgrade, Serbia and Chamber of Commerce and Industry of Serbia.
11. Ministry of Economy, Republic of Serbia. (2013). Report on SME. Retrieved from http://narr.gov.rs/index.php/Aktivnosti/Istrazhivanja-i-analize/Izveshtaj-o-MMSP
12. Ministry of Economy, Republic of Serbia. (2014). The Strategy for support to the development of SMEs, entrepreneurship and competitiveness from 2015 to 2020. Retrieved from http://www.rsjp.gov.rs/strateg/50/nac/Strategija%2012.12.2014%20Za%20press.pdf
13. Ministry of Youth and Sport, Republic of Serbia. (2012). National Youth Strategy 2015–2025. Retreived from http://www.mos.gov.rs/mladisuzakon/attachments/article/389/nacionalna_strategija_za_mlade0101_cyr.pdf
14. Ou, C., & Haynes, G. W. (2006). Acquisition of additional equity capital by small firms–findings from the national survey of small business finances. Small Business Economics, 27(2-3), 157-168.
15. Płaziak, M., & Rachwał, T. (2014). The role of entrepreneurship in regional development strategies (based on the Polish National Strategy of Regional Development 2010-2020). Europa XXI, 26, pp. 97-110.

16. Porter, M. E. (2008). Competitive strategy: Techniques for analyzing industries and competitors. Simon and Schuster.

17. Ratanova, I., Reshina, G., Bruna, S., & Gross, E. (2014). Development of Small and Medium-Sized Enterprises in Regions of Latvia. Regional Formation and Development Studies, 11(3), pp. 189-198.

18. Rowe, G., Wright, G., Bolger, F., (1991) Delphi: A re-evaluation of research and theory, Technological Forecasting and Social Change, 39, 235-251

19. Serbian Business Registers Agency. (2014). *Annual financial statements bulletin for 2014.* Belgrade. Serbian Business Registers Agency

20. Statistical Office of the Republic of Serbia (2014). *Labor Force Survey in Republic of Serbia 2014.* Retrieved from:
http://webrzs.stat.gov.rs/WebSite/repository/documents/00/01/71/72/SB-593-bilten_ARS_2014.pdf

THE ADOPTION OF FACEBOOK FOR EDUCATIONAL PURPOSES IN THAILAND

Sureerut Inmor
Department of Information Systems, Business Administration faculty
Rajamangala University of Technology Thanyaburi,
Thanyaburi, Klong 6,
Pathumthani, 12120, Thailand
sureerut_i@rmutt.ac.th

ABSTRACT
Research on the Adoption of Facebook for Educational Purposes is aim to understand why students use Facebook primarily for online activities. In order to analyze the type of Facebook usage on matters related to the objectives of education and to compare the result between business administration student and Engineering student from the sample group. The hypothesis states that the nature of demographic difference (gender, study year, faculty, frequency of use, number of friends on Facebook), resulting in the reasons for Facebook usage and for the educational purpose are different. The sample group consisted of 400 respondents. The statistics used for data analysis are Descriptive statistics and inferential statistics (Independent t-test, One-way ANOVA). The study found that demographic characteristics different does not affect the use of Facebook in the social influence aspect. For the educational purposes found that the study year does not affect the use of Facebook for educational purpose. For the faculty different found that business administration student use Facebook for communication and create educational partnerships slightly higher than Engineering Students with statistically significant.
Keywords: *Facebook, Educational, Blended Learning, TAM, UTAUT, SNSs*

1. INTRODUCTION

There are many Social Network Sites (SNSs) with various applications such as Facebook, Twitter, Instagram, and Linkedin, Facebook has become the most SNSs that adopted by college student as a resource to support education and collaboration with faculty member (M.D. Roblyer et al., 2010). The pervasive usage of Facebook that was significantly researched specific on the area such as commercial purpose and personal/group communication. At present, the using trend of Facebook has turn into the way of academic purpose. Student start to join group related to the class and subject of interested. They use Facebook not only for exchange the academic information but also for seeking help on their homework. However, the faculty attitudes toward Facebook were negative side. Most of faculty always prohibit student to have a connection on Facebook while in class. They have the idea that reason for students' usage of Facebook is for entertainment and personal communication only.

As a member of faculty, we cannot just ignore this incident. In recent years, lot of educational research conducted on how to get successful in deployment of e-learning website. The institution spend large amount of budget to create the powerful e-learning and content management website. The main objective of those learning websites is to provide another communication channel for student and instructor. The emerging of Facebook has led to the new infrastructure of communication. Since most of the students are using Facebook as their daily activities, why should the institution take this opportunity to gain benefit from them. Using social network in education could be a superior idea because students spend a lot of time on these sites activities.

There exists many studies related academic purpose of Facebook usages have done in many countries for example Turkey (Erdem, M. and Kibar, P.N., 2014, Sacide Güzin Mazman et

al,.2010), Iran (Morteza Erfanian et al., 2013), United State (M.D. Roblyer et al., 2010, Paul Amador and Julie Amador, 2014, Brittany Gentile et al., 2012), Pakistan (R. Arteaga Sáncheza et al.,2014), and Australia (Jason L. Skues et al., 2012). In Thailand, the research on social networking in education is still limited. Not many researches have conducted in Thailand. The researcher found a research that emphasized on internal and external influences on social networking site usage in Thailand (Vikanda Pornsakulvanich and Nuchada Dumrongsiri., 2013). There are few studies about e-learning and content management in Thailand (Navaporn S. Snodin, 2013, Wannasiri Bhuasiri et al., 2012). This research will considered to be the existing early group for the topic of Facebook usage for academic purpose in Thailand.

The research will aim to survey how student are persuade into using Facebook and how they use them for the academic purpose. The result will share among educator. If educators understand on both questions, Facebook might become one of academic tool for teaching, learning, and communicating among all parties concern with the educational context. Other than educators, the institution should provide Blended Learning Model by integrating Social Network Sites (SNSs) into an existing learning model (Ron and Dennis, 2013).

1.1 Objective of the Study

1. To understand the reason why student use Facebook for their daily online activities.
2. To analyze Facebook using type for educational purpose.
3. To compare usage of Facebook for educational purpose of both business and engineering students.

1.2 Benefit of the Study

1. The result could be used to construct a blended learning model which takes the benefit of SNSs such as Facebook.
2. To define the academic institution strategy on how to improve the study model by using SNSs.
3. As results are more specific on academic purpose, the educational institution could apply knowledge to improve their study environment.
4. To promote the educator awareness of Facebook usage as a tool for teaching and learning.

1.3 Literature Review

Adoption of Facebook applies The Technology Acceptance Model (TAM) defined by Davis (1989) for the two variables: Usefulness and Ease of Use. The Unified theory of acceptance and use of technology (UTAUT) is a technology acceptance model developed by Venkatesh and others in "User acceptance of information technology: Toward a unified view" (Venkatesh, Morris, Davis, & Davis, 2003) for the two variables: Social Influence and Facilitating Conditions. The reasons for choosing these four variables are because they directly related to the use of Facebook.

1. Usefulness and Ease of Use: TAM specifies that "perceived usefulness (PU)" and "perceived ease of use (PEOU)" are main inspirational factors for accepting and utilizing new technologies. PU can be clarified as "the degree to which an individual believes that using a particular system would enhance his/ her job performance" (Davis, 1989) while PEoU describes as "the degree to which an individual believes that using a particular system would be free of physical and mental efforts" (Davis, 1989). In this research, PU of Facebook is explained as the degree to which an individual believes that the use of Facebook would enhance his/her communication, collaboration and information exchange. PEoU is explained as the degree to which an individual believes that using Facebook would use free or little of physical and mental efforts.

2. Social Influence: Social Influence can be referred as "the degree to which an individual perceives that important others believe she or he should use the new system" (Venkatesh et al., 2003). According to the research purpose, Social Influence is determined as the degree to which an individual sustains the importance of his/her meaning regarding Facebook adoption.

3. Facilitating Conditions: Facilitating Conditions is an extensive variable that support using the system, includes many different concepts such as training, help support, subject infrastructure, and available knowledge. It is defined as "the degree to which an individual believes that an organizational and technical structure exists to support use of the system" (Venkatesh et al., 2003). In this research, Facilitating Conditions refer to the degree to which an individual believes that there exists an appropriate organization environment and technical infrastructure to support the use of Facebook.The third variable group of the model, Educational Usage of Facebook, is classified by 3 observed variables: Communication, Collaboration, and Resource/Material Sharing.

1. Communication: Based on the internet connection, Facebook has an advantage over other tools for communication. It can be used to create and promote online connections between students and faculty within an academic community (Mazer et al., 2007).

2. Collaboration:Social Networking Sites (SNS) such as Facebook may be used to develop new collaboration models. Maloney (2007) concludes that the conversational, collaborative, and communication qualities of SNS enhance the learning process.

3. Resource/Material Sharing: Students and professors can share many different kinds of educational materials through Facebook in order to complement the traditional learning model. The Facebook can be used as an additional tool in blending learning environment.

According to Mazman and Usluel (2010), the educational usage of Facebook is related to the user purposes and the adoption process. The Facebook adoption processes explained 45% of its educational usage. When included the user purposes, it could explain 50% of variance in educational usage of Facebook.

Applying the Technology Acceptance Model (TAM) by R. Arreaga Sanchez et al., 2014 found that the most important factor in adoption of Facebook is social influence and social relations is the most important factor of usage purpose.

Research on "Academic advising via Facebook" by Paul Amador and Julie Amador, 2014 result that student at higher education use Facebook to seek academic advising help about university academic matters. Besides that, the student also considered Facebook to interact with higher education personnel electronically. Jason L. Skues et al., 2012 cited in the research "The effects of personality traits, self-esteem, loneliness, and narcissism on Facebook use", students with higher level of loneliness reported to have more Facebook friend. The conclusion was students who are high in openness use Facebook to connect with others in order to discuss a wide range of interest. The students who are high at loneliness use the site to compensate for their lack of online relationship. Brittany Gentile et al., 2012 researched on how SNSs shape personality traits and identity. The result showed that college students who focused on their Facebook page scored significantly higher in general self-esteem, but not narcissism. Spending time on SNSs profiles cause young people to endorse more positive self-views.

A comparison of faculty and student responses on "Findings on Facebook in higher education" by M.D. Roblyer et al., 2010, concluded that students are much more likely than faculty to use Facebook. They also more open to the possibility of using Facebook and similar technologies to support classroom work. Faculty members are more likely to use more "traditional" technologies such as e-mail.

Erdem, M. and Kibar, P.N. (2014) studied on students' opinions on blended learning and its implementation. The result stated that students have positive opinions on blended learning and its implementation. The findings indicate that Facebook may be an appropriate tool for communication and interaction for sharing content, homework/projects.

1.4 Conceptual Framework
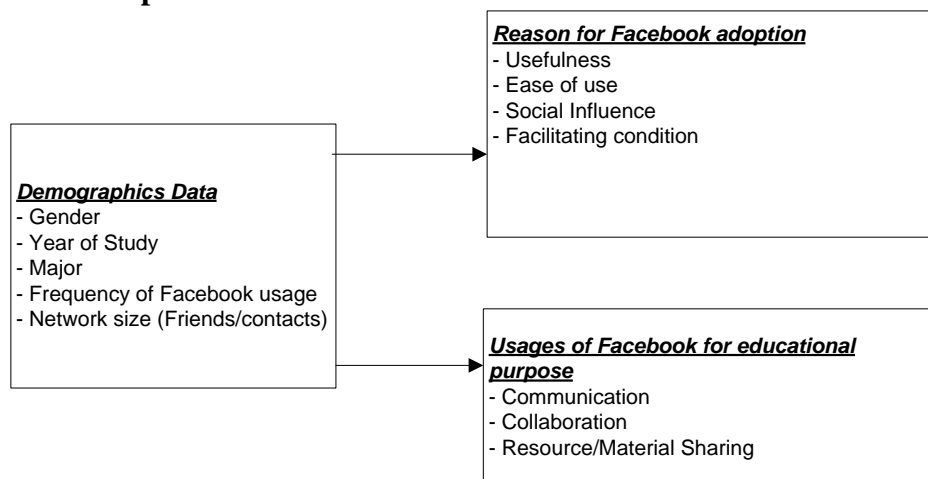
Hypothesis: The first hypothesis is the differences in student characteristics will vary with reasons for Facebook adoption. The second hypothesis is the differences in student characteristics will vary with usage type of Facebook for educational purpose.

2. DATA ANALYSIS
2.1 Data Analysis for Data Distribution

Table 1: Distribution of respondents by their major of study

Major	Frequency	Percentage
Business	203	50.75
Engineer	197	49.25
Total	400	100.00

The majority of respondents in this study are in Business major, followed by the Engineering major.

Table : Summary distribution respondents on the reason for Facebook adoption

No.	Reason for Facebook adoption	$\bar{x}$	S.D.	Result	Order
1	Usefulness	4.24	0.517	Agree	1
2	Ease of use	4.20	0.618	Agree	2
3	Social Influence	4.05	0.695	Agree	3
4	Facilitating Conditions	4.05	0.690	Agree	3
	Total	4.14		Agree	

From Table 2, the summary on the reason for Facebook adoption found that the overall mean is 4.14 at "Agree" level of opinion. The highest mean (4.24) is for the reason of usefulness and the lowest mean (4.05) for the reason of "Social Influence" and "Facilitating Conditions".

Table 3: Summary distribution respondents on the usage of Facebook for educational purpose

No.	Usage of Facebook for Educational Purpose	$\bar{x}$	S.D.	Result	Order
1	Communication	4.21	0.573	Agree	2
2	Collaboration	4.34	0.627	Agree	1
3	Resource/Material Sharing	4.21	0.660	Agree	2
	Total	4.25		Agree	

From Table 3, the summary on the usage of Facebook for educational purpose found that the overall mean is 4.25 at "Agree" level of opinion. The highest mean (4.34) is for the "Collaboration" purpose, follows by "Communication" and "Resource/Material Sharing" at the same mean(4.21).

2.2 Data Analysis for Hypothesis Testing (show only part of total hypothesis)
Hypothesis 1: the reason for Facebook adoption will vary with the study major.

Table 4: Data analysis for testing that reason for Facebook adoption will vary with the study major

Reason for Facebook adoption	t-test for Equality Mean					
	major	$\bar{x}$	S.D	t	df	Sig.
Usefulness	Business	4.17	0.582	-2.818	0.057	0.005*
	Engineer	4.33	0.547		0.057	
Ease of use	Business	4.10	0.654	-3.595	0.061	0.000*
	Engineer	4.32	0.548		0.060	
Social Influence	Business	3.99	0.681	-1.944	0.070	0.053
	Engineer	4.12	0.706		0.070	
Facilitating Conditions	Business	3.97	0.687	-2.499	0.069	0.013*
	Engineer	4.14	0.684		0.069	

*Significant level at 0.05

From Table 4, the independent t-test testing indicates that three factors in reason for Facebook adoption (usefulness, ease of use, and facilitating conditions) have significant level < 0.05 when analyses with the study major. As a result the usefulness, ease of use, and facilitating conditions of reason for Facebook adoption will vary with the study major except for the social influence reason.

Hypothesis 2: the usage of Facebook for educational purpose will vary with the study major.

From Table 5, the independent t-test testing indicates that two factors in use of Facebook for Educational Purpose (communication and collaboration) have significant level < 0.05 when analyses with the study major. As a result the communication and collaboration purpose of using Facebook for Educational will vary with the study major except for the resource/material sharing purpose.

Table 5: Data analysis for testing that usage of Facebook for educational purpose will vary with the study major

Use of Facebook for Educational Purpose	t-test for Equality Mean					
	Major	$\bar{x}$	S.D	t	df	Sig.
Communication	Business	4.29	0.559	2.840	0.057	0.005*
	Engineer	4.13	0.578		0.057	
Collaboration	Business	4.43	0.586	3.036	0.062	0.003*
	Engineer	4.24	0.655		0.062	
Resource/Material Sharing	Business	4.27	0.624	1.763	0.066	0.079
	Engineer	4.15	0.693		0.066	

*Significant level at 0.05

Hypothesis 3: the reason for Facebook adoption will vary with the frequency of Facebook Usage.

Table 6: Data analysis for testing that reason for Facebook adoption will vary with the frequency of Facebook usage

Reason for Facebook adoption	Source of Variation	SS	df	MS	F	Sig.
Usefulness	Between Groups	8.240	4	2.060	6.669	0.000*
	Within Groups	122.016	395	0.309		
	Total	130.256	399			
Ease of use	Between Groups	4.894	4	1.223	3.281	0.012*
	Within Groups	147.286	395	0.373		
	Total	152.179	399			
Social Influence	Between Groups	2.705	4	0.676	1.407	0.231
	Within Groups	189.899	395	0. 481		
	Total	192.605	399			
Facilitating Conditions	Between Groups	5.047	4	1.262	2.694	0.031*
	Within Groups	185.029	395	0.468		
	Total	190.076	399			

*Significant level at 0.05

From Table 6, the one-way ANOVA testing was conducted to compare the reason for Facebook adoption among the frequency of Facebook usage. The result indicates that three reasons which are usefulness, ease of use, and facilitation conditions have significant level < 0.05 then the null hypothesis was rejected. The social influence reason has significant level >0.05 then the null hypothesis was accepted. As a result, the reason for Facebook adoption will vary with the frequency of Facebook usage. Therefore Post Hoc Test has been used to identify the difference between each frequency of use and reason for Facebook adoption only for three reasons which are usefulness, ease of use, and facilitating conditions.

Table 7: Post Hoc Test (LSD) between each frequency of use and reason for Facebook adoption in the usefulness reason.

Frequency of Facebook Usage	$\bar{x}$,	Several times/day 4.30	Once/day 4.04	Several times/month 3.96	Once/ month 3.54	Several times/year 4.50
Several times/day	4.30		0.25 (0.006)*	0.34 (0.005) *	0.76 (0.000)*	-0.20 (0.465)
Once/day	4.04			0.09 (0.555)	0.51 (0.026)*	-0.46 (0.116)
Several times/month	3.96				0.42 (0.080)	-0.54 (0.072)
Once/month	3.54					-0.96 (0.006)*
Several times/year	4.50					

*Significant level at 0.05

From Table 7, the data analysis on each frequency of Facebook usage associated with usefulness reason of Facebook adoption, a one-way ANOVA test indicated a statistically significant difference in each pair of frequency are as follows: The respondents who spend times using Facebook several times a day have used Facebook for usefulness reason more than those who spend times once a day, several times a month, and once a month. The respondents who spend times using Facebook once a day have used Facebook for usefulness reason more than those who spends times using once a month. The respondents who spend times using Facebook once a month have used Facebook for usefulness reason less than those who spends times using several times a year. Thus, the evident suggest that the more the respondents spend times on Facebook, the more they accept the Facebook for usefulness reason. But this conclusion also cannot apply for the respondents who rarely spend time using Facebook (several times a year), it might happen because the question is rather ambiguous.

Table 8: Post Hoc Test (LSD) between each frequency of use and reason for Facebook adoption in the ease of use reason.

Frequency of Facebook Usage	$\bar{x}$	Several times/day	Once/day	Several times/month	Once/month	Several times/year
		4.23	4.17	3.97	3.52	4.08
Several times/day	4.23		0.07 (0.498)	0.26 (0.046) *	0.71 (0.002)*	0.15 (0.621)
Once/day	4.17			0.20 (0.217)	0.64 (0.010)*	0.08 (0.792)
Several times/month	3.97				0.45 (0.091)	-0.11 (0.736)
Once/month	3.52					-0.56 (0.146)
Several times/year	4.08					

*Significant level at 0.05

From Table 8, the data analysis on each frequency of Facebook usage associated with ease of use reason of Facebook adoption, a one-way ANOVA test indicated a statistically significant difference in each pair of frequency are as follows: The respondents who spend times using Facebook several times a day have used Facebook for ease of use reason more than those who spend times several times a month, and once a month. The respondents who spend times using Facebook once a day have used Facebook for ease of use reason more than those who spend times once a month. Thus, the evident suggest that the more the respondents spend times on Facebook, the more they accept the Facebook for ease of use reason.

Table 9: Post Hoc Test (LSD) between each frequency of use and reason for Facebook adoption in the facilitating condition reason.

Frequency of Facebook Usage	$\bar{x}$	Several times/day	Once/day	Several times/month	Once/month	Several times/year
		4.08	3.93	3.94	3.40	4.55
Several times/day	4.08		0.14 (0.201)	0.14 (0.351)	0.68 (0.010)*	-0.47 (0.170)
Once/day	3.93			0.00 (0.974)	0.53 (0.057)	-0.62 (0.086)
Several times/month	3.94				0.54 (0.069)	-0.61 (0.100)
Once/month	3.40					-1.15 (0.008)*
Several times/year	4.55					

*Significant level at 0.05

From Table 9, the data analysis on each frequency of Facebook usage associated with facilitating condition reason of Facebook adoption, a one-way ANOVA test indicated a statistically significant difference in each pair of frequency are as follows: The respondents who spend times using Facebook several times a day have used Facebook for facilitating condition reason more than those who spend times once a month. The respondents who spend times using Facebook once a month have used Facebook for facilitating condition reason less than those who spend times several times a year.

Thus, the evident suggest that the more the respondents spend times on Facebook, the more they accept the Facebook for facilitating condition reason. But this conclusion also cannot apply for the respondents who rarely spend time using Facebook (several times a year), it might happen because the question is rather ambiguous.

3. CONCLUSION, DISCUSSION AND SUGGESTIONS
3.1 Conclusion
Hypothesis 1: The differences in student characteristics will vary with reasons for Facebook adoption.

The reason for Facebook adoption (usefulness, ease of use, social influence, and facilitation conditions) will not vary with the respondents' year of study and also the social influence reason will not vary with any of the student characteristics.

Hypothesis 2: The differences in student characteristics will vary with usage type of Facebook for educational purpose. The usage type of Facebook (communication, collaboration, and resource/material sharing) will not vary with the respondents' year of study.

Table 10: Summary of Testing for Hypothesis

Remarks: ✓ Statistically significant differences at 0.05
- No Statistically significant differences at 0.05

3.2 Discussion
The research result found that the most important reason for Facebook adoption is "Usefulness", follow by "Ease of use", "Social Influence", and "Facilitating Conditions". This is inconsistent with research by R. Arreaga Sanchez et al., 2014, which has "Social Influence" as the most important factor. This can be explained as the technology is more easy to use than before then at present, the user will mainly focus on their "Usefulness".

Also the usage of Facebook for the educational purpose according to the research result found

Hypothesis 1: The differences in student characteristics will vary with reasons for Facebook adoption.

Reason for Facebook adoption	Usefulness	Ease of use	Social Influence	Facilitating Condition
H 1.1: Gender	✓	✓	-	✓
H 1.2: Year of Study	-	-	-	-
H 1.3: Major	✓	✓	-	✓
H 1.4: Frequency of Use	✓	✓	-	✓
H 1.5: Network Size	✓	-	-	-

Hypothesis 2: The differences in student characteristics will vary with usage type of Facebook for educational purpose.

Usage of Facebook for Educational Purpose	Communication	Collaboration	Resource/Material Sharing
H 2.1: Gender	✓	✓	✓
H 2.2: Year of Study	-	-	-
H 2.3: Major	✓	✓	-
H 2.4: Frequency of Use	✓	✓	✓
H 2.5: Network Size	-	-	✓

that the respondent use mainly for "Collaboration" such as encourage the creation of academic groups, exchange course related information, and improve student group work. This is consistent with the research from Paul Amador and Julie Amador, 2014 that the student use Facebook for seeking academic advising and interact with educational personnel.

Summary from the opened-ended question suggest that student want their faculty to use Facebook more on their related field of study and they also want to integrate Facebook as part of their learning tool. These results are consistent with the research from M.D. Roblyer et al., 2010 and Erdem, M. and Kibar, P.N. (2014).

3.3 Suggestion for further study

The research result could give some suggestions for further study as follows:

1. The study on how faculty member use their Facebook for educational purpose should be conduct. That way we can analyzed about the reason why most of the faculty member continue to use their traditional method of learning tool instead of social media.

2. The blended learning method that using Facebook should be design. Most of the student uses their Facebook for the educational purpose. If the higher education could integrate Facebook to the learning process, this could be greater benefit for both student and the education institution.

LITERATURE

1. Erdem, M. and Kibar, P.N., (2014), Students' opinions on facebook supported blended learning environment, Turkish Online Journal of Educational Technology, Volume 13, Issue 1, January 2014, Pages 199-206. Available at http://www.scopus.com/record/display.url?eid=2-s2.0-84891636436&origin=inward&txGid=B4930A1DD0802213A4EB09405684B16C.euC1g MODexYlPkQec4u1Q%3a2

2. Paul Amador and Julie Amador. (2014). Academic advising via Facebook: Examining student help seeking, The Internet and Higher Education, Volume 21, April 2014, Pages 9–16. Available at http://www.sciencedirect.com/science/article/pii/S109675161300047X

3. R. Arteaga Sáncheza, V. Cortijob, and U. Javedc. (2014), Students' perceptions of Facebook for academic purposes, Computers & Education Volume 70, January 2014, Pages 138–149. Available at http://www.sciencedirect.com/science/article/pii/S0360131513002340

4. Vikanda Pornsakulvanich and Nuchada Dumrongsiri. (2013), Internal and external influences on social networking site usage in Thailand, Computers in Human Behavior, Volume 29, Issue 6, November 2013, Pages 2788-2795. Available at http://www.sciencedirect.com/science/article/pii/S0747563213002549

5. Morteza Erfanian, Seyed Alireza Javadinia, Mohammadreza Abedini, and Bita Bijari, (2013), Iranian Students and Social Networking Sites: Prevalence and Pattern of Usage, Procedia - Social and Behavioral Sciences, Volume 83, 4 July 2013, Pages 44-46. Available at http://www.sciencedirect.com/science/article/pii/S1877042813010392

6. Navaporn S. Snodin (2013), The effects of blended learning with a CMS on the development of autonomous learning: A case study of different degrees of autonomy achieved by individual learners, Computers & Education, Volume 61, February 2013, Pages 209-216. Available at http://www.sciencedirect.com/science/article/pii/S0360131512002266

7. Ron Owston, Dennis York, Susan Murtha. (2013), Student perceptions and achievement in a university blended learning strategic initiative. The Internet and Higher Education, Volume 18, July 2013, Pages 38-46.Available athttp://www.sciencedirect.com/science/article/pii/S1096751612000863

8. Wannasiri Bhuasiri, Oudone Xaymoungkhoun, Hangjung Zo, Jae Jeung Rho, Andrew P. Ciganek. (2012), Critical success factors for e-learning in developing countries: A comparative analysis between ICT experts and faculty, Computers & Education, Volume 58, Issue 2, February 2012, Pages 843-855, Available at http://www.sciencedirect.com/science/article/pii/S0360131511002545

9. Jason L. Skues, Ben Williams, and Lisa Wise. (2012), The effects of personality traits, self-esteem, loneliness, and narcissism on Facebook use among university students, Computers in Human Behavior, Volume 28, Issue 6, November 2012, Pages 2414-2419. Available at http://www.sciencedirect.com/science/article/pii/S0747563212002129

10. Brittany Gentile, Jean M. Twenge, Elise C. Freeman, and W. Keith Campbell. (2012), The effect of social networking websites on positive self-views: An experimental investigation, Computers in Human Behavior, Volume 28, Issue 5, September 2012, Pages 1929-1933. Available at http://www.sciencedirect.com/science/article/pii/S0747563212001409

11. Sacide Güzin Mazman and Yasemin Koçak Usluel (2010), Modeling educational usage of Facebook, Computers & Education Volume 55, Issue 2, September 2010, Pages 444–453. Available at http://www.sciencedirect.com/science/article/pii/S0360131510000424

12. M.D. Roblyer, Michelle McDaniel, Marsena Webb, James Herman, and James Vince Witty. (2010), Findings on Facebook in higher education: A comparison of college faculty and student uses and perceptions of social networking sites, The Internet and Higher Education, Volume 13, Issue 3, June 2010, Pages 134-140. Available at http://www.sciencedirect.com/science/article/pii/S1096751610000278

13. Maloney, E. (2007), What Web 2.0 can teach us about learning, Chronicle of Higher Education, 53(18), B26.

14. Mazer, J. P., Murphy, R. E., & Simonds, C. J. (2007), I'll see you on acebook: the effects of computer-mediated teacher self-disclosure on student motivation, affective learning, and classroom climate, Communication Education, 56(1), 1–17.

15. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003), User acceptance of information technology: toward a unified view, MIS Quarterly, 27(3), 425–478.

16. Glenn D. I. (1992). Determining Sample Size. A series of the Program Evaluation and Organizational Development. University of Florida, Publication date: November 1992.

17. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340.

HOW DO ESEIGS´ FACULTY AND LIBRARIAN WORK TOGETHER IN ORDER TO PROMOTE STUDENTS' KNOWLEDGE MANAGEMENT SKILLS?

Susana Martins
Escola Superior de Estudos Industriais e de Gestão, Instituto Politécnico do Porto, Portugal
susanamartins@eseig.ipp.pt

Milena Carvalho
Escola Superior de Estudos Industriais e de Gestão, Instituto Politécnico do Porto, Portugal
milenacarvalho@eseig.ipp.pt

ABSTRACT

Information practices and learning strategies, i.e. knowledge management, are gaining acceptance in the field of Education. Knowledge management can be described as a set of practices that help to improve the use and sharing of data and information in decision-making. This paradigm shift, at a national scale, was driven by the Bologna Declaration by assuming that students play an active and central role in their training. Projects like "Tuning Educational Structures in Europe" and "Definition and Selection of Competencies" mentions information literacy skills (ILS) as a strategy for the individual to thrive in the 21st century. This requires a critical analysis on the nature of the information itself and of the informational skills that are needed as a basis for decision-making, issuing opinions and execution of duly informed and reasoned actions.

This short-paper shows the relationship between the full time faculty of the School of Management and Industrial Studies (ESEIG) of Polytechnic Institute of Porto (IPP) and ESEIG´s librarian. We assess, by a questionnaire applied to both faculty and ESEIGs´ librarian, how they face collaboration among them in order to achieve a good performance in terms of information literacy of that student community. This study shows how these actors perceive their roles within the information literacy education in this context.

We conclude that there is growing concern on the part of faculty to promote students acquisition of information literacy skills, but that collaboration with the librarian did not reach the parameters considered yet satisfactory by the information literacy movement.

Finally, action proposals are presented to that community in order to facilitate dialogue and collaboration between those actors, in order to promote the acquisition of ILS by the students. Some proposals are presented in order to enhance and improve the relationship between them, and thus improve ILS that students acquire.

Keywords: *Collaboration; Higher Education; Information Literacy skills; Information Society; Knowledge Management*

1. INTRODUCTION

In the context we live in, flexibility, adaptability, creativity, mobility and learning throughout life have assumed increasing importance. Therefore, and due to its importance, this issue must be considered also in the context of Higher Education and Training.

A considerable part of human activity and wealth creation lies in the production, handling and correct use of information, and the growth of the knowledge society, will depend on the production of new knowledge, its communication through education and information, its visibility and dissemination using ICT and its effective use. Higher education institutions and of course their libraries, are the means to achieve these ends. Information and Knowledge are different concepts, because knowing and reasoning is not only store, process and communicate data. And widespread access to large volumes of information, with the use of ICT, is no

guarantee of greater knowledge or higher education, and may also access the same have facilitated the opposite effect. If individuals are not equipped with skills to handle massive amounts of information, may err in various ways, for example when using the uncritically information or not respecting its legal use.

According to Ferguson (2009) Information Literacy (IL) is linked with Knowledge Management (KM). The author suggests that there are significant similarities between IL and KM to the extent that the development of information literate workforce can be seen as a step in the creation of innovative and adaptive learning organizations. In fact, that is one of the goals of the higher education and to achieve that the use of IL is an accepted and used tool. In fact, although IL, in this context, focuses on personal and academic development of the students, with particular emphasis on the information resources as well as on the information systems that support areas such as personal self-development, teaching and learning and, in some cases, the successful completion of learning tasks, it must be seen as part of a KM strategy, that although is taking place in a higher education institution, it is intended to have impact on the labor market, on the organizations that will absorb this students, because they will be carrying a different type of mentality and skills that will, without a doubt, be a step forward the implementation of KM policies towards the corporate knowledge.

2. INFORMATION LITERACY AND HIGHER EDUCATION

Current academic, professional and social demands require the individual to acquire a high domain in sociocultural tools that allow him to interact with knowledge. These tools are language, information, knowledge and computers. The ability to use information and knowledge in an interactive way is therefore an element considered essential, since both the growing importance of information, as well as the central role of knowledge management are key points for individuals to be able to fully develop their role as social and professional actors in the 21st century society.

In the higher education context, these skills should be regarded as essential, developed and evaluated in ascending order, following all educational levels and respecting the correspondent gradient of complexity. In fact, there are several studies that acknowledge the positive impact of such practices in students' performance, such as Dorothy Williams (2001) "Impact of School library services on achievement and learning", Mokhtar, Majid e Foo (2008) "Teaching Information Literacy through Learning Styles: Application of Gardner's Multiple Intelligences", Christine S. Bruce (2004) "Information Literacy as a Catalyst for Educational Change", Julien Heidi (2009) "How high-school students find and evaluate scientific information: A basis for information literacy skills development", Kirsty Williamson e Terryl Asla (2009) "Information behavior of people in the fourth age: Implications for the conceptualization of information literacy".

It is believed that changes in Portugal in higher education and the influences that naturally hold over any graduate and post-graduate educational process, instill the education systems with the obligation to instruct students in order to prepare them to deal with the current problems of information: excess and different forms of presentation.

The information literacy is presented as a continuum between the demand for information and its effective and ethical use for the management of knowledge in an academic environment.

In this process, the first step corresponds to the informational need that forces the user to choose specific information behavior that will lead to demand, access and use of information. There is thus a close link between information behavior and information literacy, while addressing different aspects of demand and use of information.

Within the scope of information behavior, the focus is the behavior taken by individuals when they need information. The focus is oriented to the needs, demand and use of information. It is assumed that there is an interdependence and dynamism between these different elements and

the objective is to determine the effectiveness and efficiency of the duties performed by the subject.

With regard to information literacy, what is intended to know is how the behavior assumed by the subject relates to the normative guidelines that exist. Basically, assess the quality of information behavior and each of its components in relation to set targets. Each element is considered independently and as holder of own procedures.

The approach of Information Literacy also assumes the need to master technological skills and this is, in itself, an important aspect because the attention that the use of ICT receives as an instrument of teaching and learning process is quite high and media / mediated. However only matching informational practices with the use of ICT and academic context, it is possible to promote the effective and correct use of information within this community. In fact, Bruce (2000, p. 4) refers that you only are before the teaching of Information Literacy when "It is bringing these information practices into the curriculum, and ensuring that students have the capabilities to engage in, and reflect upon such practices, that constitutes information literacy education".

The positive impact of the acquisition of information literacy was confirmed by Todd (1995), who, after a study developed, recognized that in Australian schools, students with information literacy had achieved better results in assessments and exams. Also Limberg (2000) confirmed that in Swedish schools, students who held more complex informational behavior, reached high results, notably those related to the understanding and interpretation rather than the simple reproduction of information.

Given these results, we conclude that the information literacy is a promoter element of a more deep and successful learning, capable of generating autonomous learners, that are able to learn throughout their lives, to adapt to the context and their own needs, regardless of their nature.

The information competencies arise, then, as energetic and emancipatory elements of the Information Society. Gómez Hernández (1995) assumes that it is intended for the education system to educate for the Information Society in order to avoid social misfits and to train for the proper use of technical-scientific and professional expertise available. Based on these objectives arises the concept of Information Literacy. The term Information Literacy is born by the hand of Paul G. Zurkowski in 1974, when the publication of the report "The Information Service Environment Relationships and Priorities. Related Paper No. 5" for the National Commission on Libraries and Information. The term appears in the prologue of the document which intended to designate the detention of information competencies, including the use of informational tools, as well as primary sources of information, in order to solve problems, assuming a divide between literate and non-literate individuals:

> (…) *People trained in the application of information resources to their work can be called information literates. They have learned techniques and skills for utilizing the wide range of information tools as well as primary sources in molding information solutions to their problems. The individuals in the remaining portion of the population, while literate in me sense that they can read and write, do not have a measure for the value of information, do not have an ability to mold information to their needs, and realistically must be considered to be information illiterates* (Zurkowski, 1974, p. 6).

Zurkowski (. 1974, p 1) also states that the information superabundance exceeds our ability to evaluate, and points out three reasons for this to happen:

> 1. *The information seeking procedures of individuals are different at different times for different purposes.*
>
> 2. *A multiplicity of access routes and sources have arisen in response to this kaleidoscopic approach people take to fulfilling their information needs. These are poorly understood and vastly underutilized.*

> 3. *More and more of the events and artifacts of human existence have been dealt within information equivalents, requiring retraining of the whole population.*

In 1989, the American Library Association (ALA), in the "Presidential Committee on Information Literacy. Final Report ", defines Informational literacy as "the set of abilities Requiring Individuals to "Recognize When information is needed and have the ability to locate, evaluate, and use effectively the needed information". The concept of Information Literacy, currently very present in our vocabulary, is distinguished by two nuclear characteristics (Gomes, Avila, Sebastian, & Costa, 2002):

a) enable the analysis of the effective usability in everyday life of reading skills, writing and arithmetic;

b) refer to a continuum of skills that translate into literacy levels with different degrees of difficulty.

The emphasis is then placed, not on academic credentials, but in fact possessed skills. The authors call attention to the fact that literacy should not be viewed statically or be the holder of only two poles (on one end the literate and the other end the illiterate), but in a dynamic way, reflecting the evolution of the skills acquisition of the individual and with various gradations of grey between black and white.

The Organization for Economic Cooperation and Development (OECD) in the report "Literacy in the Information Age" (International Adult Literacy Survey, Organization for Economic Co-operation and Development, & Statistics Canada, 2000), concludes that high levels of literacy are associated with higher proportions of knowledge-based jobs, and that people's skills, or lack of, negatively influence the long-term unemployment probability, while a literate individual increases his career chances. We can try to point out the causes for all the attention that the IL theme is getting, in fact, Calixto (2004) advances three causes for this:

1. Very rapid growth of information.

2. Increased Prevalence of digital formats.

3. Focus directed on study skills and lifelong learning.

These are undoubtedly aspects that make information literacy is widespread concern in a super-informed world. In fact, the Association of College and Research Libraries (ACRL) (2010), argues that Information Literacy is of utmost importance today. The exponential growth of information, its increasing complexity, and the proliferation of unfiltered sources of information, require that you must have skills that allow you to make the right choices, questioning about the authenticity, validity and reliability of the information you want to use.

The concept of Information Literacy assumes that all potential users of scientific and technical information must undergo some sort of training programs to enable them to contemplate the dimensions that mediate access to knowledge: the information dimension and the technological dimension. Learning to inform themselves, learning to learn are competencies required in the information society so that all individuals must be prepared to conduct the analysis, selection and evaluation of information sources and information, while adopting a critical posture towards this. But is that what happens in academia? Is the importance of these skills recognized by faculty? And how is that, in the classroom, students acquire these skills? Through a collaborative effort between the faculty and the library of the institution?

2.1. And what about libraries?

We should probably star by changing this designation because it encompasses a pretty heavy past and some people still haven't made a reboot of the concept.

Information services in higher education, a.k.a. as libraries, do play a very important role in this scenario. They are the mediators and one of the main actors of the teaching and learning process and a central element in the use of active pedagogies.

Zanola (2012) in a recent article states that both T. W. Adorno and Lev Vigotski, although representing different theoretical schools, agree on the analysis of the potential of mediation in the transformation of contemporary, as an ideal instrument for the acquisition of consciousness, choosing it as a catalyst for a new disciplinary paradigm, according to which there is a reciprocal relationship between individuals and the possibilities of knowledge / learning. It is to seek mediation through the confrontation between what the object looks or it intends to be with what is actually through the critical eye sustained in the dialectic method of seeking truth in his denial.

Another variable is the cyberspace, indeed it has completely revolutionized communication, just as we knew it, but is especially marked in an extraordinary way the configuration of information services and professional praxis that is behind it, beyond the behavior of users of these services, in the way they complain and demand the information they hold, preserve and make accessible. The information explosion process, in the perception of the Porto School, will necessarily have to be accompanied not only by a technical and procedural update by the information services, but, fundamentally, by a mediation that contributes to the general and unlimited access to information.

According to the proposal of Armando Malheiro da Silva (2010, p. 13), it is possible to synthesize three different types of post-custodial and informational mediation: 1) Institutional Mediation: Emerging from the traditional cultural institutions such as libraries and archives, is carried out by specialized professionals - the mediators of information - and shared with computer technicians, responsible for drafting the website through which the collections in storage are available; 2) Distributed Mediation and / or shared: occurs on websites and blogs promoted by individuals or legal organizations, and the mediators exist to locate, select and provide content to the designer/company that sell or provide the application, and the ones accessing the service are invited to actively intervene with content and comments; 3) Cumulative Mediation: with the technological innovation, the role of producer and user grows enormously, developing a kind of cumulative mediation that may also include designer and programmer, and it takes effect and is conditioned by an active participation in communities that add identical or similar interacting (the user becomes producer and vice versa).

Still according to Silva (2010), the information professional is not a computer technician in fact he moves away from him when he places the focus on mediation in deep and thorough analysis of the profiles and needs of its users, that is, when he holds on the conditions under which sharing and access to information occur. Concerning to the information mediation, Kuhlthau (2004) in her analysis in the context of information services, she identifies five areas of intervention, the first of which involves the intervention of the user himself, and the remaining four different degrees of mediation: zone 2, in which the information professional acts as locator information, zone 3, in which the information professional acts as the identifier of information, that is, revealing information resources potentially more appropriate to search of the user zone 4, where the information worker assumes the role of consultant, he not only identifies the most appropriate information resources but he guides the user through them, and zone 5, in which the information professional acts as a user's counselor, i.e. guides you throughout the entire search process information, interacting in a more systematic and continuous way.

It is now easy to see that IL gains special importance in the higher education context, because they do empower students with the critical-cognitive skills of users at the time of search, allowing them to evaluate and use the information, accordingly to their scientific requirements as well as legal ones.

Thus, information professionals assume the dual role of educators and facilitators, guiding users in their research, by practicing informational mediation. This is only achievable to the maximum if they act accordingly to the context and invoking the specialties of each scientific field, both instrumental level and cognitive.

3. METHODOLOGY

Considering the above context, we conducted a descriptive investigation that targeted both the full time faculty of the School of Industrial Studies and Management (ESEIG) of the Polytechnic Institute of Porto (IPP), located in Vila do Conde – Portugal and the Librarian of ESEIG. The full time faculty make up 46 individuals. This investigation assumed two clear objectives: 1) know if faculty assumes that the students' information literacy skills are important in the context of the Higher Education; 2) assess the collaboration among the full time faculty and the librarian. We created two questionnaires in Google Forms, one directed to the faculty and the other to the librarian. Both questionnaires shared the same structure, i.e., the first section intended to collect data of the population; the second included questions related to their perception of Informational literacy in the context of teaching and learning; the third asked about the Faculty-Library Collaboration. Both shared some of the questions in the second and third sections and that allowed us to compare the answers.

All full time teachers were contacted by email several times and by telephone so that they would participate in this study. Through this strategy we tried to ensure an excellent response rate as well as a serious and conscious participation in this study but we believe that because of the majority of these teachers were participating in a major restructuring operation of IPP, the answer rate was low, of only 26%. The questionnaire was completed between the 10th and 21st of March. The ESEIG´s librarian was very pleased to cooperate with this study.

The questionnaires were both mixed but the majority of the questions were open-ended questions.

4. RESULTS

In this section we present the results obtained from our study. This section will have subsections related to the subsections of the questionnaires.

4.1. Teachers
4.1.1 characterization

The respondents of the questionnaire applied to full-time teachers of ESEIG are mostly female (92%) and in terms of age, the of majority them are between 40 and 49 years old (58,3%), followed by a group of teachers that have 50 to 59 years (33,3%) and other whose age is between 30 and 39 years old (8,3%). Of the respondents, 50% have a PhD degree and the other holds a Master's degree. The highest frequency response rate obtained was from teachers belonging to the following departments: Design; Languages and Law; Human Resources; Information Science, with 16,7% of responses for each department. The remaining departments that participated in this study (Informatics, Mathematics, Accounting, Management and Economics and Industrial Engineering and Management) presented only a response rate of 8,3%.

With regard to the professional category, 67% are Associate Professors and 33% are Assistants and 8,7% teach in Higher Education Professional Degrees (short higher education courses directed to professional qualifications), 52,2% in undergraduate programs, 13% in Postgraduate courses and 26% in Master's courses (in Portugal there is a binary system of higher education that does not allow the polytechnic institutions to assign the degree of doctor independently; to do so they have to associate with Portuguese or foreign universities).

4.1.2 Informational literacy in the context of teaching and learning

Regarding the Informational Literacy definitions provided by teachers, most assume as elements present in the definition of IL, with 88,9% of the responses, the ability to evaluate and select information in hand with the skills for information search. Then, with 55,6% of responses comes the ethical and legal use of information. With 22,2% answers some teachers mention the

ability to recognize their own information needs, and only 11,1% response: learning ability, information management, and the generation of new knowledge.

When asked to name the three IL skills that they consider to be the most important for students and that they should acquire, the ability to search for information is the competence most often indicated (33,3%), followed by the ethical and legal use of information with 30% of responses. The evaluation of information obtained 25,9% of the responses and with only 3,7% of the answers emerged: identifying their information needs; the field of information technology and knowledge of English (both as facilitators for the information search).

The teachers who responded to this questionnaire integrate in the most varied forms some of the IL skills in the teaching of their classes. In fact from the answers obtained, it is possible to say that some teach this type of content as well as promote the ethical and legal use of information. The orientation for the analysis of technical and scientific documents, and use of active methodologies are also present in the responses. Also the orientation given regarding to the information research, as well as the illustration of the excess of bad information available online and the need to write good reports as well as develop projects are the strategies that these teachers use to promote the integration of the IL skills in their classes.

4.1.3 Faculty-Library Collaboration

When asked about the way in which they believe that there may be a collaboration with the library in order to assist in the teaching and learning process, the answers showed the following tactics:

- Provide training in and out of class (catalog, databases, scientific information search, citation and referencing)
- Collaborate in the research of information on each school's scientific area
- Disseminate credible information sources
- Promote practical training (hands on) and not only theoretical- research exercises and information retrieval

In fact, in regard to this matter, most of them have already collaborated with the library, with 83% saying they´ve already did and only 17% referring they didn´t. they were then asked to state the terms in which this collaboration took place:

- Training sessions in class (search and retrieval of information, bibliometric indicators, quotes and references, access and selection of scientific journals and articles)
- Guided tours of the library (facilities, services and products available)
- Assistance in referencing scientific papers

Although not all teachers have presented a definition of IL and not all of them have asked, to date, the collaboration of the library, they all assume that the library has a very important role in the teaching and learning process in higher education. They´ve stated that the library:

- Has a very important role;
- Is an important axis in education / mediator of the education process;
- Is a credible information repository;
- Is an educator of the community;
- Should take an even more active role in training
- Should promote a better and more close contact with the community

4.2. ESEIG´s librarian

The ESEIG´s librarian is a female, aged between 40-49 years. She holds a course of postgraduate studies and is superior technician. The library promotes it´s approach to the IL based on the need for the community to hold the ability / skills to identify / select information sources, always taking into account the desired information, the search for information

knowingly using search strategies and assess the relevance of the retrieved information, know how to use ethically this information in writing academic papers and communicate it effectively. The librarian was then asked to identify the three most important IL skills: Identify / access information; evaluate the information; use / communicate information was the answer. She then referred to the importance of combining the information literacy with the digital literacy because of the vast amount of digital information available.

Responding to the question on how the library promotes these skills in the community, it was reported that, because the library is aware of its importance to the higher education context, it has outlined an information literacy program under which organizes autonomous training sessions or in the context of the classroom, discloses / recommends by various means of dissemination appropriate sources of information to the academic context, and trains users in these skills whenever requested, also in person at the library facilities.

With regard to the implementation of the collaboration with the faculty, the library says it can contribute / collaborate in the process of teaching and learning in this area of information literacy, particularly through training sessions that promotes inserted in the context of room class in the course units of degrees taught in ESEIG.

The librarian had collaborated with almost all the Master Degrees available at the time of this study (80%) but only with 50% of the Graduate Degrees.

Assuming the importance of the library's role, it was then stated that the information competencies are essential for any student and transversal to any degree and profession. The librarian said that, indeed, the library holds a very important role in ensuring the development of these skills through training sessions that makes available to students, either in collaboration with teachers in curricular context or allowing the student to develop them in an extra-curricular context, independently.

5. CONCLUSION

Academic libraries should therefore reflect on their role as disseminators and educators, as shown by Paulo & Silva (2007), supposing to be an information mediator, seen as a professional organization who interferes heavily in construction the promising conditions for more significant changes in the academic life of users.

The results show there is a good interaction between this library and the faculty, in order to promote the collaboration among these two actors and to achieve good IL skills. This is a fairly good indicator of the existence of an awareness of the need for direct mediation conducted by the librarian among users of the academic library.

One of the issues that is of the upmost importance is to assure that the information literacy competencies acquired in the context of higher education are transferable to situations in the workplace and society, once students complete their formal education. For several years, higher education libraries have been making several efforts to promote the integration of IL instruction (ILI) into the curriculum. There has been a growing body of opinion that suggests ILI should be integrated into academic programs (Stubley, 2002). As a Skov & Skærbak (2003, p. 332). put it, "information literacy is not a "library thing" and it is not concerned only with database searching and Boolean logic; information searching is a part of the learning process and should be taught as such embedded in the curriculum". In fact, Levy (2000, p. 47), drawing on a constructivist notion that "knowledge is constructed through, and builds upon, experience", suggests that "skills are most effectively learned when related to learning needs arising directly from academic work". Therefore, librarians should take a team approach, building bridges to academic staff and learning support units (Currier, 2003) because teaching, learning and information resources cannot be compartmentalised.

With this study we´ve realised that there is a consciousness of importance of the connection between operational competencies in several areas and the informational practices, both from

the faculty that participated as well as from the librarian. And this is a reality because the importance of knowledge management lies on the fact that many sectors of the economy comprehend knowledge as the main asset of the organizations, since it is presented as the main element in sustainable competitiveness. At the same time the organizations are becoming more aware of the importance and value of information and knowledge in innovation and competitiveness. this awareness, by also information services, led them to develop and offer products and adequate information services to the needs of users.

In our study we have concluded that there is the perfect notion and concern associated with the legal and ethical use of information but the importance and relation of the IL skills with the students future, mainly with their passage to the labor market, with the creation of new knowledge and with the implications in their own learning, including a collaborative approach, is very residual. That is why it is of the upmost importance to promote the importance of transferability of such skills for the labor market, to create smarter and more KM friendly organizations. We must not forget that KM brings together three core organizational resources: people, processes and technologies in order to enable the organization to use and share information more effectively.

As we said before, this does not concern only to the library but to all actors in the teaching and learning process and it is obvious that those responsible for the higher education institutions have a decisive role, assuming such importance in official documents (mission and vision of the institution; action plan), paired with the Pedagogical Council and the Scientific-Technical Council in order to guarantee that all teachers and students truly benefit from this close relation. Because, as we´ve stated earlier, there is an awareness on the part of most of the teachers who participated in this study that this type of skills and collaboration are essential and will do the difference in the performance of students and future professionals of intelligent organizations.

LITERATURE

1. ACRL Research Planning and Review Committee. (2010). 2010 top ten trends in academic libraries: a review of the current literature. In D. Free (ed.), *College & Research Libraries News* (p. 286–292). Chicago: ACRL.
2. American Library Association's Presidential Committee on Information Literacy. (1989). *Presidential Committee on Information Literacy: Final Report*. (Final Report). EUA: ALA. Retrieved 21.01.2016 from
   http://www.ala.org/acrl/publications/whitepapers/presidential
3. Arp, L., Woodard, B. S., Lindstrom, J., & Shonrock, D. D. (2006). Faculty-Librarian Collaboration to Achieve Integration of Information Literacy. In B. Trott (ed.), *Reference & User Services Quarterly*, (p. 18–23). Retrieved 05.01.2016 from http://journals.ala.org/rusq/article/view/2960
4. Brage, C., & Svensson, E. S. (2011). Collaborative assessment of information literacy education at Linköping University library. *INTED2011 Proceedings*, (p. 4610–4618). Retrieved 02.02.2016 from
   http://liu.diva-portal.org/smash/get/diva2:404232/FULLTEXT01.pdf
5. Bruce, C. (2000). Information Literacy Research: Dimensions of the Emerging Collective Consciousness. In M. A. Kennan & G. Haddow (eds.), *Australian Academic and Research Libraries (AARL)* (p. 91-109). Australia: Routledge.
6. Calixto, J. A. (2004). Literacia da informação: um desafio para as bibliotecas. *Homenagem ao Professor Doutor José Marques*. Porto: Faculdade de Letras da Universidade do Porto. Retrieved 20.01.2016 from
   http://ler.letras.up.pt/uploads/ficheiros/artigo5551.PDF
7. Carvalho, M. (2014). Estudo da mediação e do uso da informação nos Arquivos Distritais. (Tese de Doutoramento). Coimbra: Universidade de Coimbra.

8. Currier, S. (2003). *INSPIRAL Case Study 4: Edge Hill College of Higher Education: Post-Graduate Certificate in Teaching & Learning in Clinical Practice* (Introductory Module). Retrieved 23.01.2016 from
   http://inspiral.cdlr.strath.ac.uk/documents/INSPcasestudy4EH.doc

9. Ferguson, S. (2009). Information literacy and its relationship to knowledge management. In E. Coonan (ed.), *Journal of Information Literacy* (pp. 6-24). Retrieved 20.01.2016 from http://ojs.lboro.ac.uk/ojs/index.php/JIL/article/view/PRA-V3-I2-2009-1

10. Gomes, M. do C., Ávila, P., Sebastião, J., & Costa, A. F. da. (2002). Novas análises dos níveis de literacia em Portugal: comparações diacrónicas e internacionais. *Actas do IV Congresso Português de Sociologia* (p. 12). Coimbra: Universidade de Coimbra.

11. Gómez Hernández, J. A. (1995). *La función de la Biblioteca en la Educación Superior: estudio aplicado a la Biblioteca Universitária de Murcia*. Murcia: Universidad de Murcia.

12. International Adult Literacy Survey, Statistics Canada., & Organisation for Economic Cooperation and Development. (2000). *Literacy in the information age: Final report of the International Adult Literacy Survey*. Paris: Organisation for Economic Cooperation and Development.

13. Jackie Belanger, Rebecca Bliquez, & Sharleen Mondal. (2012). Developing a collaborative faculty-librarian information literacy assessment project. In J. Broady-Preston (ed.), *Library Review*, (p. 68–91). Retrieved 12.12.2015 from http://www.emeraldinsight.com/doi/abs/10.1108/00242531211220726

14. Jennifer L. Dorner, Susan E. Taylor, & Kay Hodson-Carlton. (2001). Faculty-librarian collaboration for nursing information literacy: a tiered approach. In E. Mitchell & S. B. Watstein (eds.), *Reference Services Review*, (p. 132–141). Retrieved 14.12.2015 from http://www.emeraldinsight.com/doi/abs/10.1108/00242531211220726

15. Kuhlthau, C. (2004). *Seeking Meaning: a process approach to library and information services*. London: Libraries Unlimited.

16. Lampert, L. (2005). «Getting Psyched» About Information Literacy: A Successful Faculty-Librarian Collaboration for Educational Psychology and Counseling. In W. Miller & R. M. Pellen (eds.), *The Reference Librarian*, (p. 5–23). Retrieved 13.12.2016 from http://www.tandfonline.com/doi/abs/10.1300/J120v43n89_02

17. Levy, P. (2000). Information specialists supporting learning in the networked environment: A review of trends and issues in higher education. *The New Review of Libraries and Lifelong Learning*, (p. 35-64).

18. Limberg, L. (2000). Is there a relationship between information seeking and learning outcomes? In C. Bruce & P. Candy (eds.), *Information literacy around the world: advances in programs and research* (p. 193–208). Australia: Centre for Information Studies.

19. Martins, S. (2015). *Tecnologias de Informação, Literacia e Bibliotecas do Ensino Superior da Área Metropolitana do Porto* (Tese de Doutoramento). Porto : Universidade Portucalense Infante D. Henrique.

20. Paulo, D. F. L.; Silva, A. K. A. da. (2007). Do ler ao fazer: práticas de leitura dos discentes do curso de graduação em biblioteconomia/UFPB.In M. M. M. Autran (ed.), *Biblionline* (p. 1-20). Retrieved 02.02.2016 from
    http://periodicos.ufpb.br/ojs/index.php/biblio/article/view/1491/1152

21. Silva, A. M. da (2010). Mediações e mediadores em Ciência da Informação. In A. M. da Silva (ed.), *Prisma.com* (p. 1-37). Portugal: CETAC.MEDIA. Retrieved 19.01.2016 from http://revistas.ua.pt/index.php/prismacom/article/view/700/pdf>

22. Skov, A. & Skærbak, H. (2003). Fighting an uphill battle: Teaching information literacy in Danish institutions of higher education. In J. Broady-Preston (ed.), *Library Review*, (p. 326-332). Retrieved 10.01.2016 from
http://www.emeraldinsight.com/doi/pdfplus/10.1108/00242530310487425
23. Stubley, P. (2002). Skills move to VLEs. *Library + Information Update*, (p. 34-35).
24. Todd, R. J. (1995). Integrated Information Skills Instruction: Does It Make a Difference? *School Library Media Quarterly*, (p. 133–38).EUA: ALA.
25. Zanolla, S. (2012). O conceito de mediação em Vigotski e Adorno.In C. Mayorga (ed.), *Psicologia & Sociedade*, (p. 5-14) Retrieved 12.02.2016 from
http://www.scielo.br/pdf/psoc/v24n1/02.pdf>
26. Zurkowski, P. G. (1974). *The Information Service Environment Relationships and Priorities: Related Paper* (Report no. 5). EUA: ALA. Retrieved 21.01.2016 from http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=E D10 0391

THE IMPACT OF EU FUNDS ON THE DEVELOPMENT OF TRANSITION ECONOMIES

Tea Lovrinovic
tlovrinovic@icloud.com

Martina Nakic
University of Zagreb, Faculty of Economics & Business, Kennedy sq. 6, Zagreb, Croatia
mnakic@efzg.hr

ABSTRACT

European Union consists of countries which are very different considering their stage of development, economic characteristics, social policy and living standard quality. The EU funds should contribute to the development of transition economies through reducing regional disparities between transition economies and the rest of EU member states and promoting growth. Late 1980s brought the collapse of a communist system in Europe and left behind its economies in an unprepared state for a capitalist tournament. Nowadays, many of these countries belong to a group of new EU members who are still facing a problem of convergence towards their advanced colleagues. The main goal of this paper is to answer whether the EU funds affect the development of transition economies. Findings from the literature up to now result in different conclusions regarding the impact of EU funds, ranging from those which prove that they have a significant effect to the ones who deny the positive influence of EU funds. The empirical analysis in this paper conducted on ten transition economies over 14 years showed that the effect of analyzed EU funds is indeed positive, i.e. EU funds promote growth in transition economies. The planned economy left a certain heritage to transition economies in form of lack of entrepreneurship, infrastructure and weak institutions, which can present an obstacle for efficient EU funds usage. Transition economies should not fall into a trap of EU funding overenthusiasm and they should be fully aware that they, foremost, need to develop and implement appropriate economic policies on their own, after which the EU funds will assist them on their path of convergence.
Keywords: EU funds, development, panel analysis, transition economies

1. INTRODUCTION

The EU policymakers know that EU cannot function as a true Union as long as large disparities in social and economic status between the member states are present. A way towards a true European family should be paved with EU funds assistance. EU funds are the financial instruments of EU whose aim is to reduce the disparities between its regions and member states. Prior to 2004 enlargement, the main beneficiaries of EU funds were Greece, Spain, Italy, Portugal and Ireland. According to European Commission, around €480 billion has been invested into the lagging regions since 1988 and for the period 2007 to 2013 EU funds took the second place in EU budget with around €347 billion. Looking at these substantial amounts, it is obvious that EU considers regional and cohesion policy as its priorities.

As the primary goal of EU funds is to reduce disparities between its regions, the choice of transition economies as a subject of research appeared as rational. If EU funds indeed help economies grow, their importance in finishing up the second transition of these economies, i.e. transition to the GDP per capita levels of EU advanced economies, has to be emphasized.

The paper is structured as follows. After introduction, in second chapter objectives of different EU funds are outlined and their usage in transition economies is analyzed. Review of previous research on EU fund effectiveness, data and methodology description and results of the empirical analysis are given in third chapter. Finally, the last chapter sums up the conclusions.

2. EU FUNDS IN TRANSITION ECONOMIES – AN OVERVIEW

2.1 EU funds – types and objectives

EU funds are the financial instruments of EU which contribute to economic, social and territorial cohesion of member states. The EU funds covered by the analysis include:

a) two Structural funds:

a1) *European Regional Development Fund (ERDF)* has a goal of promoting economic and social cohesion by reducing the imbalances between the regions. With the highest amount of resources, it contributes to creation of sustainable jobs and provides support for SMEs, R&D, cultural projects and various local initiatives. It also co-finances infrastructure projects like modernization of local public roads, energy efficiency initiatives etc.

a2) *European Social Fund (ESF)* brings back into working life unemployed and disadvantaged people. Through its funding of training programs, this population gets higher chance of getting a job. Furthermore, ESF contributes to an improvement of education opportunities across the EU and promotion of social inclusion. Thereby, this fund aims especially at enhancing human capital.

b) *Cohesion Fund (CF)* is created in order to speed up economic, social and territorial convergence. CF is nowadays intended for countries with GDP per capita below 90% of the Community average and operates only on national level.[1] It is based on the principle of co-funding of environmental and transport infrastructure projects of common interest. Its resources are available also for support of renewable energy.

3 objectives	3 structural instruments		
Convergence	European Regional Development Fund	European Social Fund	Cohesion Fund
Regional competitiveness and employment	European Regional Development Fund	European Social Fund	
European territorial cooperation	European Regional Development Fund		

Figure 1. EU objectives and structural instruments for 2007-2013 (Central Office for Development Strategy and Coordination of EU Funds in Croatia, 2009)

Starting from 2007, previously mentioned organization of funds is replaced with three new objectives (see Figure 1): convergence (financed by all three previously mentioned funds and represents 81.5% of total allocated funds), regional competitiveness and employment (financed by ERDF and ESF, accounts for 16% of total allocated funds) and European territorial cooperation (financed by ERDF, accounts for 2.5% of total allocated funds).

Additionally, *Instrument for Pre-Accession Assistance (IPA)* which candidate states can use before their accession to EU is analyzed.[2] IPA is designed to cover five different purposes: assistance for transition and institution building, cross-border cooperation, regional development, human resources and rural development.

---

[1] Difference between ERDF and CF is that former provides funding on regional and latter on national level. Although they can finance projects in the same field, ERDF is oriented on a small-scale projects and CF co-finances major country investments.

[2] With introduction of IPA in January 2007 a couple of programs intended for Candidates were later replaced by IPA. Those were PHARE, PHARE CBC, ISPA, SAPARD, CARDS and financial instrument for Turkey.

2.2 Transition countries and EU funds

The transition economies possess special characteristics which make their economies different from the other economies. As Gros and Suhrcke (2000) state, even a hypothetical visitor from Mars would be able to identify countries with central planning past by observing specific indicators. The communist system left a heritage which can even nowadays affect their development: lack of entrepreneurship and skills, corruption, lack of infrastructure, lack of sophisticated legal system, moral hazard and inequality. The transition economies were chosen as a subject of research due to a significant space left for their convergence to advanced EU economies. After most of the countries completed the transition from centrally planned to market economy, they entered the process of second transition, i.e. reforms that would bring them closer to EU average, where EU funds are given the role of assistants on this new path. Table 1 gives short overview of the basic information about the eleven transition economies.[3]

Table 7. Overview of transition economies (World Bank, 2015, European Commission, 2015, authors' calculations)

	Bulgaria	Croatia	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Slovakia	Slovenia	Average
Population (million)	7.28	4.26	10.52	1.32	9.91	2.02	2.97	38.53	20.06	5.41	2.06	-
GDP p.c. (thousand €)	4,808	10,556	14,648	12,057	11,434	8,866	10,544	10,786	6,067	15,371	18,639	11,252
Total EU funds (million €)	5,677.6	709.8	16,979.7	3,638.5	18,785.2	4,401.2	7,426.1	59,890.7	12,749.4	8,184.7	3,316.7	12,887.2
Share in total EU funds (%)	4%	0.5%	12%	2.6%	13.3%	3.1%	5.2%	42.3%	9%	5.8%	2.3%	-
EU funds p.c. (thousand €)	780	167	1,614	2,756	1,896	2,179	2,500	1,554	636	1,513	1,610	1,564

* Notes: population and GDP p.c. data for 2013, EU funds (ERDF, ESF, CF and IPA) data for 2000-2013; share in EU funds payments to transition countries

Among the observed member states, Baltic states (Estonia, Latvia and Lithuania) stand out with the highest EU funds per capita. Croatia has the lowest EU funds which is in accordance with its most recent accession to EU and entitlement to use EU funds. Exploring EU funds payments from 2000 to 2013, Poland leads with almost €60 billion. Furthermore, Poland takes far the largest share of EU funds, which amounts to 42.3%. Hungary and Czech Republic follow with, approximately, three times smaller share. These three countries account for almost 70% of EU funds. Slovenia and Croatia take up the smallest share of the EU funds payments. Table 2 shows EU funds payments and contributions to EU budget for analyzed transition economies. All transition member states are receiving more from EU funds relative to their contribution to EU budget. The differences between them exist. While Estonia and Lithuania receive three times more than they contribute,[4] Slovenia gets only 1.1 times more. Poland is obviously the biggest contributor and receiver. Table 2 also shows the difference between contracting and payment ratios for 2007-2013 period which is useful for evaluation of the efficiency of EU funds management.[5] The path from assignment of EU funds allocations to the final disbursement of

---

[3] Central European and Baltic countries became EU members in 2004, Bulgaria and Romania entered the EU in 2007 and Croatia in 2013.

[4] Croatia also receives 3 times more but the reason is that retrieving funds from IPA started in 2006 while its contributions to EU budget started in 2013 with joining EU.

[5] Contracting ratio equals the amount of contracted grants divided by the available budget. Payment ratio equals the amount of paid grants divided by the available budget. The smaller the difference between these two indicators, the more successful the country is in absorption of available EU funds.

grants is long. The country can be entitled to a substantial amount of EU funds, but the amount actually disbursed depends on many factors like quality of the conduct of a project.[6] The most efficient countries regarding EU funds absorption are Baltic countries. Bulgaria and Romania with 58% and 57% show certain problems with the conduct of projects financed by EU funds. The group average of 36% implies that transition economies encounter difficulties with either transparency or organization of grants disbursements.

Table 2: Net EU funds payments 2000-2013 (European Commission, 2015, authors' calculation) and Difference between contracting and payment ratios for the Financial framework 2007-2013 (KPMG, 2014)

	Net EU funds payments 2000-2013			Financial framework 2007-2013		
	EU funds payments (eur million)	EU budget contributions (eur million)	Net EU funds payments (eur million)	Contracting ratio (%)	Payment ratio (%)	Difference (%)
Country	*(1)*	*(2)*	*(3) = (1) – (2)*	*(4)*	*(5)*	*(6) = (4) – (5)*
Estonia	3,638.5	1,244.2	2,394.3	96	77	19
Lithuania	7,426.1	2,380.6	5,045.5	99	74	25
Latvia	4,401.2	1,624.6	2,776.6	96	70	26
Czech Republic	16,979.7	11,230.4	5,749.3	92	64	28
Poland	59,890.7	27,677	32,213.7	95	64	31
Slovenia	3,316.7	2,951.2	365.5	93	62	31
Hungary	18,785.2	7,740.8	11,044.4	106	62	44
Slovakia	8,184.7	4,877.7	3,307	98	53	45
Romania	12,749.4	8,019.3	4,730.1	94	37	57
Bulgaria	5,677.6	2,294.1	3,383.5	112	54	58
Croatia	709.8	226.8	483	n/a	n/a	n/a
CEE Avg.	12.887,2	6,387.9	6,499.3	98	62	36

3. EMPIRICAL ANALYSIS

3.1 Review of previous research

Number of authors have conducted an analysis of the EU funds effectiveness. Detailed description of the estimation methods they used can be found in the Appendix (Table 1A). Most authors conclude that EU funds have positive and significant effect on growth. However, there are exceptions. Dall'erba and Le Gallo (2008) show that convergence between 145 European regions happened indeed, but not due to EU funds. On the other hand, Eggert et al. (2007) results show that cohesion policy accelerates convergence, but also reduces average growth rate. According to interesting finding of Soukiazis and Antunes (2006), EU funds are more effective in the coastal than interior regions in Portugal. Tomova et al. (2013) examine whether EU funds are beneficial to the achievement of socio-economic development objectives by constructing an index based on several indicators of infrastructure, health, education, employment opportunities, environmental sustainability and welfare. Their conclusion is that EU funds are effective conditional on the macroeconomic and fiscal policies showing that member states with sound macroeconomic and fiscal framework experience positive impact of EU funds. Regarding the negative impact of EU funds on the countries' growth, Garcia-Milá and McGuire (2001) state that the grants are not effective in improving the economies of the poorer regions. Eggert et al. (2007) prove that SFs reduce the growth rates, but on the other hand they accelerate regions' convergence. Analysis in this paper is conducted following the

---

[6] The difference between these two categories can appear because of malfunctions in implementation of a project. For example, Dimulescu, Pop and Doroftei (2013) bring forth two cases which occurred in Romania where European Commission halted reimbursements in 2011 and again in 2012 for operational programs due to problems with the public procurement procedure, fraud and conflict of interest.

empirical work of Ederveen et al. (2002) and Beugelsdijk and Eijffinger (2005). Both papers analyze the effectiveness of EU funds in old member states concerning convergence between the regions but end up with different conclusions. Ederveen et al. (2002) state that EU funds are conditionally effective blaming low institutional quality for the cases where the impact of EU funds cannot be seen. Beugelsdijk and Eijffinger (2005) emphasize the importance of funds in the convergence process and contrary to Ederveen et al. (2002) indicate that more corrupted countries do not use their funds in a more inefficient way.

3.2 Methodology and data

The goal of the paper is to find out whether EU funds have any effect on the economic development of transition economies. Measure of economic development used is growth rate of GDP per capita.[7] The neoclassical growth model was used to construct the complete setting of EU funds impact on transition countries economic development. The basic regression equation takes the following form:

$$g_{it} = \alpha + \beta_1 \ln(y_i) + \beta_2(s_{k,it}) + \beta_3(s_{h,it}) + \beta_4(n_{it} + g_a + \delta) + \beta_5(F_{it}) + t_t + e_{it} \qquad (1)$$

where g_{it} stands for real GDP per capita growth rate in country i and period t, $ln(y_i)$ natural logarithm of initial real GDP per capita expressed in current US dollars,[8] $s_{k,it}$ capital formation, $s_{h,it}$ human capital and n_{it} population growth rate. The standard in the growth literature is to take the sum of exogenous rate of technological progress g_a and rate of depreciation δ to be equal to 5% for all countries and time periods. EU funds F_{it}, including total payments country received from IPA, ERDF, ESF and CF, are expressed as a share of GDP.[9] Only the data about actual payments from EU funds are used, and not commitments data, since they reflect better EU funds effectiveness. Three year averages of EU funds were divided by 3-year averages of GDP to obtain this specification. Period dummies t_t are included in regression to capture time specific effects. Barro (1991) states that initial level of per capita income is inversely related to per capita growth rate since poor countries tend to grow faster than rich countries (if they are similar in preferences and technology). Human capital plays an important role in modern growth literature since large stock of human capital makes it easier for countries to absorb new products or ideas, and thereby induces growth. In this model human capital is proxied with secondary school enrolment rates.[10] Gross capital formation, expressed as a percent of GDP, measures investments.[11] Variables are averaged over a 3-year period in order to capture full effect of EU funds. The time dimension is assumed to have important influence since the impact of EU funds on growth takes effect with a time delay.[12]

---

[7] GDP per capita is considered a better measure of living conditions as compared to GDP alone because it shows average amount of money each citizen gets. However, both measures are imperfect due to their ignorance of wealth distribution, informal economy, currency fluctuations and so on. Since there still does not exist a measure that perfectly describes all aspects of the economic development, GDP per capita growth rate, which is still the best indicator, will serve the purpose of this research adequately.

[8] For each country the value of initial GDP per capita is the one from the beginning of each period.

[9] EU funds are expressed as a share of GDP because this data manipulation, presented in work of Tomova et al. (2013), removes the short term cyclical variation.

[10] The appropriateness of this measure could be discussed because it does not say anything about e.g. the type of job person performs and whether it suits to that person's qualification. However, since school enrolment rates are usually used as a proxy for human capital, the same concept has been applied here.

[11] World Bank (2015) defines capital formation as outlays on additions to the fixed assets of the economy plus net changes in the level of inventories. In the macroeconomic frame, it represents a measure of net additions to the physical capital stock of a country.

[12] For example, if a municipality plans to build a new motorway in year t, which would attract investments into that region and boost production, the outputs would not be observable immediately, but in year $t+n$. Build-up of a motorway takes time and disbursement from EU funds will be documented certain period of time before the whole construction is done. After a time lag, the EU funds should positively influence GDP p.c. growth rate. It is reasonable that the time horizon in which the effects of EU funding will be visible depends on the project type.

Ederveen et al. (2002) emphasize the role of quality of institutions in EU funds effectiveness. They state that the EU funds might be conditionally effective, meaning that allocation of EU funds is influenced by various factors. They use corruption perception index and openness to measure institutional quality directly and inflation as an indicator of the degree to which public authorities give in to certain pressures. Openness should promote the efficient allocation of resources through specialization and comparative advantage. The less corrupted country is, the EU funds usage should be more efficient. Finally, bargaining game between the government and the central bank defines the level of institutional quality regarding inflation. In order to test the influence of conditional variables on the effectiveness of EU funds, conditional effectiveness regression is stated as:

$$g_{it} = \alpha + \beta_1 \ln(y_i) + \beta_2(s_{k,it}) + \beta_3(s_{h,it}) + \beta_4(n_{it} + g_a + \delta) + \beta_5(F_{it}) + t_t$$
$$+ \beta_6 COND_{it}F_{it} + e_{it} \qquad (2)$$

where *COND* includes interaction term of total funds with openness, inflation and corruption indicator. Furthermore, a dummy indicating years when country is EU member is added to both regression equations to find out whether the EU accession itself had a significant impact on the growth and disentangle this effect from the EU funds effect.

Data are from World Development Indicators database, European Commission documents and databases, and Transparency International. The panel dataset covers a time span of 14 years, 2000-2013.[13] Dataset consists of 50 observations for 10 countries.[14] Variables used in empirical analysis are presented in Table A2 of the Appendix.

3.3 Results

Table 3 gives the estimation results from three different methods implemented on the panel dataset. First three columns give an overview of results from the basic regression, whereas the last three indicate what happens when the conditional variables are included in the interaction with total funds.

Table following on the next page

The average of 3 years is not standard practice (5-year is usually used), but here it has been chosen because of the lack of the data.

[13] Five periods were created after the variables were averaged. Four periods were averaged over 3 years (2000-2002, 2003-2005, 2006-2008, 2009-2011) and one over 2 years (2012-2013).

[14] Empirical research is limited by the EU funds data availability since countries are entitled to use EU funds once they enter EU. However, dataset contains information about the pre-accession funds (IPA), in order to evaluate the total impact of EU aid on growth. Croatia is not included in this part of the analysis since it joined EU in July 2013.

Table 3: Comparison of Pooled Ordinary Least Squares, Random and Fixed Effects results
Dependent variable: real GDP per capita growth rate

	OLS	RE	FE	OLS'	RE'	FE'
Initial GDP p.c.	-0.021**	-0.021**	-	-0.017*	-0.017	-
	(0.01)	(0.01)	-	(0.01)	(0.01)	-
Investment	0.230***	0.230***	0.235*	0.240***	0.240***	0.234*
	(0.08)	(0.07)	(0.13)	(0.08)	(0.08)	(0.14)
Human capital	-0.106*	-0.106*	-0.109	-0.103	-0.103	-0.098
	(0.06)	(0.06)	(0.10)	(0.08)	(0.07)	(0.11)
Population + 0.05	0.804	0.804	0.760	0.844	0.844	0.911
	(0.96)	(0.81)	(1.39)	(0.98)	(0.87)	(1.52)
Total funds	2.164***	2.164**	2.489*	3.361	3.361	4.031
	(0.74)	(0.93)	(1.28)	(2.43)	(2.96)	(4.14)
EU dummy	0.017	0.017	0.016	0.018	0.018	0.017
	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)	(0.02)
2003-2005	-0.007	-0.007	-0.007	-0.007	-0.007	-0.008
	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)	(0.02)
2006-2008	-0.019	-0.019	-0.020	-0.021	-0.021	-0.021
	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.03)
2009-2011	-0.080***	-0.080**	-0.083**	-0.082***	-0.082***	-0.087**
	(0.02)	(0.03)	(0.03)	(0.02)	(0.03)	(0.04)
2012-2013	-0.073***	-0.073**	-0.077**	-0.073***	-0.073**	-0.082**
	(0.02)	(0.03)	(0.04)	(0.02)	(0.03)	(0.05)
Openness				-0.826	-0.826	-0.169
				(0.64)	(0.79)	(1.16)
Corruption				0.015	0.015	-0.199
				(0.26)	(0.38)	(0.52)
Inflation				4.233	4.233	-0.425
				(11.48)	(11.96)	(15.51)
Observations	48.000	48.000	48.000	48.000	48.000	48.000
Adj. R-squared	0.758	0.763		0.766	0.764	
p-value	0.000	0.000	0.000	0.000	0.000	0.000

Notes: standard errors are given in parenthesis; ***/**/* denote significance at 1, 5 and 10% respectively

One can observe similar coefficients of pooled OLS and GLS estimators. Initial GDP p.c. has expected significant negative influence on the growth rate and, as expected, investment influences growth rate positively and significantly. The coefficient of total funds is positive and significant implying that increase of payments from EU funds by 1 percentage point, will on average increase the growth rate of GDP per capita by 0.72 percentage points annually, ceteris paribus. A strong effect of the economic downturn is certainly present in the model.[15] Dummies for last two periods have negative and significant coefficients throughout all specifications.[16]Accession to EU could also have an influence on the economic performance of countries if better investment climate and other economically thriving side effects of joining EU occur. However, the importance of EU dummy in this model, although of a positive sign, is insignificant.[17]

---

[15] All countries except Poland experienced sharp negative drops in GDP per capita growth rates in 2009. In Baltic countries they even fell by 16,6%.

[16] Due to multicollinearity, only 4 instead of 5 period dummies were created.

[17] On the other hand, without the inclusion of EU dummy, the coefficient of EU funds would be underestimated.

Looking at the results of conditional regression, no evidence of conditional effectiveness of EU funds was found. [18] All coefficients of conditional variables are insignificant in all three specifications. While the sign of an interaction term with openness is negative, parameters for corruption and inflation are positive in pooled OLS and random effects estimations (although they become negative in fixed effect estimation).

4. CONCLUSION

The EU funds should contribute to the development of transition economies by means of reducing the regional disparities between them and the rest of EU member states and promoting growth. The empirical analysis conducted on the ten transition economies over time period of 14 years confirmed that the effect of analyzed EU funds is indeed positive. The results confirm that the EU funds promote growth in transition economies. On average, if the EU funds increase by 1 percentage point, the growth rate of GDP per capita will increase by 0.7 percentage points annually. The impact of EU funds is notable.

The planned economy left a certain heritage to transition economies. It can be perceived in form of lack of entrepreneurship, infrastructure and weak institutions, which can be an obstacle for efficient EU funds usage. However, corruption, inflation and openness which proxied the quality of institutions and efficient usage of EU funds, showed no joint significant effect with total funds on the GDP per capita growth rate.

Finally, the EU funds certainly do fulfill their goal in promoting the growth of transition economies. EU funds opened up a huge pool of benefits for transition countries. On the other hand, they should not deceive themselves that the economic growth will be realized only through EU funds. Their goal is not to lead the economic policies of a country. Just relying on EU funds is dangerous and limits countries' potentials. These countries have to develop their own economic strategy where EU funds will be given a role of assistants and not leaders.

LITERATURE

1. Barro, J. R. (1991). Human Capital and Growth in Cross-Country Regressions. *The Quarterly Journal of Economics*, Vol. 106, No. 2, p. 407-443
2. Becker, S., Egger, P., von Elrich, M. (2010). Going NUTS: the effect of EU Structural Funds on regional performance. *Journal of Public Economics*, Vol. 94, Issue 9-10, p. 578-590
3. Beugelsdijk, M., Eijffinger, S. (2005). The Effectiveness of Structural Policy in the European Union: An Empirical Analysis for the EU-15 in 1995-2001. *Journal of Common Market Studies.* Vol. 43, No.1, p. 37-51.
4. Central Office for Development Strategy and Coordination of EU Funds in Croatia. (2009). *A Handbook on Financial Cooperation and European Union Supported Programs in Croatia.* Retrieved 11.04.2015. from
http://www.safu.hr/datastore/filestore/10/European_Funds_for_Croatian_Projects.pdf.
5. Dall'erba, S., Le Gallo, J. (2008). Regional Convergence and the Impact of European Structural Funds over 1989-1999: A Spatial Econometric Analysis. *Papers in Regional Science*, Vol. 87, Issue 2, p. 219–244.
6. Dimulescu, V., Pop, R., Doroftei, M. (2013). Bottom of the Heap: The Case of Romania. *European Research Centre for Anti-Corruption and State-Building.* Working Paper No. 37.

---

[18] The possible explanation could be that the effect cannot be proven because of small number of observations. The conditional regression equation brings into an estimation three new variables that eat up degrees of freedom additionally.

7. Ederveen, S., de Groot, H. L. F., Nahuis, R. (2002). Fertile Soil for Structural Funds? A panel data analysis of the conditional effectiveness of European cohesion policy. *Tinbergen Institute.* Discussion Paper No. 096/3.

8. Eggert, W., Von Ehrlich, M., Fenge, R. and König, G. (2007). Konvergenz- und Wachstumseffekte der europäischen Regionalpolitik in Deutschland. *Perspektiven der Wirtschaftspolitik,* Vol. 8, Issue 2, p. 130-146.

9. European Commission. (2015). *Budget.* Retrieved 11.04.2015. from http://ec.europa.eu/budget/figures/interactive/index_en.cfm.

10. Garcia-Milá, T., McGuire, T. J. (2001). Do Interregional Transfers Improve the Economic Performance of Poor Regions? The Case of Spain. *International Tax and Public Finance*, Vol. 8, Issue 3, p. 281-296.

11. Gros, D., Suhrcke, M. (2000). Ten Years After: What is Special about Transition Countries? *European Bank for Reconstruction and Development*. Working Paper No. 56.

12. KPMG. (2014). *EU Funds in Central and Eastern Europe – Progress Report 2007-2013.* Retrieved 11.04.2015. from http://www.kpmg.com/cee/en/issuesandinsights/articlespublications/pages/eu-funds-in-central-and-eastern-europe-2013.aspx.

13. Puigcerver-Peñalver, M. C. (2007). The Impact of Structural Funds Policy. *The European Journal of Comparative Economics*, Vol. 4, No. 2, p. 179-208.

14. Soukiazis, E., Antunes, M. (2006). Two Speed Regional Convergence In Portugal And the Importance of Structural Funds on Growth. *Ekonomia,* Vol. 9, Issue 2, p. 222-241.

15. Tomova, M., Rezessy, A., Lenkowski, A., Maincent, E. (2013). EU Governance and EU Funds – Testing the Effectiveness of EU Funds in a Sound Macroeconomic Framework. *European Commission Directorate-General for Economic and Financial Affairs.* Economic Papers No. 510.

16. Transparency International. (2015). *Corruption Perceptions Index.* Retrieved 11.04.2015. from http://www.transparency.org/research/cpi/overview.

17. World Bank. (2015). *World Development Indicators Data*. Retrieved 11.04.2015. from http://data.worldbank.org/data-catalog/world-development-indicators.

18. Wostner, P., Šlander, S. (2009). The Effectiveness of EU Cohesion Policy Revisited: Are EU Funds Really Additional?. *European Policy Research Centre.* European Policy Research Paper No. 69.

Appendix following on the next page

Appendix

Table A1: Empirical research of EU funds effectiveness

Authors	**Impact of EU funds on economic growth**	**Time span**	**Units**	**Econometric method**
Garcia-Milá and McGuire (2001)	Grants not effective in improving the economies of the poorer regions	1977-1992	Spain (NUTS2 regions)	OLS, difference-in-difference approach
Ederveen et al. (2002)	SF effective in countries with high-quality institutions	1960-1995	EU-13	Pooled OLS, RE, FE
Beugelsdijk and Eijffinger (2005)	Corrupted countries do not gain less growth from SF	1995-2001	EU-15	GMM model
Soukiazis and Antunes (2006)	Small positive impact on growth which is more effective in costal regions	1991-1999	Portugal (NUTS3 regions)	Pooled OLS, RE, FE
Eggert et al. (2007)	SF reduces the growth rate, but accelerates region's convergence	1994-2004	Germany (NUTS1 regions)	Pooled OLS
Puigcerver-Peñalver (2007)	Positive effect of SF of Obj.1 regions in first programming period but not in the other	1989-2000	EU-15 (NUTS2 regions)	Pooled OLS, FE
Dall'erba and Le Gallo (2008)	No impact on regional convergence	1989-1999	EU-12 (NUTS2 regions)	Spatial lag with IV
Wostner and Šlander (2009)	Cohesion funds result in additional public expenditure – quadratic f-on	1995-2006	EU-15	Pooled OLS, RE, FE
Becker et al. (2010)	Significant growth effect of Obj. 1 regions	1989-2006	EU-25 (NUTS2 regions)	Regression discontinuity analysis

Table A2: Descriptive statistics of variables

Variable	**Description**	**Source**	**Overall mean**	**Overall st.dev.**
GDP p.c. growth	Growth rate of real GDP per capita (%)	World Bank	3.5	3.3
Initial GDP p.c.	Value of GDP p.c. in the beginning of each period for each country (current US$)	World Bank	-	-
Gross capital formation	Gross capital formation (% of GDP)	World Bank	25.7	4.9
Population growth + depreciation	Rate at which number of individuals in a population increases (%)	World Bank	4.6	0.6
Human capital	Secondary school enrollment rate (% gross)	World Bank	97	6.2
Corruption index	Ranges from 10 (very clean) to 0 (very corrupted) and indicates how people perceive corruption	Transparency International	4.645	1.006
Openness	Export plus import over GDP (%)	World Bank	119.4	33.9
Inflation	Consumer price (%)	World Bank	4.8	4.9
Total funds	IPA, ERDF, ESF and CF (% of annual GDP)	European Commission	1.02	0.7
Conditional corruption	Total funds multiplied by corruption index	-	4.9	4.03
Conditional openness	Total funds multiplied by openness	-	1.3	1.24
Conditional inflation	Total funds multiplied by inflation	-	0.04	0.03
EU dummy	=1 if the country is EU member	European Commission	-	-

PERSONAL INCOME TAX SYSTEM IN BULGARIA

Nelly Popova
University of National and World Economy, Bulgaria
E-mail: npopova@unwe.bg

ABSTRACT
Personal income tax (PIT) is the most important fiscal instrument in modern times. Its share amounts to 20-25% of total fiscal revenues in many European countries as well as other developed economies because of its important role in enhancing social equity. On the other hand, high personal income tax rates are considered a significant factor for inefficiencies in labour markets. Therefore, over the last decades most industrialized countries initiated reforms aiming at reduction of overall tax burden, and in particular personal income tax rates. The reforms in most of these countries focused on decreasing top marginal tax rates, but also on decreasing minimum marginal tax rates on low-income workers. In other countries, especially in the transition economies of Central and Eastern Europe, the reforms of personal income taxation were even more far-reaching.
The present paper has as its object the personal income tax system in Bulgaria. The first part of the paper outlines the main types of PIT models existing in theory, and in particular: the multi-bracket progressive taxation, the Bentham's progressivity, the Hall-Rabushka flat tax and the proportional income taxation. The second part dwells upon PIT systems in EU Member States. There are significant differences among these countries, and especially between the "old" Member States of EU-15 and the new Member States from Central and Eastern Europe. The third part places the focus on the organization of personal income tax in Bulgaria because of the specific features that distinguish this country from all other EU Member States.
Keywords: personal income tax, tax reforms, tax system

1. INTRODUCTION

Personal income tax (PIT) is the most important fiscal instrument in modern times. According to the European Statistical Office (Eurostat) its share in total budget revenues in EU-28 in 2012 is almost 24% on average. The significant amount of PIT revenues is related to its role in redistributing income and macroeconomic stabilization. On the other hand, high personal income tax rates are considered an important factor for labour market inefficiencies. Therefore, over the last decades reforms were initiated aiming at diminishing tax burden on individual incomes. In most cases reforms included reduction of top marginal tax rates, but also of minimum marginal tax rates on low-income workers. In the transitional economies of Central and Eastern Europe PIT reforms were even more far-reaching and in many cases included substitution of the multi-bracket progressive schedule with a more simplified two-bracket schedule. Bulgaria differs from almost all EU Member States as regards individual income taxation. In 2008 this country adopted a proportional system with a single rate of 10% (the lowest in EU-28) and no general allowance. This policy decision reflected the existing theoretical views on the trade-offs between social equity and economic efficiency.

The present paper is organized as follows: the first part outlines the main types of PIT systems existing in theory, and in particular: the multi-bracket progressive taxation, the Bentham's progressivity, the Hall-Rabushka flat tax and the proportional income taxation. The second part dwells upon PIT systems in EU Member States and examines the most important differences between "old" EU Member States of EU-15 and new Member States from Central and Eastern Europe. The third part places the focus on the organization of personal income tax in Bulgaria because of the specific features that distinguish this country from all other EU Member States.

2. MAIN TYPES OF PERSONAL INCOME TAX SYSTEMS

Personal income tax is relatively new. Progressive income taxes were at first adopted in the 1880s, but only after World War II they became a major source of fiscal revenues (Bird and Zolt, 2005 p. 1633). The main reason for their increasing role in the second half of the 20th century was their redistributive capability.

Taxes can be distinguished by various criteria. One of the most important classifications is according to the rate structure and the relationship between average tax rate (ATR) and marginal tax rate (MTR). Average tax rate measures the ratio between tax due and the tax base, while marginal tax rate measures the change in tax due after a change in the tax base.

The "classical" type of personal income tax in theory and in practice is the multi-bracket system presented in Figure 1. This type of PIT regime contains various marginal tax rates applying to different income levels. In this way higher incomes are taxed more heavily. An integral part of the progressive PIT system is the general allowance or non-taxable minimum which applies to all taxpayers. The progressivity implies that tax due increases more intensively than the tax base, hence average tax rate (ATR) remains lower than marginal tax rate (MTR) for all incomes above the non-taxable minimum.
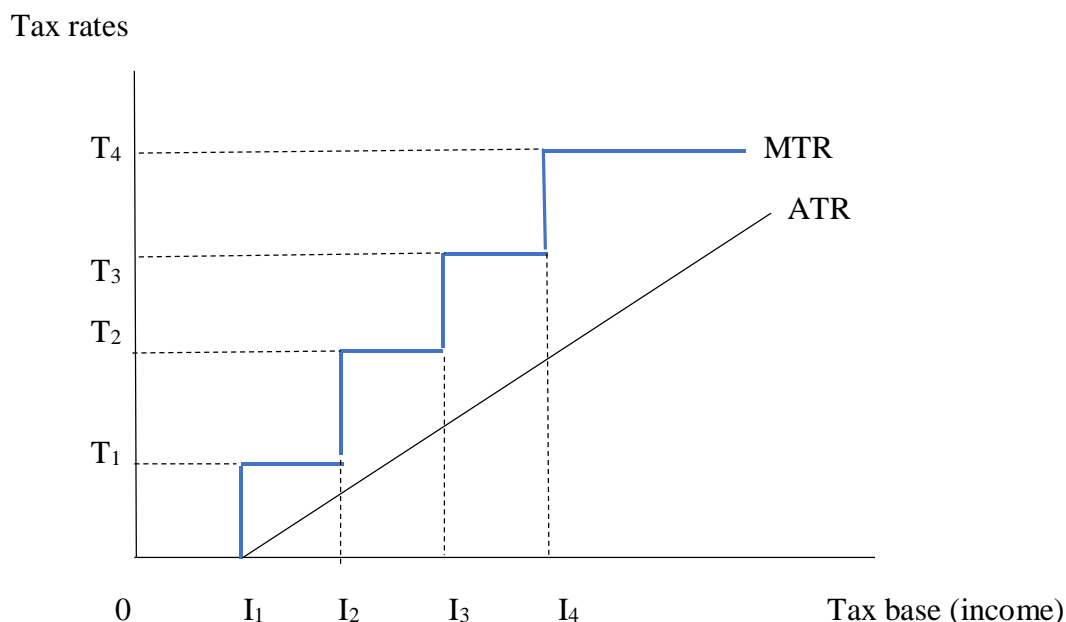
Figure 1: Progressive income taxation (Hyman, 2010, p. 417)

Over the last two decades a simplified version of progressive individual income tax, called Bentham's progressivity, became popular.[1] This type of PIT includes only two tax brackets – the first bracket represents the non-taxable minimum, and the second bracket includes all incomes above the non-taxable minimum, which are taxed at a single rate. Albeit simpler than the multi-bracket schedule, this type of PIT is also progressive (MTR is higher than ATR), and this can be seen in Figure 2.

---

[1] After the British 19th century philosopher Jeremy Bentham, founder of the Utilitarian school
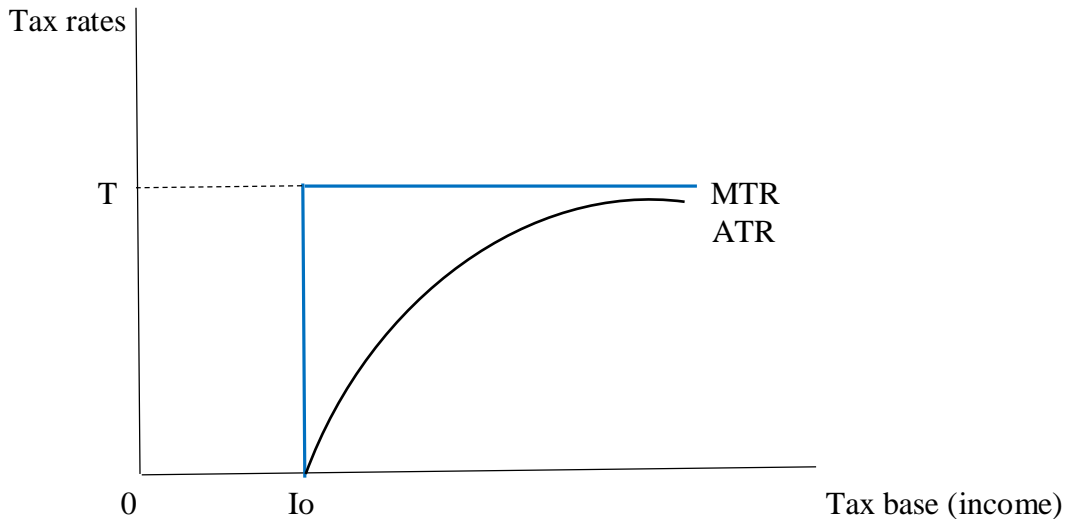
Figure 2: Bentham's progressivity (Brussarski, 2007, p. 129.)

Proportional taxation of personal income implies the application of a single (flat) tax rate with no general allowance. Thus, tax due increases proportionally to the tax base, and ATR is equal to MTR for all income levels (Figure 3).
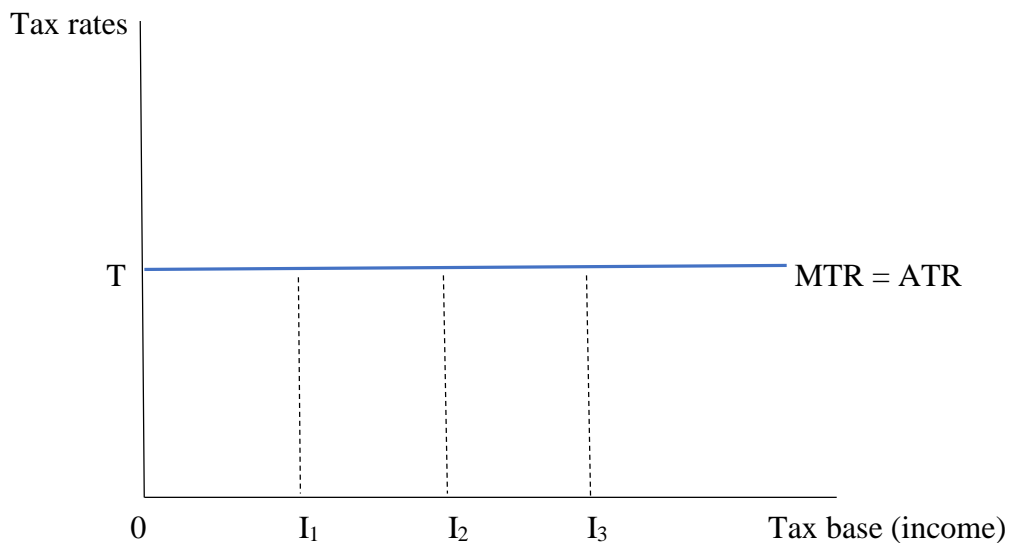
Figure 3: Proportional income tax (Hyman, 2010, p. 417)

Proportional PIT does not have redistributive capacity, because it does not change the ratio between high and low incomes in the national economy. For this reason most countries refrain from taxing individual incomes proportionally.

Another theoretical concept is the so called flat tax proposed by US economists Robert Hall and Alvin Rabushka at the beginning of the 80's. The main objective of the flat tax was to simplify the federal income tax return. The second argument for the replacement of the multi-bracket system with a flat rate was that consumption was a better tax base than income. The Hall-Rabushka flat tax had two components: first, an individual income tax to be imposed on salaries and pensions at a rate of 19% (part of individual income would be exempt); second, a business tax would be imposed on business entities after deduction of costs for inputs, also at a

rate of 19%. The base of the individual tax is the wage payment with no capital income taxed at the individual level. The business tax was similar to the value added tax in EU Member States (Rosen and Gayer, 2010, p. 489). Flat tax was never introduced in the USA or elsewhere, because of concerns it would increase social inequality. However, as a theoretical concept it attracted significant attention because of its simplicity.

3. PERSONAL INCOME TAX SYSTEMS IN EU MEMBER STATES
3.1. The countries of EU-15

Unlike indirect taxes, individual taxation in the European Union is not an object of harmonization. This means that Member States have full responsibility to customize their national PIT systems to their policy goals. However, there are some common features among EU-15 Member States.[2] They are all characterized by the application of multi-bracket systems with high top statutory rates and various tax exemptions, allowances and credits. The complex PIT systems are designed to achieve more equitable income redistribution. However, high tax rates are considered an important factor for labour market inefficiencies.

At the turn of the 21st century some Member States initiated reforms of their PIT systems, in order to decrease tax burden and enhance labour market efficiency. One of the main elements of the reforms was the reduction of top statutory rates. Between 1995 and 2004 the latter was lowered from almost 54% to around 48% on average. The reduction was most significant in Luxemburg (12 percentage points), Spain (11 p.p.), Finland, Germany (10 p.p.) and the Netherlands (8 p.p.). Albeit with a smaller amount, PIT rates were also lowered in almost all other Member States, except Austria, Portugal and United Kingdom, where the rates were kept unchanged (EU Taxation trends, 2015 Edition, p. 142). Nevertheless, the average top PIT rate in EU-15 remained higher in comparison to other developed countries - 39.6% in the USA and 45% in Japan.

The financial and economic crisis that began in 2009 reversed the process of tax rate reductions in EU countries, because of fiscal consolidation and increased social transfers. In many Member States top PIT rates returned to their levels from the middle of the 90's (Ireland), and in some cases even exceeded them (Greece, Portugal, United Kingdom). Elsewhere, the process of tax rate reduction was stopped. In 2015 the top marginal PIT rate in EU-15 reached 50.3% on average (Figure 4).

An important feature of individual income taxation in some Member State during the crisis was the introduction of the called solidarity surcharges, i.e. additional taxes for the incomes exceeding a certain amount. Such solidarity surcharges were adopted as temporary measures in Germany, Greece, Italy, Spain and Portugal.
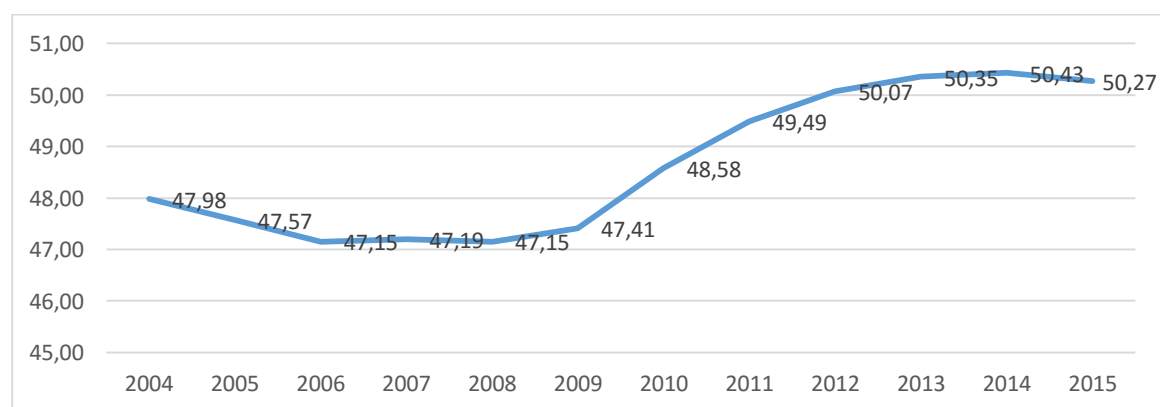
Figure 4: Average top statutory PIT rate in EU-15 (Taxation Trends in the EU, 2015 Edition and own calculations)

---

[2] This group includes the EU Member States before the 2004, 2007 and 2013 enlargements

Another reform at the turn of the century concerned the number of tax brackets, which was reduced in Austria, Belgium, Finland, Greece, Italy, Luxemburg and Spain. In 2016 the number of tax brackets varies between two in Ireland and nineteen in Luxemburg.

During the global crisis some Member States reduced tax rates in the low and middle income brackets in order to boost purchasing capacity. In 2008 Germany decreased the lowest rate by 1 p.p. and in 2009 Austria also reduced the marginal tax rates in the second and third brackets. It can be concluded that despite the reforms, EU-15 Member States kept and the progressivity of PIT.

Table 1 presents personal income tax revenues in EU-15 over the period 2004-2012. In most Member States its share is significant, especially in Denmark, Sweden, Belgium, Finland and Ireland. The only country with a considerably low amount of PIT revenues is France. An important conclusion is that the global crisis did not affect personal tax revenues in EU-15 Member States.

	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Austria	17.82	17.43	17.94	17.99	18.58	17.9	18.09	18.18	18.66
Belgium	28.86	28.84	27.93	27.95	28.61	28.61	28.61	28.95	28.72
Denmark	38.67	37.36	38.15	39.39	39.58	39.3	38.03	38.16	38.24
Finland	28.94	28.63	27.86	27.09	28.3	29.3	27.94	27.32	27.26
France	6.64	6.56	6.61	5.93	6.09	5.8	5.71	5.78	6.51
Germany	16.93	16.37	16.14	16.34	16.99	16.96	16.18	16.33	16.69
Greece	13.46	13.85	14.6	14.8	14.98	16.25	14.03	14.66	20.58
Ireland	23.87	22.99	21.75	22.72	24.7	25.93	25.35	23.29	24.3
Italy	24.2	24.52	24.23	24.49	25.43	25.47	26.31	25.83	25.86
Luxemburg	17.79	18.98	20.91	20.01	21.64	20.57	21.06	22.19	21.91
Netherlands	14.37	15.99	16.69	18.09	17.38	21.74	21.08	20.21	18.95
Portugal	16.46	16.37	16.34	16.72	17.01	18.44	17.66	18.46	18.32
Spain	18.68	18.65	19.55	21.06	22.31	23.01	22.94	23.83	23.81
Sweden	30.61	29.6	28.88	27	27.52	26.68	25.26	25.26	25.76
UK	26.99	27.52	27.26	28.13	26.79	27.47	26.92	26.32	25.54
Average	21.62	21.58	20.68	20.86	22.39	22.90	22.34	22.32	22.74

Table 1: PIT revenues in the EU-15 Member States (*Taxes in Europe Database*)

3.2. New EU Member States from Central and Eastern Europe

At the beginning of the market transition the countries from Central and Eastern Europe (CEEC) organized their PIT systems in a different manner than EU-15. They had to start from scratch in constructing their tax systems, but they also had the opportunity to conduct more far-reaching reforms. A common feature of almost all CEEC (with few exceptions) became the so called "flat-tax revolution". The latter began in Estonia in 1994 when a single rate of 26% was introduced, replacing the previous three-bracket schedule. In the following years the other two Baltic countries, Latvia and Lithuania, also replaced their multi-bracket systems with a single-rate personal income tax. At the beginning of the 21st century a new, bigger wave of the "flat-tax revolution" took place in Central and Eastern Europe when Slovakia, Romania, Bulgaria, Czech Republic and Hungary also abolished the multi-bracket schedule. Flat tax was also introduced in a number of Balkan and East European countries outside the EU – Russia, Georgia, Serbia, Macedonia, etc.

It should be noted, however, that in almost all CEEC individual income taxation remained progressive because of the retention of various tax allowances and credits. The existence of a certain non-taxable part of the income makes average tax rate lower than marginal tax rate. In this sense, the correct title of the personal income taxes in these countries is Bentham's

progressivity. The only country in the EU with a truly flat (proportional) tax of individual income has been Bulgaria. Only in 2016 tax allowances for families with children were introduced, which bring some progressivity in PIT. In 2011 Hungary also replaced the progressive multi-bracket system with a flat rate. In addition the earned income tax credit was substituted with a new family tax allowance. Before the reform those earning around the minimum wage level have not had to pay personal income tax, and even those on an average salary have benefitted in the form of tax credits resulting in a very low tax liability. The flat tax rate system applies to everyone across the board regardless of their salary (Hungary's Flat Rate Personal Income Tax, p. 3). On the other hand, in 2013 Slovakia reintroduced the "classical" progressive system, by introducing a second positive tax bracket of 25%.

The only two new EU Member States which are not transitional economies, Cyprus and Malta, are characterized by steeply progressive PIT systems similar to the countries of EU-15. Malta apply 12 tax brackets, varying from 0 to 35%. Cyprus also has opted for a multi-bracket system. In 2015 the average statutory PIT in CEEC amounted to 25%. Personal income tax regimes in force in CEEC in 2016 are presented in Table 2.

Country	Tax allowances, deductions and credits	Tax rates (%)
Bulgaria	Allowances for families with children	10
Croatia	Basic yearly allowance for individuals, allowances for families with children	12, 25, 40
Cyprus	Basic yearly allowance for individuals	0,20,25,30,35
Czech Republic	Basic yearly tax credit for individuals, tax credits for families with children	15
Estonia	Basic yearly allowance for individuals; allowances for families with children	20
Hungary	Tax relief for newly married couples; allowances for families with children	15
Latvia	Basic yearly allowance for individuals; allowances for families with children	22
Lithuania	Basic yearly allowance for individuals (applies only to labour income), allowances for families with children	15
Malta	Basic yearly allowance for individuals	0 - 35
Poland	Basic yearly tax credit for individuals	18, 32
Romania	Deduction from the monthly net income from wages for the natural persons with a gross monthly income of up to RON 1,000	16
Slovakia	Basic yearly allowance for individuals; Tax deductions for dependent children, employee tax credit	19, 25
Slovenia	Basic yearly allowance for individuals; allowances for families with children	16, 27, 41,50

Table 2: PIT organization in Central and Eastern Europe in 2015 (Taxes in Europe Database)

Personal income tax regimes adopted by the majority of CEEC have little in common with the original flat tax of Hall and Rabushka (the only similarity being the application of a single rate toward all income above a certain non-taxable amount). The tax system adopted by Slovakia in 2004 bore the closest resemblance to the flat tax proposed by Hall and Rabuska (Horvath, 2015, p. 2).

One of the main reasons stated in favour of the flat tax was that it encourages market efficiency through simplification of tax rules. Empirical studies in this field are scarce. Research by the IMF on the effects of the tax reform adopted by Russia in 2001 suggested that labour supply did not increase meaningfully among those most affected by the reforms (The Economist, 2007).

On the other hand, the main argument against flat tax was that it limits income redistribution. According to some views even before the flat-tax revolution PIT revenues in most developing

countries were considerably low and thus exerted little impact on income redistribution (Bird, 2005, p. 1635). For this reason, it could not be expected the revenues to fall drastically.

Table 3 presents the share of personal income tax revenues in total fiscal receipts in new EU Member States in 2004-2012. The countries with the highest revenues in 2004 were Estonia, Lithuania and Malta. In 2009 there was a sharp decline in Lithuania and Estonia, which was due mainly to the severe economic crisis. PIT revenues declined also in Slovakia, Hungary and Czech Republic. It is interesting to note that the revenue decline in Hungary coincided with the introduction of the flat tax (2011). In the other countries fiscal receipts remained stable throughout the crisis, and in Poland they even increased.

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bulgaria	9.51	8.68	8.36	9.21	8.59	9.71	10.44	10.03	9.97
Croatia	10.19	9.6	9.82	10.54	10.49	10.68	9.65	9.86	10.33
Cyprus	8.44	8.83	8.74	8.01	8.41	9.97	10.25	10.64	10.41
Czech Republic	12.95	12.41	11.76	11.84	10.73	10.83	10.6	10.78	10.78
Estonia	20.55	18.16	18.16	18.53	19.55	15.98	15.9	16.16	16.46
Hungary	17.51	17.58	18.08	17.97	18.99	18.45	17.19	13.26	13.76
Latvia	14.65	13.79	13.92	14.11	15.32	14.32	15.84	14.28	14.34
Lithuania	23.39	23.47	22.54	21.76	21.27	13.56	12.73	12.88	12.94
Malta	20.87	20.12	20.92	18.06	17.85	19.66	18.98	19.16	20.06
Poland	11.6	12.02	13.61	15.05	15.6	14.61	14.04	13.79	14.08
Romania	10.41	8.38	10.32	12.17	12.86	13.54	12.73	12.12	12.64
Slovakia	13.02	11.84	11.8	10.92	10.86	9.31	8.99	9.47	13.6
Slovenia	14.4	13.4	13.33	12.19	12.89	13.59	13.61	13.6	13.28
Average	14.42	13.71	13.95	13.87	14.11	13.40	13.15	12.77	13.28

Table 3: PIT revenues as a percentage of total fiscal revenues (Taxes in Europe Database and own calculations)

4. MAIN FEATURES OF PIT SYSTEM IN BULGARIA

At the beginning of the 90's personal income tax in Bulgaria was organized in a similar way as in developed market economies, i.e. a steeply progressive scale. In 1992 there were seven brackets and the top rate was a combination of a lump-sum tax and a 40% ad valorem rate. In 1993 the top rate even reached 52% (Bogetic and Hassan, 1997, p.33).

During the market transition Bulgaria, like other Central and Eastern European countries, carried out ambitious tax reforms in order to attract foreign direct investments and speed up economic growth. These reforms concerned mainly direct taxes which were gradually reduced. In 2007, the year of Bulgaria's accession to the European Union, the corporate income tax was decreased to 10%. However, the most distinctive feature of Bulgaria in the tax field has become personal income tax which has been an object of important changes. A process of gradual "flattening" of PIT began with the number of tax brackets being reduced to five in 1997, four in 2006 and three in 2007 (Brussarski, 2012, p. 28). In 2008 the progressive PIT was completely abolished and a single 10% rate was introduced (the only exception was a 5% rate applied to dividends). However, the non-taxable minimum was removed as well as almost all tax reliefs, with the aim of widening the tax base. Thus, Bulgaria has become the only EU Member State with a truly proportional (flat) tax. Apart from Bulgaria the only other country applying a flat income tax has been Georgia.

The introduction of the flat tax was revenue neutral because it did not affect budget receipts. As can be seen in Table 1, even before flat tax adoption PIT revenues in Bulgaria were lowest in the CEEC and EU-28 – they amounted to around 10% of total fiscal revenues. After a small decline in 2008 (the year of flat tax introduction) in the following years revenues began rising

and slightly exceeded the pre-2008 levels. However, there was either no drastic increase in revenues as predicted by the Laffer theory. As regards the effects of the flat tax on income redistribution in Bulgaria, there are no clear empirical results. However, some information could be derived from the aggregate indicators measuring effective tax burden, such as the average tax rate on low-income workers. The average tax rate is defined as the income tax on gross wage earnings plus the employee's social security contributions less universal cash benefits, expressed as a percentage of gross wage earnings (Eurostat, Average tax rate, Metadata). The dynamics of the average tax rate on a single person receiving 50% of average income in Bulgaria in 2005-2012 is presented in Figure 5
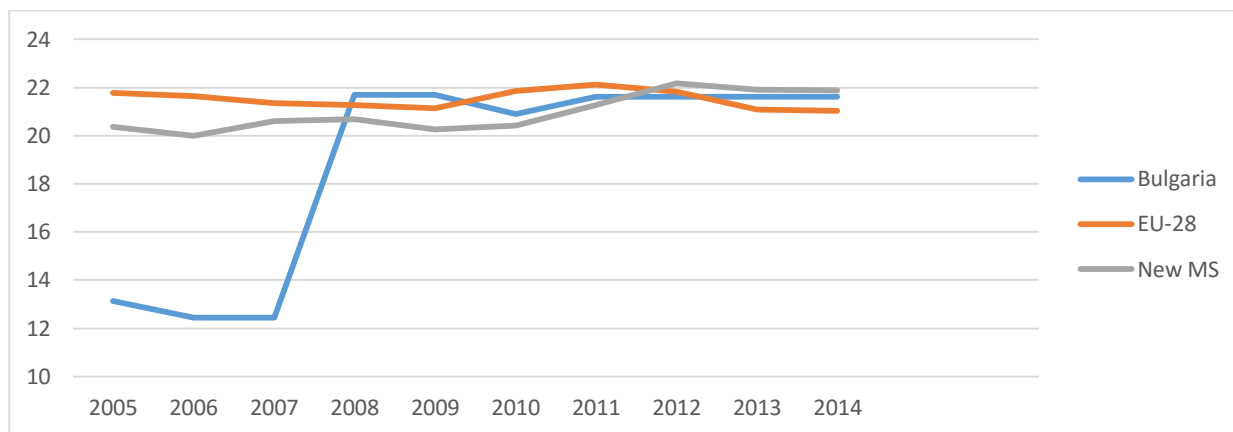
Figure 5: Average tax rate for a person receiving 50% of average income
(Eurostat and own calculations)

In 2005-2007 the value of this indicator in Bulgaria was 12-13%, well below the EU average of over 20%. In the year of flat tax introduction (2008) the average tax rate on low-income individuals in Bulgaria rose steeply to almost 22%, and it has remained around this level ever since. The development of this indicator is a clear sign for the increasing tax burden on low-income earners. It should be taken into account that the average tax rate includes also social security contributions, as well as social transfers. However, social security contributions in Bulgaria were also reduced at the turn of the century. It can be concluded that the abolition of the non-taxable minimum has led to a shift of the tax burden towards low-income taxpayers. Bulgaria is the EU Member State with the lowest per capita income and one of the highest values of Gini coefficient in the EU. The lack of progressivity of PIT, combined with high indirect taxes, deepened inequality in income distribution.

Over the last few years some measures were taken to increase progressivity. In 2014 a new tax credit was introduced for individuals with labour income not exceeding the minimum wage. However, it was abolished only after a year. From the beginning of 2016 a new allowance was adopted for families with at least one dependent child.

5. CONCLUSION

Despite being one of the newest fiscal instruments, in modern times personal income tax has a major role in developed countries as a tool for accumulating budget revenues, redistributing income and stabilizing the economy. In theory there exist different models of the individual income tax – varying from the multi-bracket progressive schedule to a uniform (flat) tax rate. As regards the practice, progressive income tax has dominated in most countries throughout the world, and in particular in "old" Member States of the European Union because of its redistributive capacity. During the market transition new EU Member States from Central and Eastern Europe carried out sweeping reforms of their personal income tax systems replacing

the multi-bracket regime with a more simplified two-bracket regime. Although this type of PIT was called a flat tax, its more correct title is Bentham's progressivity, because the existence of a general allowance makes that marginal tax rate is higher than average tax rate for all incomes above the non-taxable income. Bulgaria is the only EU Member States that adopted a truly proportional (one bracket) personal income tax. This reform was revenue neutral and it did not lead to significant changes in fiscal revenue. However, as a result there was a shift in tax burden towards lowest income individuals.

LITERATURE
1. Bird, R., E.M. Zolt (2005). *Redistribution Via Taxation: The Limited Role of the Personal Income Tax in Developing Countries.* RePEc. Retrvieved on 16.02.2016 from file:///C:/Users/User/Downloads/Bird-ZoltUCLApaper2005.pdf
2. Bogetic, J., F.M.A. Hassan (1997). *Personal Income Tax Reform and Revenue Potential in Transitional Economies: Bulgaria.* Retrieved on 16.02.2016 from https://www.researchgate.net/publication/23749344_Personal_Income_Tax_Reform_and_ Revenue_Potential_in_Transition
3. Brussarski, R. (2007) *Theory of Public Finance.* Sofia: UNWE University Press
4. Brussarski, R. (2012). *Labor Income Taxation in Bulgaria.* Economic Thought, 4/2012, (ISSN 0013-2993), pp. 26-45
5. Eurostat Database
6. Eurostat Statistical Books (2014) *Taxation Trends in the European Union: Data for the EU Member States, Iceland and Norway.* Retrieved 01.09.2014 from http://ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_a nalysis/tax_structures/2014/report.pdf
7. Eurostat Statistical Books (2015) *Taxation Trends in the European Union: Data for the EU Member States, Iceland and Norway.* Retrieved 10.12.2015 from http://ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_a nalysis/tax_structures/2015/report.pdf
8. Horvath, M. (2015) *The End of Flat Tax Experiment in Slovakia.* University of York: Discussion Paper in Economics. Retrieved on 13.02.2016 from https://www.researchgate.net/publication/281105764_The_End_of_the_Flat_Tax_ Experiment_in_Slovakia
9. *Hungary's Flat Rate Personal Income Tax Rate System. Ministry for National Economy.* Retrieved on 13.02.2016 from http://www.mfa.gov.hu/NR/rdonlyres/ 68F5E85D-7062-4001-8FD87946055579B3/0/Hungaryflatratepersonalincometax.pdf
10. Hyman, D. (2010) *Public Finance: A Contemporary Application of Theory to Practice.* Cengage Learning
11. Rosen H., T. Gayer (2010). *Public Finance.* Singapore: McGraw-Hill Higher Education
12. The Economist (2007) *Flat taxes: Will More of Eastern Europe adopt flat-rate tax regimes?* January 18-th 2007. Retrieved 13.02.2016 from http://www.economist.com/node/8547343
13. "Taxes in Europe" Database. Taxation and Customs Union http://ec.europa.eu/taxation_customs/taxation/gen_info/info_docs/tax_inventory/index_en. htm

THE IMPACT OF CULTURAL HERITAGE ON SUSTAINABLE TOURISM DEVELOPMENT: THE CASE OF PERGAMON

Mirza Nesibe
Doctor of Philosophy in Tourism Management
Dokuz Eylul University, School of Foreign Languages, Izmir, Turkey
nesibecagdas@yahoo.com

ABSTRACT

Global processes; the spread of businesses, products, brand names and patterns of consumption between countries and continents can be viewed as a process of homogenisation (cf. Dicken, 2007; Kearns & Philo, 1993). Instead of homogeneity, diversity is preferred by tourism demand. Therefore, local identity and traditions of tourism destinations are very important values for the competitiveness. The impact of cultural heritage in fostering tourism is very important in planning regional and local development policies (Cuccia,Guccio, Rizzo, 2015).

Pergamon is one of the most important districts for its development at cultural tourism in Izmir, became the 999th property added to UNESCO world cultural heritage in 2014. Pergamon was founded in the 3rd century B.C. Its location in the Aegean Region, the heart of the Antique World, and at the crossroads between Europe and the Middle East destined it to be an important cultural, scientific and political centre. Pergamon and its multi-layered cultural landscape exhibit outstanding evidence of civilizations such as the Hellenistic, Roman, Byzantine and Ottoman. (UNESCO.2014)

In this study, mainly the effects of being in the World Heritage List were questionized, especially by examining tourism development of Pergamon which is the town of Turkey from the perspectives of sustainability. This article aims to discuss stakeholders' experiences regarding the contribution of UNESCO World Heritage List on sustainable tourism development. The study is based on a combination of qualitative interviews and observations. A case study approach used semi-structured interviews to collect data from purposively sampled local stakeholders. The interview questions spanned heritage awareness, local identity, cultural tourism and the contribution of UNESCO World Heritage List on sustainable tourism development.

Keywords: Cultural Heritage, Cultural Tourism, Pergamon, Sustainable Tourism Development

Full paper is not published at the Author's request

IS TURKEY BREAKING THROUGH THE MIDDLE INCOME TRAP? - AN EMPIRICAL INVESTIGATION

Mehmet Fatih Tras
Çukurova University, Turkey
mftras@cu.edu.tr

Kenan Lopcu
Çukurova University, Turkey
klopcu@cu.edu.tr

Fela Ozbey
Çukurova University, Turkey
fozbey@cu.edu.tr

ABSTRACT

The Turkish economy experienced a deep crisis in 2001, followed by implementation of a recovery program mainly designed by a well-respected Turkish economist Kemal Derviş. Despite well-targeted policies, structural reforms and promising outcomes of the recovery program, political parties forming the coalition government lost their seats in the 2002 parliamentary elections and the Justice and Development Party (AKP) came to power with a large majority. The successful program stimulated an impressive growth performance in the following years and most AKP proponents credit a large proportion of this success to AKP's single party government, giving rise to the debate as to whether single party governments are more inclined to generate growth in Turkey. The AKP wing has frequently claimed that single party governance for 14 years has led to significant economic gains in Turkey since 2002, including GDP per capita growth. In this study we attempt to unearth to what extend this argument is in line with the formal results, employing a recently introduced methodology, based on stationarity test. Additionally, the study reveals whether Turkey's economic performance in this period is sufficient to move the country out of the middle income trap. For the analysis we construct a series showing the relative position of the Turkish GDP per capita compared to a wealthy reference economy, namely the US. To this end, we evaluate the relative position of the Turkish GDP per capita for the periods before and after commencement of AKP governance and for the sub-periods of the AKP era between 2002 and 2015. Our findings show that the Turkish economy improved significantly under the single party government in the first two terms of the Justice and Development Party between 2002 and 2011. However, this inclination in performance appears to have lost momentum in recent years.
Keywords: Middle Income Trap, Single Party Governments, Turkey, Unit Root Tests

1. INTRODUCTION

The Turkish economy experienced severe fluctuations during the last four decades. One of the most drastic crash downs in this period was liquidity crisis in 2000, which emerged 12 months after launching a stabilization program assisted by International Monetary Fund (IMF) and caused net foreign exchange outflow of US$ 6.4 billion and skyrocketing overnight interest rates such as 1,700% (Alper, 2001). After this deep depression a well-respected Turkish economist Kemal Derviş was invited by then the Government to design a recovery program to get back Turkish economy on its feet. Despite well-targeted policies, structural reforms and promising intermediate outcomes of the recovery program, political parties forming the coalition government lost their seats in the 2002 parliamentary elections and the AKP came to power with a majority. In the following years, Kemal Derviş's "Transition to a Strong Economy

Program" achieved a high success and this success was mostly perceived as a consequence of AKP's economic policies. Since then, this argument has been frequently expressed by the AKP officials. The officials' belief in the nexus between single party government and economic growth was so strong that in 2011 general elections the AKP election campaign's slogan was "let the stability continue, let Turkey grow". Therefore, this argument of AKP proponents gave rise to the debate as to whether single party governments are more inclined to generate growth in Turkey. Others, on the other hand, including the prominent Turkish economist Daron Acemoğlu point out that Turkish economy underwent a series of growth-enhancing reforms following the 2001 financial crisis while the Turkish democracy was deepening under the prodding and guidance of European Union and experiencing a widening and effective political participation. However, Turkish growth experienced a turning point around 2007 as the Turkey-European Union relations collapsed and checks and balances against the domination of the ruling party eradicated. As a result, political dynamics worked in reversal and paved the way for institutional fallback that is responsible for a lower quality growth in Turkey circa 2007 (Acemoglu and Ucer, 2015).

Middle income trap (MIT) can be defined as steadiness in Gross National Income (GNI) per capita in a given county. Needless to say, income levels of all countries in the world are important to decide whether a country is in the middle income trap (MIT). With the latest figures, the World Bank determines the income group bounds in terms of GNI per capita as $1,045 or less for low-income, $1,046 and $4,125 for lower middle-income, $4,126 and $12,745 for upper middle-income and $12,736 or more for high-income countries. Given the income intervals defined by the World Bank, Turkey falls into upper middle income group countries with its $10,830 GNI per capita in 2014 and seems to struggle to enter the high income countries' groups.
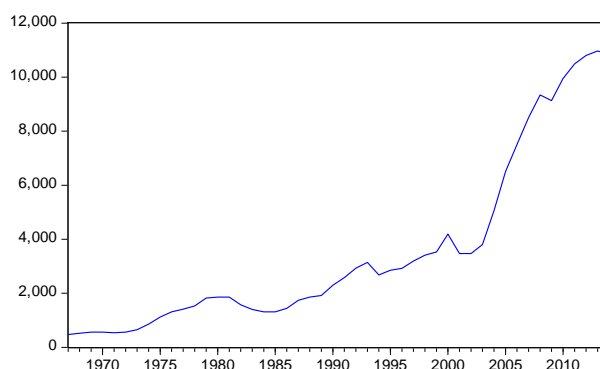
Figure 1 Turkish GNI Per Capita for 1967-2014 (Source: The World Bank, 2016)

In Figure 1 Turkish GNI per capita for the period 1967-2014 is presented. It can be seen that Turkish GNI per capita witnessed a notable surge starting from 2002 and reached a peak of $10,970 in 2013. Although a substantial improvement in Turkish per capita income after 2002 is observed (see Figure 1), if one investigates the per capita income in comparison to that of the US, the improvement is only modest (see Figure 2).

Figure following on the next page
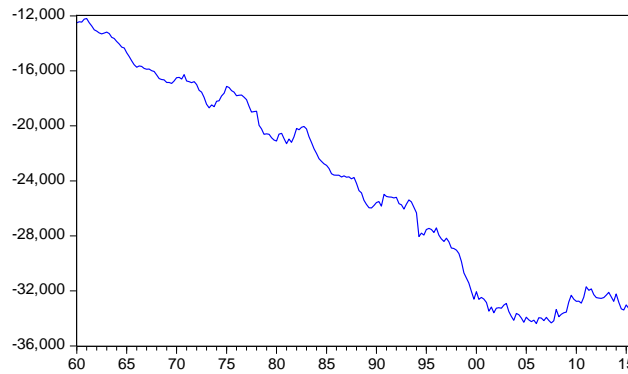
Figure 2 Income differences, Turkey-US

This study aims to reveal two aspects of the Turkish economy. On the one hand, we aim to investigate the relevance of the frequently used argument by the AKP proponents and government officials, stressing that single party government is a must for a stable economy and Turkey has benefited a great deal from the 14 year long AKP reign. On the other hand, we intend to unearth whether Turkey is breaking through the middle income trap, by investigating the period from 1960 onward, as well focussing on different periods of AKP reign in order to identify whether Turkish economy was closer to leap forward into high income economies.

2. INVESTIGATING MIT AND PERFORMANCE OF AKP

Following Ye and Robertson (2015), we employ an empirical methodology based on stationarity tests, allowing us to investigate whether Turkey is breaking through MIT and determine the validity of the AKP's argument. First and foremost, evaluating relative GDP per capita level of a country requires selection of a reference country. As mentioned in Ye and Robertson (2015), The United States (the US) has an economy growing at a rate the world technology frontier grows, therefore we also use the US as the reference country. In this framework, we focus on the characteristics of the series y_t defined as

$$y_t = \ln(x_{TUR,t}) - \ln(x_{US,t}) \tag{1}$$

where $x_{TUR,t}$ and $x_{US,t}$ denote Turkish and the US' seasonally adjusted GDP per capita in fixed PPPs, respectively. For a country to be classified as in MIT, the following conditions must be met,

$$\lim_{k \to \infty} E(y_{t+k}|I_t) = \bar{y} \tag{2}$$

$$x_{r,t}^l - x_{r,t} \leq \bar{y} \leq x_{r,t}^u - x_{r,t} \tag{3}$$

Here I_t shows information set available at the time t, $\bar{y}$ denotes a negative constant, $x_{r,t}^l$ and $x_{r,t}^u$ are the per capita income bounds defining the middle income range. Middle income is defined as the middle 40% of the countries ranked based on their \$PPP GDP per capita (Heston et al., 2012). As Ye and Robertson (2015) points out per capita GDP of countries classified as in the middle income range corresponds between 8 - 36% of the US per capita GDP.

A negative constant condition in equation (2) is necessary since a zero $\bar{y}$ would imply that GDP per capita levels of two countries are equal. In other words, a negative $\bar{y}$ combined with a stationary y_t means that the country may be in MIT. This condition may not be valid if the series y_t contains a deterministic or stochastic trend. To investigate the presence of deterministic and stochastic trend, we need to use the appropriate unit root tests, e.g. two larger

models of the Augmented Dickey Fuller (ADF) test, because if the GDP per capita difference is generated by a pure random walk process with zero initial condition, a level difference in per capita incomes cannot be observed. More specifically, to test the presence of deterministic and stochastic trend, we consider the following ADF and KPSS tests

$$\Delta(y_t) = \mu + \beta t + \alpha(y_{t-1}) + \sum_{j=1}^{k} c_j \Delta\left(y_{t-j}\right) + \varepsilon_t \qquad \text{(ADF-Model A)}$$

$$\Delta(y_t) = \mu + \alpha(y_{t-1}) + \sum_{j=1}^{k} c_j \Delta\left(y_{t-j}\right) + \varepsilon_t \qquad \text{(ADF-Model B)}$$

$$y_t = \beta t + r_t + \varepsilon_t \qquad\qquad\qquad\qquad \text{(KPSS-Model A)}$$

$$y_t = r_t + \varepsilon_t \qquad\qquad\qquad\qquad\qquad \text{(KPSS-Model B)}$$

where $r_t = r_{t-1} + u_t$, $\varepsilon_t \sim$ i.i.d. $(0, \sigma_\varepsilon^2)$ and $u_t \sim$ i.i.d. $(0, \sigma_u^2)$. If the series contain a stochastic trend this would separate two countries. In the absence of stochastic trend, if the series contain a positive deterministic trend, then the country is leaping forward to high income band. If the deterministic trend is negative, then the country is approaching the low income band. In the absence of both the stochastic and deterministic trends the direction of the movement is specified by the size of the constant and the autoregressive term.

Our data set covers the period 1960Q1-2015Q3. The data set used in this study comes from various sources. Turkish and the US GDP[1] per capita series are calculated by the authors using GDP per capita in fixed PPPs series extracted from OECD database and population figures gathered from Penn World Tables 8.1, Turkish Statistical Institute and the United States Census Bureau. In the analysis besides using the full sample we also specifically focus on the period under AKP governance of 2002Q4-2015Q3 and the three sub-periods of AKP governance, namely, 2002Q4-2007Q3, 2007Q3-2011Q2 and 2011Q2-2015Q3. The series used in the analysis are given in Figure 3.

Figure following on the next page

---

[1] Gross domestic product - expenditure approach. VPVOBARSA: US dollars, volume estimates, fixed PPPs, OECD reference year (2010), annual levels, seasonally adjusted. https://stats.oecd.org/index.aspx?queryid=350 (Accessed February 16, 2016)
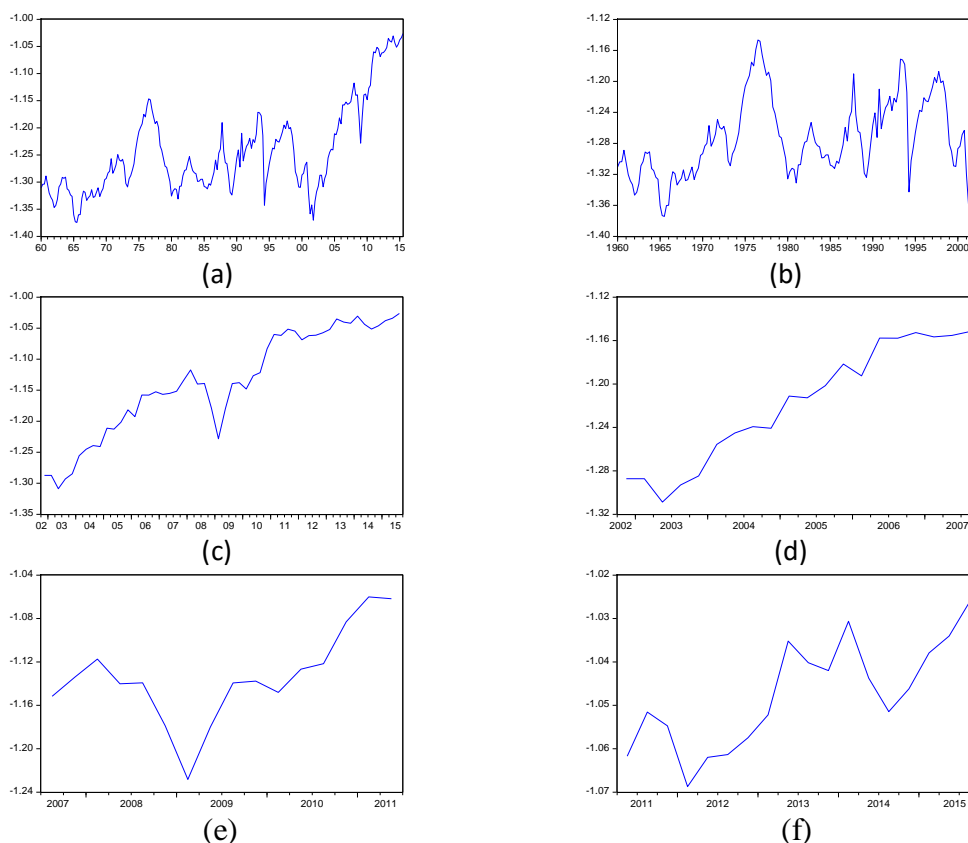
Figure 3 Series used in the analysis

Furthermore, critical values used to infer about the significance of the autoregressive parameter α in the ADF test are calculated based on MacKinnon (2010) for the sample sizes smaller than 20. The specification in Model A is the most general. If the trend coefficient is insignificant and/or very small and economically negligible, then Model B would be of particular interest in deciding whether the countries focused are in MIT (Ye and Robertson, 2015). All the unit root test results are provided in the Appendix. To give an idea on the overall picture, we start with investigating the pre-AKP and AKP periods together, namely the period of 1960-2015, using the ADF and KPSS unit root tests. According to ADF test results in Table A1, we cannot reject the null of unit root in both models for the period 1960-2015. Besides, ϕ tests for the significance of trend and constant under the existence of unit root in the income differences reveal that both deterministic components are not significant. Further, KPSS test results are in parallel with that of ADF, as the null of stationary can be rejected at 1% and 5% significance levels in Model A and Model B, respectively. For the period 1960-2002, the ADF test results for Model B show that the null of unit root can be rejected at 10% significance level. In addition, because the mean of series is about 28% - far below from the 36% threshold, it can be stated that Turkey suffered from MIT through this period. Broadly speaking, for the pre AKP reign, AKP period as whole and the sub-periods of AKP governance, we obtain similar results using ADF tests. However, using KPSS tests with constant and linear trend (Model A) for the periods 2002-2015, 2002-2007, 2011-2015 we cannot reject the null of stationarity at all conventional significance levels, signaling a possible leap forward for Turkey from MIT and even a possible catch-up with the leading economy.

166

In exact terms, if the time series properties of income differences were the same, time that would have been needed to reach, for example, the 50% of the US per capita income in a particular period might be calculated as follows:

$$\frac{\ln(0.5) - r}{\beta} = T, \tag{4}$$

where r is the constant term, β is the coefficient of trend in the KPSS test of Model A and T is the time needed to reach the 50% of the US per capita income. Despite the trends in all models are positive, some of the values are pretty close to zero indicating a need for a long time to move out of the MIT or possibly being stuck there, evidence against AKP arguments. The number of years required to catch-up 50% of the US per capita income for the trend stationary series according to KPSS test are provided in Table 1. For 2007-2011 period with constant (Model B), we cannot reject the null of stationarity at 5 and 10% level, signaling that the country is a potential candidate for MIT.

Table 1 Number of years required to catch-up 50% of the US per capita income-Model A

Periods	T (in years)	Year for reaching 50% of the US per capita income
1960-2015	184	2144
2002-2015	28	2030
2002-2007	17	2019
2011-2015	52	2063

In Table 1 it can be seen that Turkish per capita GDP performed remarkably well under the first AKP term of 2002-2007, as the number of years which have been required to reach 50% of the US per capita GDP level is only 17 years, if the series properties had been the same. Acemoglu and Ucar (2015) stress that the high performance in Turkish per capita GDP in 2002-2007 period is stemmed from (i) implementation of radical structural reforms assisted by IMF and the World Bank after 2001 financial crisis, (ii) overseeing the structural reforms introduced by the previous care-taking government and ending the dominance of Turkish Military over politics by the single party government, (iii) anchoring Turkey to the European Union throughout reactivating institutional structure between the two parties. However, it can be stated that this tendency was not sustained in the post-2007 era, illustrated by the 52 years required to reach 50% of the US per capita GDP level and the momentum in Turkish per capita GDP came to a sharp end. This stagnation can be attributed directly to the declining total private investment and the investment in machinery and equipment, a likely product of reversing climate in the political participation and the institutional slide[2].

3. CONCLUSION
In this study we investigate whether Turkey is breaking through the middle income trap and scrutinize AKP claims that Turkey has benefitted a great deal from AKP's 14 year long single party government, by investigating the time series properties of the income differences between Turkey and the US.

---

[2]In particularly Acemoglu and Ucar (2015) point out that from about 2007 and onwards Turkish political institutions and freedoms are deteriorating in terms of judiciary independence, press freedom, and the autonomy of regulatory agencies. Among these are Public Procurement Authority, Banking Regulatory and Supervision Agency and the Competition Authority.

Our findings show that Turkey exhibits the symptoms of middle income trap between1960-2002. Besides, given the span of data and the econometric methodology employed, we find that Turkish per capita GDP in 2002-2007 period exhibited an impressive performance. This period corresponds to AKP's first governance term and the remarkable economic performance in this period is the AKP's fundamental basis for claiming that single party governments in Turkey are more growth-enhancing. However, this also the period immediately following the introduction of radical structural reforms such as granting independence to the Central Bank and establishment and/or strengthening of autonomous regulatory agencies by the previous care-taking government.

Turning to 2011-2015 period, results show that the performance of the Turkish per capita GDP relative to that of the US ran out of steam. This weakness is evident in the reduced and low-quality growth rates of 2.366% per annum in per capita terms GDP growth, less than half the performance of 2002-2007 period. These two contrasting performances are likely to be the direct result of differences in private investment, particularly in machinery and equipment investment. Specifically, share of private sector investment in GDP almost doubled from 12% to 22% of GDP from 2002 to 2007, while it decreased from 22% to 19% of GDP between 2011 and 2015, claimed to linked to the reversal of political dynamics after 2007 (see footnote 1).

Hence, evidence illustrates that single party governments are not necessarily more growth-enhancing in Turkey. If single party governments were the sole creditors of 2002-2007 performance, the same performance should have been continued in the following periods as the incumbent ruling party continued to reign in the following periods.

LITERATURE

1. Acemoglu, D. and Ucer, M. (2015). The Ups and Downs of Turkish Growth, 2002-2015: Political Dynamics, the European Union and the Institutional Slide. *National Bureau of Economic Research.* (Working Paper No. 21608).
2. Alper, C. E. (2001). The Turkish Liquidity Crisis of 2000: What Went Wrong. *Russian & East European Finance And Trade*, 37(6), 58-80.
3. Heston, A., Summers, R., & Aten, B. (2012). Penn World Table Version 7.1, Center for International Comparisons of Production, Income and Prices. Philadelphia: University of Pennsylvania.
4. MacKinnon, J. G. (2010). Critical values for cointegration tests (No. 1227). Queen's Economics Department Working Paper.
5. The World Bank, Data, Retrieved 11.03.2016 from http://data.worldbank.org/about/country-and-lending-groups.
6. Ye, L., & Robertson, P. E. (2015). On the Existence of a Middle-Income Trap. Retrieved 13.03.2016 from https://www.researchgate.net/profile/Peter_Robertson3/publication/256050484_On_the_Existence_of_a_Middle_Income_Trap/links/55de944e08ae45e825d3a173.pdf

Appendix following on the next page

APPENDIX

Table A1 ADF/ KPSS test results of per capita GDP log-differences for the period 1960-2015

			ADF Test		KPSS
		k	τ Test	ϕ Test	LM Test
Model A	Test Statistics	0	-2.116872	2.614380	0.189517**
	Critical Values				
	1%		-3.999930	8.34	0.216000
	5%		-3.430196	6.30	0.146000
	10%		-3.138663	5.36	0.119000
Model B	Test Statistics	0	-0.968776	0.914929	1.018220***
	Critical Values				
	1%		-3.459762	6.47	0.739000
	5%		-2.874376	4.61	0.463000
	10%		-2.573687	3.79	0.347000

Table A2 ADF/ KPSS test results of per capita GDP log-differences for the period 1960-2002

			ADF Test		KPSS
		k	t Test	ϕ Test	LM Test
Model A	Test Statistics	0	-2.725207	3.816256	0.122106*
	Critical Values				
	1%		-4.012944	8.73	0.216000
	5%		-3.436475	6.49	0.146000
	10%		-3.142358	5.47	0.119000
Model B	Test Statistics	0	-2.719921*	3.699038	0.365923*
	Critical Values				
	1%		-3.468980	6.70	0.739000
	5%		-2.878413	4.71	0.463000
	10%		-2.575844	3.86	0.347000

Table A3 ADF/ KPSS test results of per capita GDP log-differences for the period 2002-2015

			ADF Test		KPSS
		k	t Test	ϕ Test	LM Test
Model A	Test Statistics	0	-2.396154	3.018360	0.087319
	Critical Values				
	1%		-4.148465	9.31	0.216000
	5%		-3.500495	6.73	0.146000
	10%		-3.179617	5.61	0.119000
Model B	Test Statistics	0	-1.250481	2.867996	0.909129***
	Critical Values				
	1%		-3.565430	7.06	0.739000
	5%		-2.919952	4.86	0.463000
	10%		-2.597905	3.94	0.347000

Table A4 ADF/ KPSS test results of per capita GDP log-differences for the period 2002-2007

			ADF Test		KPSS
		k	t Test	ϕ Test	LM Test
Model A	Test Statistics	0	-2.805598	3.937230	0.112926
	Critical Values				
	1%		-4.53355	10.61	0.216000
	5%		-3.67361	7.24	0.146000
	10%		-3.27726	5.91	0.119000
Model B	Test Statistics	1	-0.578946	3.445809	0.582178**
	Critical Values				
	1%		-3.85907	7.88	0.739000
	5%		-3.04204	5.18	0.463000
	10%		-2.66090	4.12	0.347000

Table A5 ADF/ KPSS test results of per capita GDP log-differences for the period 2007-2011

			ADF Test		**KPSS**
		k	t Test	ϕ Test	LM Test
Model A	Test Statistics	0	-1.296504	1.294030	0.145821*
	Critical Values				
	1%		-4.72806	10.61	0.216000
	5%		-3.75719	7.24	0.146000
	10%		-3.32349	5.91	0.119000
Model B	Test Statistics	0	-0.692565	0.565021	0.329876
	Critical Values				
	1%		-3.96444	7.88	0.739000
	5%		-3.08490	5.18	0.463000
	10%		-2.68181	4.12	0.347000

Table A6 ADF/ KPSS test results of per capita GDP log-differences for the period 2011-2015

			ADF Test		**KPSS**
		k	t Test	ϕ Test	LM Test
Model A	Test Statistics	0	-2.316521	2.770360	0.068513
	Critical Values				
	1%		-4.61697	10.61	0.216000
	5%		-3.70966	7.24	0.146000
	10%		-3.29728	5.91	0.119000
Model B	Test Statistics	0	-1.178241	1.210335	0.545987**
	Critical Values				
	1%		-4.61697	7.88	0.739000
	5%		-3.70966	5.18	0.463000
	10%		-3.29728	4.12	0.347000

PROMOTING SUSTAINABLE CONSUMPTION THROUGH HIGHER EDUCATION

Kristina Afric Rakitovac
Juraj Dobrila University of Pula
Faculty of Economics and Tourism
"Dr. Mijo Mirković" Pula, Croatia
kafric@unipu.hr

Matea Tadic
Regional Development Agency of Pozega-Slavonia County — PANORA Ltd.
Pozega, Croatia
matea.tadic@pszupanija.hr

ABSTRACT

The first decades of the 21 century have been considerably marked with the immense need for changing the harm and injustice that has been brought upon the natural and social order in the world. Unsustainable production and consumption, the need for more luxury and wealth have resulted in different social inequalities, the pollution of the ecosystem, the unsustainable exploitation of natural resources, which ultimately endangers human existence. The time has come for a different, more sustainable approach in the production of goods and services, as well as in their consumption.

The aim of the paper is to emphasise the importance of implementing the concept of sustainable consumption, for the purpose of altering unsustainable purchasing habits, and thereby directing consumers towards sustainable consumption patterns, in order to achieve social cohesion, environmental protection and economic development. For the means of attaining a better insight into the functioning and implementation of sustainable consumption when it comes to the decisions of individuals, the research was conducted on a population of university students. Despite a high level of knowledge about eco products, the results explicitly showed a relatively low level of consumption of these products, primarily due to their insufficient information on their benefits. Therefore, promoting sustainable consumption require collaboration of universities with different stakeholders: governments (at global, national, regional and local levels), business and non-governmental organisations. The higher educational system, with its keen role in moulding young minds, must make a great effort in raising awareness on the importance of sustainable consumption, in order to improve the quality of life for all.

Keywords: *sustainable consumption, consumption patterns, eco products, high education, Croatia*

1. INTRODUCTION

The world at the beginning of the 21st century is faced with many challenges related with negative social, environmental and even economic externalities of the dominant economic model. Unsustainable production and consumption have resulted in increasing social inequalities, the pollution of the ecosystem and unsustainable exploitation of natural resources, which ultimately endangers human existence. Namely, consumer behaviour directly influences the methods of production and the level of environmental awareness in the business community, and therefore unsustainable consumption patterns are no longer acceptable. The time has come for a different, more sustainable approach in the production of goods and services, as well as in their consumption, in order to foster sustainable economic development.

For this purpose, education for sustainable development plays a crucial role in influencing students' awareness regarding sustainable consumer behaviour and influencing the transition from unsustainable to sustainable consumption.

The aim of the paper is to emphasise the importance of promoting and implementing the concept of sustainable consumption through the higher education processes. The purpose of that is altering unsustainable purchasing habits, thereby directing students and other university's stakeholders towards sustainable consumption patterns. In order of attaining a better insight into the functioning and implementation of sustainable consumption when it comes to the decisions of individuals, the research was conducted on a population of university students in Croatia. The students were asked different questions related to their level of knowledge concerning the subject at hand, regarding their consumption of eco products, about the factors of restriction for using these goods, as well as questions pertaining to factors and entities that influence the consumption of eco products. Despite a high level of knowledge about eco products, the results explicitly showed a relatively low level of consumption of these products, primarily due to insufficient information on their benefits. Therefore, promoting sustainable consumption require collaboration of universities with different stakeholders: governments (at global, national, regional and local levels), business and non-governmental organisations. The higher educational system, with its keen role in moulding young minds, must make a great effort in raising awareness on the importance of sustainable consumption, in order to improve the quality of life for all.

2. TOWARDS SUSTAINABLE CONSUMPTION

Unsustainable patterns of production and consumption, especially in the last sixthly years, are creating different and often-negative long-term consequences on the quality of life of different stakeholders, jeopardising the ability of future generations to satisfy their needs. Therefore, there is an urgent need to change the fundamental paradigm of managing resources, i.e. from irresponsible, unsustainable models to those based on sustainability, responsibility and long-term perspective. As Marglin (2013, p. 153) notes, a new economy requires a new economics., i.e. the reorientation of both the demand and supply sides of growth will require a fundamentally different role of the market recognising the limits of the invisible hand resulting in different economic, social and environmental problems. "A new economy will need a broader view of economics, which goes beyond the calculating, self-interested, individual to take account of community, compassion and cosmos. A new economics should be based on a basic insight of ecological economics, namely, the fundamental interdependence of humans and the rest of nature."

The transition towards sustainable consumption depends on, inter alia, institutional changes at different levels. Sustainable consumption as a concept is closely related with the concept of sustainable production, both deriving from the concept of sustainable development. In 1992 at the United Nations Conference on Environment and Development (UNCED, 1992) the concept of sustainable consumption was proposed in chapter 4 of the Agenda 21: "Although consumption patterns are very high in certain parts of the world, the basic consumer needs of a large section of humanity are not being met. This results in excessive demands and unsustainable lifestyles among the richer segments, which place immense stress on the environment. The poorer segments, meanwhile, are unable to meet food, health care, shelter and educational needs. Changing consumption patterns will require a multipronged strategy focusing on demand, meeting the basic needs of the poor, and reducing wastage and the use of finite resources in the production process." Governments were invited, in collaboration with appropriate organizations, to strive to meet the proposed objectives through, inter alia, assisting individuals, households, private sector and educational institutions to promote sustainable production and consumption patterns.

The definition proposed by the 1994 Oslo Symposium on Sustainable Consumption defines it as "the use of goods and services that respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations". (Norwegian Ministry of the Environment, 1994) There were many initiatives on the global scale related with promoting and fostering sustainable consumption (e.g. Guidelines on Consumer Protection, UN ECOSOC, 1995; Report on Sustainable Consumption by OECD, 1997; sustainable consumption was discussed in the Human Development Report of the UN Development Programme, 1998; a Ten-Year Program on Sustainable Production and Consumption in the Plan of Implementation at the World Summit on Sustainable Development in Johannesburg, 2002). In 2012 at the UN Conference on Sustainable Development RIO+20, sustainable consumption was promoted as a part of the document "Futures as We Want" through a specific document titled "Ten Years Framework for Programmes of Sustainable Consumption and Production". There were five sectors of the program: information for consumers, sustainable lifestyles and education, sustainable public procurement, sustainable housing and building and sustainable tourism, including eco-tourism. (WEF, 2013, pp.11-12) Among 17 UN Sustainable Development Goals, as parts of the 2030 Agenda for Sustainable Development, the one directly related with sustainable consumption is the 12th: Ensure sustainable consumption and production patterns.

Croatia, although a small middle-developed country, is an active participant in the global and European processes on sustainable development already from the very beginning. In 1972 before the first UN Conference on Human Environment in Stockholm, the world's first environmental summit, Croatia has adopted a Resolution on protection of the human environment. Despite the Homeland war in which it was involved, in June 1992 immediately after the World Summit on Environment and Development in Rio de Janeiro, Croatia has adopted a Declaration on Environmental Protection showing its basically determination towards sustainable development. All educational institutions were invited to participate to its implementation. In 2009. the Sustainable Development Strategy was adopted by the Croatian parliament. *Education for sustainable development* and *Promoting sustainable production and consumption* are between its fundamental principles. *Guiding towards sustainable production and consumption* in one of eight key challenges proposed by the Strategy Croatia was intended to face with in the following ten years. Until now, there are different initiatives related with sustainable consumption: eco-labelling (e.g. EU Ecolabel, Croatian Friend of the Environment, Sustainable Hotels, etc.), green public procurement, organic-label for organic farming, energy-certifications of buildings, promoting sustainable purchasing through corporate social responsibility (CSR) index, etc.

As Pogutz and Micale note (2011, 34), despite the strong international and national commitment, new trends in corporate behaviour (corporate social responsibility, cleaner production, etc.), more than twenty years of efforts and initiatives across countries, local communities and sectors, the results are ineffective and disappointing and the conditions of the environment remains bleak. The growth in consumption has resulted with depletion in natural resources, unsustainable increases in emission trends, disappearance of millions hectares of forests, pollution of potable water and so on. The Living Planet Index (LPI), calculated by World Wide Fund, which measures trends in thousands of vertebrate species populations, shows a decline of 52 per cent between 1970 and 2010. Habitat loss and degradation, and exploitation through hunting and fishing, are the primary causes of decline. Climate change is the next most common primary threat, and is likely to put more pressure on populations in the future. (WWF, 2015, p. 16) The Ecological Footprint shows that 1.5 Earths would be required to meet the demands humanity makes on nature each year, with huge differences between developed and

developing countries (WWF, 2015, pp. 34-36). In the same period, social inequalities between inhabitants of developed and developing countries are deepening.

„As we move from the age of abundance to an era of externally enforced frugality, a new definition of sustainable consumption that fits resource-constrained development conditions is necessary, Sustainable consumption can no longer mean voluntary refraining from some of the consumption options available (which were part of an unsustainable development and waiving them was of limited effectiveness due to rebound effects), but the ability to lead to a dignified life, maintaining or enhancing quality of life despite shrinking resource availability." (Spangenberg, 2014, p. 62) The challenge should be understood and taken by different stakeholders in the society. Developed countries, as mainly responsible for the previously stated environmental degradation and social biases, are supposed to take the lead.

It is interesting to observe four stylized societal models proposed by Pogutz and Micale (2011, 44-46): *business as usual, technology driven, low affluence,* and *sustainable*. They have combined consumption intensity (as a measure of consumer behaviour) and production eco-efficiency (as the amount of environmental impact per unit of production). *Business as usual model* describes the societal models that still seek wealth through material-intensive growth and consumption. The environment is considered as an unlimited resource and environmental degradation is considered an acceptable by-product of growth. In terms of consumption, the model is dominated by a culture of quantity that measures well-being with consumerism, social class and lifestyles are defined by the ownership of material goods. *Technology driven models* are characterised by a general awareness of the problems caused by irresponsible and unsustainable growth but at the same time, a widespread confidence in technological progress as the sole means of achieving sustainable development. It typically refers to most western and industrialised countries, characterised with high standard of living and consumption, their attention to and concern for sustainability issues increasing, but not "there" yet. *Low affluence models* describe societal models of less developed countries characterised by low or very low consumption patterns and low technological development. Many basic needs (health, security, education) remain unfulfilled, environmental protection issues arte peripheral compared to economic and social needs. *Sustainable models* are characterised by growth and welfare that are not motivated by material gains and consumption of environmental resources is balanced with the carrying capacity of ecosystems. Companies are implementing the concept of corporate social responsibility in all it aspects (internal and external dimension) gaining competitive advantages, having satisfied employees and contributing to the local communities they operate in. Consumers have a key role through altering their materialistic consumption patterns and lifestyles, motivated by a growing awareness of the impact of their choices on the environment. However, the model should be more enlarged on societal issues, i.e. sustainable models should consider not only the impact on the environment, but also on the society within the whole life cycle of a particular product or service for the present and the future generations.

One of the necessary preconditions for a transition towards a sustainable societal model is a proper formal, nonformal and informal education offer to different stakeholders. The paper point out the role of higher education institutions in promoting sustainable consumption.

3. THE ROLE OF HIGHER EDUCATION IN PROMOTING SUSTAINABLE CONSUMPTION

Higher education institutions should have a very important role in the process of creation and transfer of knowledge about the necessity and urgency of the transition from unsustainable to more sustainable purchasing behaviour. Actual students will be future experts, carriers of future strategic decisions that have the potential of changing the course of management of the economy. Students, after graduation, as academic citizens, with the implantation of acquainted knowledge and skills, will influence the economic and social changes though their business and

private purchasing habits and decisions. Therefore, high education institutions have great responsibility in increasing consciousness, literacy and knowledge for creation of a more sustainable present and future.

Many documents foster higher education institutions on their road towards the creation of a more sustainable society:

- Talloires Declaration, Association of University Leaders for a Sustainable Future (1990)
- Halifax Declaration, International Association of Universities (IAU), UN University, Association of Universities and Colleges of Canada) (1991)
- The University Charter for Sustainable Development/Copernicus Charter, Association of European Universities (CRE) (1994)
- Magna Carta of European Universities (1998)
- World Declaration on Higher Education for the 21st Century: Vision and Action, UNESCO World Conference on Higher Education, Paris (1998)
- Lüneburg Declaration, GHESP partners (International Association of Universities, University Leaders for a Sustainable Future, COPERNICUS CAMPUS and UNESCO) (2001)
- Talloires Declaration On the Civic Roles and Social Responsibilities of Higher Education (2005)
- Rio+20 Treaty on Higher Education, COPERNICUS Alliance, UNUIAS and IAU (2012) (Afrić Rakitovac, K.; Žužić, A., 2014, pp. 19-20)

All stated documents indicate an increasing consensus on the role of higher education institutions in promoting sustainable behaviour in the society. Their role should not be limited just on education *on* sustainable development and sustainable consumption, but also *for* and *through* sustainable practices. Education *on* sustainable development and consumption primarily relates with the transfer of knowledge and results of scientific researches to students. Through the teaching process, universities have the opportunity and responsibility to educate future bearers of changes and creators of strategic decisions. A conditio sine qu non for that is a proper education of teachers about the concrete implementation of the concept of sustainable development and sustainable consumption into the teaching process. In conditions of constant, hardly foreseeable and quick changes, it is very important that education is based on the interdisciplinary, holistic and participatory approach implemented in all forms of higher education. Education *for* sustainable practices is related with encouraging employees and students to be proactive in their local communities, to act as responsible individuals and consumers, while education *through* sustainable practices is related with the implementation of sustainability practices in the management process of the universities (e.g. through creation and implementation of sustainability strategy by involving different stakeholders, through sustainability reports, etc.)

Heiskanen, E. et al (2014, pp. 38-41) propose to reorganise the entire knowledge utilisation process from a liner, sequential and instrumental process into a deliberative process of capacity building through knowledge co-production (i.e. joint involvement in all stages of research, policy development and use). It implies a deep and intense cooperation between researchers, policy makers of different administrative units and levels and other stakeholders. As Bitalgy, M. (2015, p. 288) notes, reorienting higher education for sustainability does not require large additional financial resources, but it requires political will of governments eager to model a cooperative approach to sustainable consumption. In that, challenging process universities should collaborate also with other external stakeholders such as business, local authorities and non-governmental organisation.

4. EMPIRICAL RESEARCH
The Aims and Hypotheses of the Conduced Research
In an effort to guide society toward sustainable consumption, the need for environmental consciousness is being recognized. The research was conducted for determining whether education for sustainable development influences an individual's awareness on the importance and benefits of sustainable consumer behaviour. In compliance, we wanted to identify the extent as to which the concept of sustainable consumption is, in fact, implemented when it comes to the consumption decisions of individuals, and which factors influence the consumption of such products. Therefore, we sought out to establish the level of environmental awareness of a student population in Istria County in Croatia, by determining their level of awareness on the importance of the term "eco products". In accordance to the above-mentioned aims, the research was based on the following hypotheses:

H1: The consumption of eco products is associated with ones understanding of the benefits of eco products.
H2: Education for sustainable development increases understanding of sustainable consumer behaviour and of the impact that certain factors and entities have in influencing sustainable consumption.

The Research Respondents and the Research Methodology
The study was carried out on a sample population consisting of a total of 285 students from the third year of the undergraduate study and first year of the graduate study attending the *Juraj Dobrila University of Pula* (the Faculty *of Economics and Tourism "Dr. Mijo Mirković"* and the Faculty of Educational Sciences) and the *Polytechnic Pula – University of Applied Sciences*. It is important to mention that the *Faculty of Economics and Tourism "Dr. Mijo Mirković"* and the *Polytechnic Pula – University of Applied Sciences* offer courses on sustainable development to their students, and will therefore be minded as higher education institutes providing education for sustainable development. The *Faculty of Educational Sciences*, on the other hand, do not offer courses on sustainable development, and will therefore be minded as higher education institutes that do not provide education for sustainable development.

The main research instrument was a questionnaire consisting of fifteen questions. The survey was carried out with the aim of determining the influence that education for sustainable development has on an individual's knowledge and awareness on the importance and benefits of sustainable consumer behaviour, as well as to evaluate their consumption habits of these products. The questionnaire was also used for identifying the limiting factors for using eco products and for determining factors and entities that influence the consumption of these goods. In this paper, the sample was considered as a whole, as a total number of respondents (285 students) who participated in the research. Statistical differences were not found in the responses of students of different gender nor different year of study; therefore, this data will not be presented. However, differences were found in the responses of students attending higher education institutes that provide education for sustainable development and those attending higher education institutes that do not provide such education, thus these responses will be presented.
Statistical analyses were performed with the use of SPSS 19.0. The data were analysed first for normal distribution and variance equality. If the data did exhibit a normal distribution and equality in variance, a parametric test was performed. On the other hand, if a normal distribution and/or equal variance was not determined, a nonparametric test was applied.

Fisher's exact test (2-sided) was applied to identify the link between:
- consumption of these products and knowledge on eco products;
- consumption of eco products and one's opinion on whether eco products are better for ones' health and environmental protection;
- consumption of eco products and one's opinion on whether higher prices of these products are justified by higher levels of quality;
- education for sustainable development and one's opinion on whether higher prices of these products are justified by higher levels of quality.

The Mann Whitney U test was used to determine the influence which education for sustainable development has on understanding the factors that influence sustainable consumption. The unpaired t test was applied in order to identify the influence that education for sustainable development has on understanding the magnitude that education institutes have on production and consumption of eco products. A p-value (2-sided) less than 0.05 was considered statistically significant. The effect size was determined according to Cohen.

The Research Results
As was expected, the results explicitly showed that the majority of respondents (96%) are familiar with the term "eco products". This implicates a high level of knowledge and awareness concerning the importance of this term amongst the students. It was very interesting to find that most of the respondents (96%) associate the term "eco products" with eco food products, whilst a small percentage of them (4%) associate the term with detergents, hair and body products, and other cosmetic products.

When questioned about the accessibility of information on eco products, 75% of the students consider them available or even extremely available, and 25% regarded them as being generally unavailable. The most common source of information concerning eco products are the television and the radio (34%), the internet (25%), and promotions held by companies that produce eco products (23%). Only 6% of the respondents learn about eco products by communicating and talking to their friends. Considering their importance as a reference group, when it comes to sharing information, forming principles and influencing consumer behaviour, it is somewhat troubling to find our respondents not sharing knowledge of eco products largely with their friends. This could very well imply a lower level of consumption of these products. Never the less, the level of consumption of eco products is substantially low; eco products are not consumed by 77% of our respondents, whereas 23% of our participants stated that they do purchase these products. The most commonly used eco goods were said to be eco food products, including bread, vegetables, fruits, biscuits, chocolate, and different kinds of nibbles. This implies an insufficient level of awareness concerning sustainable consumption, in general, and indicates that certain limiting factors are present, preventing individuals from buying such products. Using Fisher's exact test (2-sided), it was determined that the consumption of eco products is not linked to ones' knowledge on these products (p=0.074, phi=0.054). Namely, knowledge on eco products and education for sustainable development are not the sole factors influencing the consumption of eco products. Awareness on the necessity of altering production and consumption behaviour are prerequisites for establishing sustainable consumption. However, there are certain limiting factors preventing altercation in consumer behaviour. According to our respondents, the main limiting factors in the consumption of eco products are high prices, inadequate representation of these products on the market, and lack of information on eco products. In compliance, the majority of respondents stated they would increase their consumption of eco products if they had more information on them and/or if their purchasing power were to increase.

Our research results did, however, show that individuals who feel that eco products are better for one's health and the environment are more inclined to consume such products (two-sided Fisher's exact test, p=0.003, phi=0.161). The effect size is small. In order to encourage and support the consumption of eco products one must be taught of their benefits, as well as of importance of sustainable consumption and production. Therefore, education for sustainable development plays a crucial part in promoting the importance of sustainable behaviour for current and future generations, through influencing the awareness of students.

The majority of the respondents (62%) expressed that higher prices of these goods are justified by their high level of quality, whereas 38% of students do not agree. The consumption of eco products is not linked to ones' opinion on the justification of their higher prices by higher levels of quality (two-sided Fisher's exact test, p=0.312, phi=0.063). Never the less, by offering comprehension of the true value of sustainable products, through education for sustainable development, individuals will be presented with knowledge on sustainable behaviour and its importance, which can later be implemented into consumption habits. We determined that students attending different higher education institutes hold different opinions as to the justification of higher prices of these products. Students attending institutes which provide education for sustainable development feel that higher prices of eco products are justified by their high level of quality (two-sided Fisher's exact test, p<0.000, phi=0.227). The effect size is small. This implies that higher education institutes that offer sustainable development courses enable students a better understanding of the importance of sustainability and the quality that products resulting from sustainable production behold.

When asked to express their opinions on the efforts and incentives that the Croatian government is currently undertaking, in respect to the encouragement of sustainable production and consumption, only 2% of the respondents feel the Croatian government is investing sufficiently in these areas. Thus, the majority of students believe the efforts of the Croatian government to be insufficient, when it comes to promoting sustainable production and consumption. According to the views of our respondents, the Croatian government ought to invest additional resources in the production and consumption of eco products, and generally should abide more attention to the implementation of the concepts of sustainable consumption and production.

Then, we were interested in establishing the level of influence that certain factors (care for one's health; government incentives aimed at changing existing patterns of production and consumption; family upbringing; stringent legislation; education to achieve higher levels of environmental consciousness) have on increasing the production and consumption of eco products. By calculating the mean ratings of agreement, care for one's health (3,990) and education (3,923) are factors that have the greatest impact on consumption of eco products. This indicates that a majority of respondents understand and agree with the importance of education for sustainable development in promoting the consumption of eco products. However, a difference was noted between the responses of students attending different higher education institutes. Students attending higher education institutes which provide education for sustainable development present a higher level of awareness (Mean Rank=149.80) than students attending higher education institutes which do not provide such education (Mean Rank=127,26), regarding the importance of care for one's health, government incentives, family upbringing, legislation, and education on the consumption of eco products (Mann Whitney U test, p=0.033, r=0.126). The effect size is small. In other words, education for sustainable development enables a higher level of understanding of the influence that the above-mentioned factors have in promoting sustainable consumption.

In the last question we were interested in establishing the level of influence that certain entities have on increasing the production and consumption of eco products (environmental organizations and movements; public institutions; manufacturers of eco products; citizen initiatives; educational institutions). A majority of the students *agree* that environmental organizations and movements, manufacturers of eco products, educational institutes, and citizen initiatives all have an influence on increasing the production and consumption of eco products. When it comes to the impacts of public institutions, the majority of respondents stated that they *could not asses* the effect that this entity has, however a very high percentage of students also *agreed* that public institutions have an impact on increasing the production and consumption of eco products. After calculating the mean ratings of agreement for the entities, it seems the students feel that manufacturers of eco products (Mean=3,94) and environmental organizations and movements (Mean=3,71) have the grates impact on increasing the production and consumption of these products. Furthermore, when it comes to the influence of certain entities, students attending higher education institutes which provide education for sustainable development present a higher level of awareness (Mean=3.6181) than students attending higher education institutes which do not provide such education (Mean=3.349), regarding the importance that educational institutes have in promoting the production and consumption of eco products (unpaired t-test, t (285) =-2.302, p=0.022, d=0.307). The effect size is small. This indicates that education for sustainable development allows individuals to recognize the impact that educational institutes have in increasing awareness and promoting sustainable production and consumption.

6. CONCLUSION

Sustainable consumption should be promoted through all different forms of education. The learning process should be adjusted to specific needs and possibilities of different stakeholders. Higher education institutions, as educating future bearers of change, have an extremely important role in that process. In line with the objectives of the paper, two hypotheses had been defined. After analysing the gathered data, we were able to establish that both hypotheses have been proven correct. As was hypothesised, no significant statistical association was found between the consumption of eco products and ones' knowledge on these products, nor between the consumption of eco products and ones' opinion on their value for money. In other words, knowledge on eco products and ones' opinion on their value for money do not influence the consumption of these products. This is a result of different limiting factors preventing the consumption of these products, as well as of the fact that knowledge and awareness of the importance of sustainable development present prerequisites in the implementation of sustainable consumption, however they are not the only factors influencing consumer behaviour. Furthermore, a significant statistical association was noted between the consumption of eco products and ones understanding of the benefits of these products. In other words, individuals who feel that eco products are better for one's health and environmental protection are more inclined to consume these products. This clearly indicates that the first hypothesis has been proven correct. Students attending higher education institutions that offer courses on sustainable development presented statistically significant higher levels of awareness, when questioned about the justification of higher prices of eco products as a result of higher quality and when asked to assess the influence that certain factors and entities have on increasing sustainable production and consumption. In other words, education for sustainable development influences ones understanding of the value for money of eco products, enables better apprehension of factors that influence consumer behaviour and of the influence that education institutes have on production and consumption patterns. Therefore, the impact that education for sustainable development has on transferring knowledge on the importance of sustainable consumer behaviour and in providing comprehension of the influence that certain factors and

entities have on promoting sustainable production and consumption is undeniable. This undoubtedly indicates that the second hypothesis is also correct. The significance of the educational system is unmistakable and evident, in the process of informing on and promoting the consumption of eco products. Namely, the results indicate that education can have an effect on students' awareness, and therefore, bring forth a change in unsustainable consumption habits. Higher education plays a key role in informing students on the importance of sustainable consumption patterns. Educating students on the importance of sustainability is necessary, in order for them to recognize the impact their purchasing decisions have on production methods and supply, but also on future generations. Thereby, it is crucial that the importance of courses related to sustainable development (e.g. Environmental Economics, Corporate Social Responsibility, Sustainable Tourism, Sustainable Marketing, Social Economy, etc.) should be further recognized, and due to its tremendous impact, it is imperative to implement such courses in the educational programs of various universities and colleges nationwide. It is equally as important to begin with education on sustainable development from a very early age, in order to truly influence the awareness of young children and to point out the importance of sustainability. In other words, educational institutes have an obligation of passing on information on the importance of sustainable behaviour and the benefits of eco products, in order to direct individual towards the consumption thereof. Hence, the principles of sustainable development and consumption will become an integral part of their values, attitudes, thoughts, and future purchasing behaviour.

LITERATURE

1. Afrić, Rakitovac, K., Žužić, A. (2014). *Promoting Corporate Social Responsibility Through Higher Education*, in: Conference Proceedings of the 6th Conference on CSR, Croatian Business Council for Sustainable Development, pp. 15-37
2. Biltagy, M. (2015). *Education for Sustainability: Vision and Action of Higher Education for Sustainable Consumption.* International Journal of Economics and Finance; Vol. 7, No. 12, pp. 282-290. Retrieved 11.02.2016. from
   http://www.ccsenet.org/journal/index.php/ijef/article/viewFile/54417/29501
3. Dietz, R., O'Neill, D. (2013) *Enough is Enough: Building a Sustainable Economy in a World of Finite Resources*, Routledge, New York
4. Duderstadt, J. J. (1999). *The Future of Higher Education – New Roles for the 21st Century University*. Issues in Science and Technology Online. Retrieved 10.02.2016 from http://milproj.ummu.umich.edu/publications/newroles/download/newroles.pdf
5. Heiskanen, E.; Mont, O.; Power, K. (2013): *A Map Is Not a Territory – Making Research More Helpful for Sustainable Consumption Policy*, Springer Science + Business Media, New York.
6. Marglin, S.A. (2013). *Premises for a New Economy*, Development, 53(2),149-145. doi:10.1057/dev.2013.20. Retrieved 10.02.2016. from http://www.palgrave-journals.com/development/journal/v56/n2/full/dev201320a.html
7. Norwegian Ministry of the Environment (1994). *Oslo Roundtable on Sustainable Production and Consumption*. Retrieved 10.02.2016. from http://www.iisd.ca/consume/oslo000.html
8. Pogutz, S., Micale, V. (2011). *Sustainable Consumption and production. An Effort to Reconcile the Determinants of Environmental Impact*. Society and Economy, 1, pp.29-50. DOI:10.1556/Soc.Ec.33.2011.1.5

9. Spangenberg, J.H. (2014). *Institutional Change for Strong Sustainable Consumption: Sustainable Consumption and the Degrowth Economy*, Sustainability: Science, Practice &Policy. pp. 62-77. Retrieved 10.02.2016. from
https://www.researchgate.net/publication/263964767_Institutional_change_for_strong_sustainable_consumption_Sustainable_consumption_and_the_degrowth_economy

10. UN (1992). *Agenda 21*, Conference on Environment & Development, Rio de Janeiro. Retrieved 10.02.2016. from
https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf

11. WEF (2013): *Sustainable Consumption: Stakeholder Perspectives.* World Economic Forum. Davos. Retrieved 11.02.2016. from
http://www3.weforum.org/docs/WEF_ENV_SustainableConsumption_Book_2013.pdf

12. WWF (2015). *Living Planet Report 2014*, World Wide Fund, Retrieved 11.02.2016. from
http://wwf.panda.org/about_our_earth/all_publications/living_planet_report.

DOES THE RELATION BETWEEN STATE AND MARKET AFFECT THE RETIREMENT AGE? A CROSS-SECTION STUDY FOR OECD COUNTRIES

Filip Chybalski
Lodz University of Technology, Poland
filip.chybalski@p.lodz.pl

ABSTRACT
The paper discusses the very timely and important topic of retirement age. This problem seems to be crucial for contemporary pension reforms in many countries forced by deteriorating demographics. Many of them face the challenge of an increasing pensionable age, which usually meets with social resistance, although the economic reasoning for such a policy is rather obvious. However, in this study the problem of retirement age is related to pension regimes theory. The paper contributes to the literature on optimal retirement age as well as comparative studies on pension systems, including pension regimes typology. The main goal is to answer the question whether the relation between state and market in a pension system affects the statutory and effective retirement age. The results of the study generally confirm the negative relation between the involvement of the state in a pension system and the statutory as well as the effective age of retirement. The empirical study is conducted on the basis of statistical data for 30 OECD countries. The method employed is mainly based on comparative analysis of selected statistical parameters, a hypothesis test for difference between means as well as correlation analysis. The paper consists of following sections. After an initial part of an introductory character, the literature on retirement age and pension regimes typology is reviewed. Then the conceptual framework for pension regimes typology employed in the study is presented. The next section includes the empirical study. The paper ends with a short and succinct conclusion.
Keywords: Labour market, Pension, Pensionable age, Retirement, Retirement age

1. INTRODUCTION

The pension systems of many countries have undergone reforms concerning their models as well as parameters. These reforms result not only in the alteration of benefit formulas (usually defined benefit DB into defined contribution DC) or replace the pure unfunded model of a mandatory system with a mix of both an unfunded and funded one. They very often affect the more general dimension, which is the relation between the state and the market in a pension system. As far as the parameters of a pension system are concerned, one of the crucial ones is the statutory retirement age (pensionable age). The contemporary trend in this age is rather of an increasing nature, which results from the deteriorating demographics and ageing population. The involvement of the state in a pension system may obviously affect the behaviour of agents including their decision about when to retire. Therefore, the main problem discussed in this paper is the relation between the pension regime and retirement age. The pension regimes typology employed is mainly based on the relation between the state and the market in a pension system. However, I perceive this relation two-dimensionally. First, the relation between state and market refers to the relation between public and private management in a pension system. This seems to be obvious. Second, the relation between state and market is also a measure of the liberalism of a pension system and this is reflected mainly by the relation between compulsoriness and voluntariness of participation in a pension system. As far as a retirement age is concerned, I use two different types. The first one is the statutory retirement age, which means the age at which an agent is permitted to retire and receive benefits. The other is the effective retirement age, which is the actual age at which people retire. The difference between

these two retirement ages may be perceived as a measure of the effectiveness of a pension system in the sense of keeping agents economically active instead of retiring.

The main goal of this paper is to answer the question whether the relation between the state and the market in a pension system affects the statutory and effective retirement age. The method employed is mainly based on the comparative analysis of selected statistical parameters, a hypothesis test for difference between means as well as correlation analysis. In the paper, I firstly review the literature on retirement age and pension regimes typology. Then, the conceptual framework for pension regimes typology employed in the study is presented. The next section includes the empirical study. The paper ends with the short and succinct conclusion.

2. LITERATURE REVIEW

The problem of retirement timing has been discussed in literature many times, since it is perceived as one of the main problems faced by contemporary economies. Dittrich, Busch and Micheel (2011) try to answer questions concerning the willingness to work beyond the legal retirement age and the driving forces of it. They conclude, on the basis of empirical study, that the main factors encouraging people to remain economically active longer are work motivation, reflected mainly through a positive effect on self-reported work ability as well as an agent's disposition for further education. Job reward is also a stimulant for working longer, beyond the legal retirement age. Hansen and Lonstrup (2009) search for the optimal legal retirement age with the use of an OLG model with the endogenous labour supply. Their main finding is that the legal retirement age has an important welfare implication in the long-term prospect and an optimal relative (to the total length of life) legal retirement age really exists. This optimal age is characterized by decreasing distortions of the labour supply and savings from unfunded PAYG public pension schemes. Hansen and Lonstrup emphasize that their results are based on the assumption that the government is able to perfectly control when workers decide to retire. Therefore, as a possible research project to further develop their study, they indicate one relying on the autonomous decision of agents about the time of retirement. Then, many different models of pension systems could be taken into account. Other authors also studied and confirm generally that another important factor determining the decision about when to retire is the presence of unemployment in the age group near the legal retirement age (see e.g. Casamattta, Paoli 2010; Merkuryeva, 2012). Staubli and Zweimuller (2012) show in their study based on the empirical data for Austria that increasing the legal early retirement age delays retirement significantly.

Since a pension system is a mix of public and private management as well as the mandatory and voluntary participation of agents in pension schemes, the decision about when to retire is determined by government policy (statutory retirement age) on the one hand and by individual choice on the other hand (a real retirement age). Thus, the research question whether the relation between the state and the market perceived two-dimensionally - as the relation between public and private management as well as the relation between the compulsoriness and voluntariness of participation in pension schemes - influences the legal and effective retirement age seems to be fully justified. Such a question and study leading to an answer to this question need to be embedded not only in the literature referring to the issue of retirement timing but also in the literature on pension regimes. Radl (2013) discusses the problem of welfare regimes and early retirement. He refers to the famous work by Esping-Andersen (1990) who argues that the welfare state influences the timing of retirement through the combination of labour-supply and labour-demand effects. In continental Europe, conservative welfare-state intervention is dominant and early retirement has long been an element of policy supporting youth entering the labour market. In Scandinavia, representing the universalist regime, the policy is quite different and encourages older people to remain economically active longer, which results in

relatively low early exit rates. In Anglo-Saxon countries, which represent a liberal regime, high employment rates among older people are achieved by applying few early retirement incentives and by keeping the unemployment rate down on low-wage labour markets (Radl, 2013, p. 47). Radl, referring to Esping-Andersen, indicates also two main patterns of retirement. The first one is the generosity of a pension system and this affects the decision about retirement in a direct manner. The other is labour market policy, since a welfare state may shape the labour market structure and therefore alter the extent of early retirement through demand-side effects. However, this interaction is rather of an indirect character (see Radl, 2013, p. 47-48).

Esping-Andersen, aside from the welfare state regimes typology, also proposed a pension regimes typology (Esping-Andersen, 1990). His study is based mainly on the two following criteria: 1) the relationship between the state and the market in pension insurance, i.e. between the public and private sector, 2) the importance of pension privileges or privileged professional groups' share in the pension system. He proposes three pension regimes: corporatist, residual, and universalist. Esping-Andersen, although reflecting the relation between state and market in his typology, disregards the relation between the mandatory and voluntary participation in pension schemes, which may affect the decision about when to retire. Other authors try to modify or develop Esping-Andersen's typology and include other important criteria as e.g. Bismarcian vs. Beverigian roots, liberalism vs. socialism in pension provisions, public vs. social administration, social security vs. multi-pillar systems (Rhodes, Natali, 2003); and the generosity of pension systems (Borsch-Supan, 2007). A very interesting and relatively complex pensions regime typology is proposed by Soede and Vrooman (2008). They apply 34 quantitative and qualitative variables that characterize the mandatory part of different pension systems. However, they conclude that there are in fact two dimensions that differentiate pension regimes. The first is the generosity of the mandatory pension schemes and the second is the division between publicly and privately managed mandatory pension plans. Based on these two dimensions, they identify four groups of pension regimes: corporatist, liberal, modest pensions, and mandatory private. What is important in this study in the context of this paper is the reference of pension regimes to the retirement age. In the corporatist regime, where the state is dominant in a pension system, there is a relatively high pension promise which is fully provided by a PAYG scheme. The high sense of pension security ensured by the state results in relatively low employment rates among the elderly and a low early retirement age. In the case of the liberal regime, the situation is quite different. The role of the state in a pension system is limited. The market plays an important role here. The state provides rather low pension benefits and therefore agents decide to remain economically active longer, which results in a relatively high real retirement age. In the modest pensions regime, the state is dominant in the pension system and the main model is based on the PAYG formula, however pension benefits are relatively low as opposed to another regime with the domination of the state – a corporatist one. Therefore, in a modest pension regime, agents decide to work longer. Thus, retirement age in this regime is higher in comparison to the corporatist regime. In the last regime – mandatory private – the state cooperates with the market in a pension system. The retirement age and labour market participation indicators for the elderly are relatively high; however, this group of countries is rather diverse.

3. A CONCEPTUAL FRAMEWORK FOR PENSION REGIMES TYPOLOGY

My research question refers to the liberalism of a pension system, defined with the use of two dimensions. However, the first dimension is consistent with the literature and refers to public and private management in a pension system. The second dimension has been rather disregarded in the literature so far but seems to be no less important for the pension regimes typology. This is the relation between the compulsoriness and voluntariness of participation in a pension system. In such a combination of these two dimensions, perceived as the most liberal

regime is the one in which private sector plays an important role in administrating pension schemes and the mandatory participation is relatively low. On the opposite side is the most social regime in which the state plays a dominant role in a pension system and generally is the sole pension provider. Simultaneously, participation in public pension schemes is mandatory and pension contribution is relatively high.

For grouping the 30 countries studied into pension regimes, the following variables referring to the relation between public and private management as well as to the relation between compulsoriness and voluntariness in a pension system have been employed (see Marcinkiewicz, Chybalski, 2016):

X1 – the ratio between the expenditure on old-age pension provision from the mandatory public schemes, and total expenditure on old-age pensions (public and private mandatory and voluntary private). This measures the share of mandatory and publicly managed schemes in the whole pension system (OECD data from 2011);

X2 – the ratio between the expenditure on old-age pension provisions from the mandatory private schemes, and total expenditure on old-age pensions (public and private mandatory and voluntary private). This measures the share of mandatory and privately managed schemes in the whole pension system (OECD data from 2011);

X3 – the ratio between the expenditure on old-age pension provisions from the voluntary private schemes, and total expenditure on old-age pensions (public and private mandatory and voluntary private). This measures the share of privately managed voluntary schemes in the whole pension system (OECD data from 2011);

X4 – measures the contribution of a mandatory public pension system in ensuring income adequacy. It is obtained by the formula: $X4 = P1/(P1+P2+P3)$[1];

X5 - measures contribution of a mandatory private pension system in ensuring income adequacy. It is obtained by the formula: $X5 = P2/(P1+P2+P3)$;

X6 – measures the contribution of voluntary pension system in ensuring income adequacy. It is obtained by the formula: $X6 = P3/(P1+P2+P3)$;

X7 – coverage of mandatory private pension schemes by type of plan, expressed as a percentage of the working age population (15-64 years) (OECD data from 2011);

X8 – coverage of voluntary private pension schemes by type of plan, expressed as a percentage of the working age population (15-64 years), calculated as the maximum of two values: coverage of voluntary occupational schemes and coverage of voluntary personal schemes (OECD data from 2011);

X9 – the rate of public mandatory pension contribution (if it does not exist, X9=0) (OECD data from 2012);

X10 – the share of public minimum pension provision in the whole retirement income package in the mandatory system (the first and the second tier according to OECD classification). X10 contains the provision from the first tier, which serves for ensuring an absolute minimum standard of living (OECD data from 2012);

X11 – the share of public ER (earnings related) or DC provision in the whole retirement income package in the mandatory system. This contains the provision from the public part of the second tier (according to OECD classification) (OECD data from 2012);

---

[1] *P1* denotes the net pension replacement rate from the public pension system; *P2* denotes the net pension replacement rate from the mandatory private pension system; *P3* denotes the net pension replacement rate from the voluntary pension system. For all the *P1-P3* variables the net replacement rates projected for the person entering labor market in 2012 and earning an average wage, with no career breaks, were employed (according to OECD methodology).

X12 – the share of private pension provision in the whole retirement package in the mandatory system. This contains the provision from private DB and private DC schemes, thus from the private part of the second tier (OECD data from 2012).

The variable *X9* reflects the mandatory character of a pension system (regardless of whether it is publicly or privately managed). *X1, X4*, and *X11* express the importance of the mandatory and public part of a pension system. *X2, X5, X7, X12* refer to the mandatory and private character whereas *X3, X6* and *X8* to the voluntary and private character of a pension system. *X10* measures the importance of a minimum pension provision for a retirement-income package from the mandatory system. Variables *X1-X3* refer to contemporary beneficiaries whereas variables *X4-X12* to contemporary contributors since in the case of the OECD pension database, pension entitlements relate to workers entering the labour market in 2012 at age 20. Presented this way, the set of variables reflects the dynamic character of pension systems caused by permanent reforms of them. The two studied relations – public vs. private management and mandatory vs. voluntary participation in a pension system – refer not only to the contemporary beneficiaries, but also to contemporary contributors. Moreover, such an approach is also justified by the fact that a pension system includes both these groups of participants. One group pays, the other is paid (Marcinkiewicz, Chybalski, 2016).

Two following methods – hierarchical clustering and *k*-means clustering, supported by Pearson's correlation coefficient analysis allowed identification of the following pension regimes (Marcinkiewicz, Chybalski, 2016):

I regime of significant voluntary pension schemes (Canada, Ireland, New Zealand, United Kingdom, and United States),

II regime of significant mandatory participation in private schemes (Australia, Denmark, Estonia, Iceland, Israel, Netherlands, Norway, Poland, Slovak Rep., Sweden, and Switzerland),

III mandatory public regime (Austria, Belgium, Czech Rep., Finland, France, Germany, Greece, Hungary, Italy, Luxembourg, Portugal, Slovenia, Spain, and Turkey).

The I regime includes countries with pension systems with the most significant liberal character. The role of privately managed and voluntary pension schemes is important in pension security, whereas the role of the state is limited in this regime. The feature distinguishing the II regime is the important role played by privately managed and mandatory pension schemes. This regime may be perceived as an intermediate model – between a liberal and a social one. The III regime is the most social one. Here, the state plays a dominant role in providing pensions and the significance of the private sector is rather marginal.

4. THE EMPIRICAL STUDY
4.1. Methodological framework for comparative analysis and data

In the comparative study, I employ the three pension regimes typology mentioned above. However, I aggregate these regimes into two in order to distinguish mainly between two models of pension systems: first, with a significant role of the market (next to the state) and the other with the absolute domination of the state. Thus, *the state plus market pension regime* consists of the I and II regime in the previous typology. *The state pension regime* reflects the III regime in the previous typology.

I compare selected statistical parameters (means and medians) across two aggregated pension regimes in terms of statutory retirement age, average effective age of retirement as well as the difference between these two measures. Statutory (normal) retirement age (pensionable age in OECD terminology, *PA*) is the age at which people become eligible to be paid pension entitlements at normal rates. However, because of many factors, such stimulants of early retirement or stimulants of late retirement, agents can leave the labour market before or after the statutory retirement age. The indicator measuring when people actually retire is the average

effective age of retirement (*AAR*). According to OECD terminology, "the average effective age of retirement can be thought of as the average age of all persons withdrawing from the labour force in a given period, whether during the course of any particular year or over any five-year period. The average age of retirement (*AAR*) is thus simply the sum of each year of age weighted by the proportion of all withdrawals from the labour force occurring at that year of age".[2] I also study the difference between these two retirement ages: *DAR=AAR-PA*. This indicator informs how the pensionable age differs from the average effective age of retirement. *DAR*=0 means that on average, people leave the labour market at pensionable age. One can then suppose that agents are not encouraged (e.g. by the state) either to stop working before or after reaching pensionable age. *DAR*<0 may be a symptom of some factors encouraging people to leave labour market before pensionable age. *DAR*>0 suggests that there are some stimulants encouraging people to leave the labour market later than at pensionable age. I also use the mandatory public pension contribution (*PPC*) in this study, since this contribution may be perceived as the measure of compulsoriness of participation in a pension system. The higher the contribution, the greater the compulsoriness; the lower the contribution, the greater the voluntariness (and the liberalism) of a pension system. The data on pensionable age and average effective age of retirement are obtained from OECD database and refer to 2014.

4.2. Results

In Table 1 and Figure 1, *state plus market pension regime* and *state pension regime* are compared in terms of retirement ages as well as public pension contributions.

Table 1. Statistical parameters for PA, AAR and DAR across regimes

Pension regime	Statistical parameter	*AAR* male	*PA* male	*AAR* female	*PA* female	*DAR* male	*DAR* female	*PPC*
State plus market	mean	64.8	64.9	63.1	64.0	-0.1	-0.9	10.1
	median	64.8	65.0	62.8	65.0	0.0	-0.8	9.9
	standard deviation	2.1	1.3	2.6	1.9	1.5	2.3	9.2
State	mean	62.5	62.9	61.7	62.1	-0.3	-0.4	19.6
	median	62.2	62.5	60.9	61.6	-0.7	-0.8	20.0
	standard deviation	2.0	2.5	2.1	2.9	2.4	2.2	9.7

Source: own computations on the basis of OECD data

Figure following on the next page

---

[2] Cited from http://www.oecd.org/els/emp/39371923.pdf
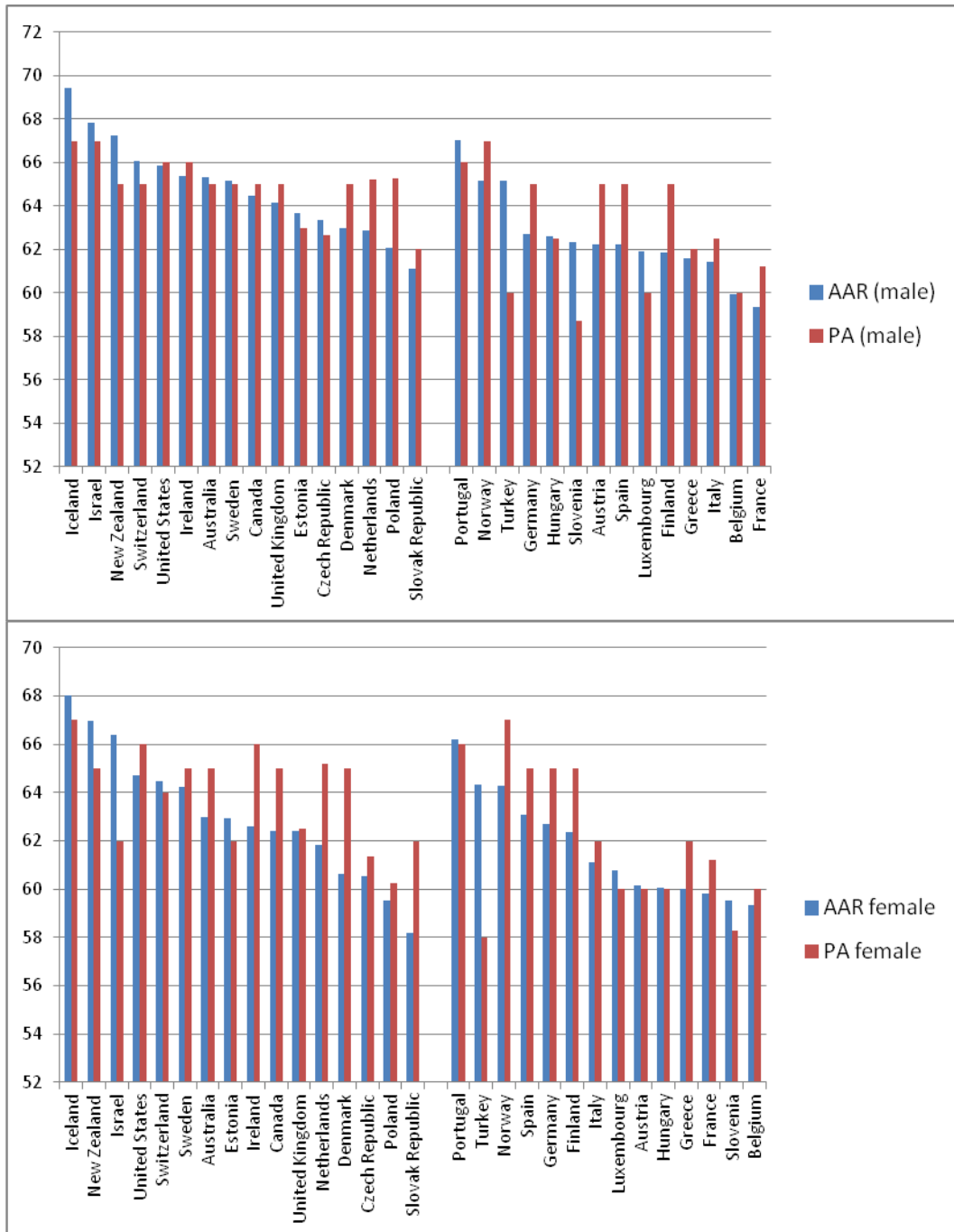
Figure 1. PA and AAR across two pension regimes
Source: own computations on the basis of OECD data

On the basis of the calculations seen in Table 1 and Figure 1, one can draw the conclusion that as far as men are concerned, in *the state plus market pension regime* the average effective age of retirement as well as pensionable age are on average two years higher than in *the state pension regime*. This refers to both statistical parameters mean and median. In the case of women, the differences between the regimes are very similar, especially in terms of pensionable age (in the case of the median, they are even greater). As far as the differences between the average effective age of retirement and pensionable age are concerned, they are generally negative for both regimes and take values from the interval [-0.9; 0]. However, in the case of *state pension regime DAR* values are very similar for both men and women, whereas in the case of *state plus market pension regime* differences across genders are significant. Men leave labour

189

market at pensionable age on average. Women retire almost one year before reaching pensionable age. Although some differences between the two regimes are observed, these regimes are very heterogeneous internally. Therefore, I also employed a hypothesis test for the difference between means. The results at the significance level of 0.05 were as follows: (1) the average effective age of retirement and pensionable age for men are greater in *the state plus market pension regime* than in *the state pension regime*; (2) in the case of women, the difference between the average effective age of retirement in both regimes is statistically insignificant, whereas the inter-regime difference in pensionable age is statistically significant (in favour of *the state plus market regime*). For $p=0.07$, all the differences are statistically significant (average effective and pensionable age are greater in *the state plus market pension regime*).

The above results suggest that a higher involvement of the state in a pension system is accompanied by a lower pensionable age and average effective age of retirement for both genders, however in the case of women the difference between the regimes in terms of the average effective age of retirement is statistically significant for $p=0.07>0.05$. This conclusion resulting from the comparative analysis of pension regimes is also confirmed by the correlation analysis between the average effective age of retirement (*AAR*) and public pension contribution (*PPC*). *PPC* may be here perceived as the measure of involvement of the state in a pension system in the sense of imposing agents to participate in (publicly or privately managed) pension schemes (see Figure 2).
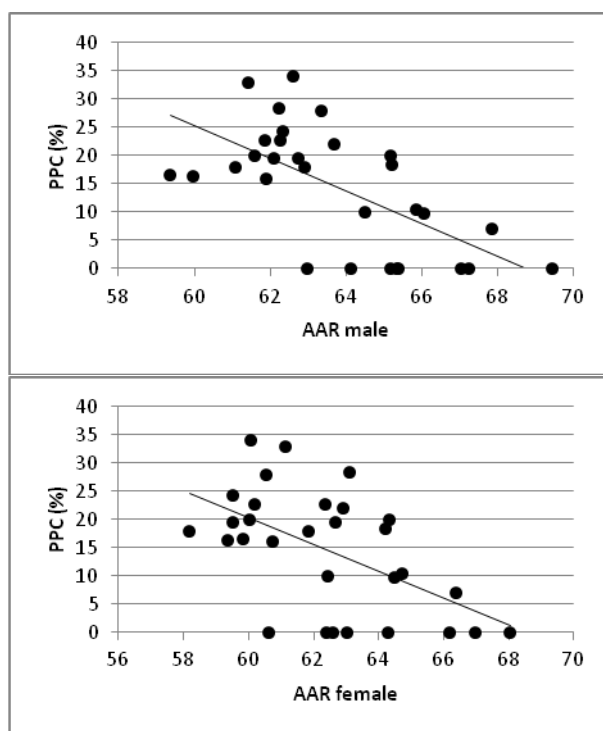
Figure 2. Correlation plots for AAR and PPC across OECD pension systems
Source: own computations on the basis of OECD data

Pearson's correlation coefficients for *AAR* and *PPC* for both genders are significant at a $p=0.05$ significance level. Therefore, one can draw a cautious conclusion that the higher the public pension contribution, the lower the average effective age of retirement. This suggests that the greater the compulsoriness of the participation in a pension system (or the greater the mandatory pension system) the lower the real age of retirement (measured by *AAR*). Pensionable age is also statistically significantly correlated with public pension contribution for both genders at $p=0.05$.

5. CONCLUSION

The empirical study conducted in the paper generally confirms that in pension regimes with a lesser role of the state agents retire later than in the most social regimes. According to Esping-Andersen's (1990) typology, the most liberal regime is a residual one and it includes e.g. United States, United Kingdom, Australia, Canada, and Switzerland. In Soede and Vrooman's (2008) typology, this regime is named liberal and includes very similar countries (United Kingdom, Ireland, Canada, United States). On the opposite side is corporatist regime in Esping-Andersen's or in Soede and Vrooman's typology and it includes Germany, France, Austria, and Belgium. Between these regimes are those which are a "good" mix of the state and market in a pension system; however, in the typology employed in this paper, this model of a pension system is classified together with the liberal one because in both of them the market plays an important role and is more or less supported by the state. Although the differences in average effective age of retirement as well as in pensionable age between *the state plus market pension regime* and *the state pension regime* are not great, they are statistically significant (in majority for $p<0.05$, and in all cases for $p<0.07$). The negative relation between the state involvement in a pension systems and the two studied retirement ages (statutory and real) are observed. Additionally, this relation is confirmed by correlation analysis. In some countries like e.g. Iceland, New Zealand, Ireland, Australia, United Kingdom or Denmark, there is not a separate public pension contribution and benefits in the mandatory public pension system are financed from taxes. These countries are examples of *the state plus market pension regime*. Only two countries in *the state pension regime* – Portugal and Norway – do not have a separate public pension contribution and they have the highest pensionable age and average effective age of retirement in this regime. Therefore, further studies could address the relation between the method of financing in a pension system (taxes vs contributions) and the retirement age.

LITERATURE

1. Borsch-Supan, A. (2007). *European welfare state regimes and their generosity towards the elderly*. MEA discussion paper series, 07128.
2. Casamatta, G. and Paoli C. (2011). Choosing the legal retirement age of unemployment. *Louvain Economic Review*. Retrieved 20.02.2016 from http://works.bepress.com/georges_casamatta/12/
3. Dittrich, D., Busch, V. and Micheel F. (2011). Working beyond retirement age in Germany: The employee's perspective. In R. Ennals, R.H. Salomon (eds.) *Older workers in a sustainable society* (p. 189-201). Frankfurt am Main: Peter Lang.
4. Esping-Andersen, G. (1990). *The Three Worlds of Welfare Capitalism*. Cambridge: Politi Press.
5. Hansen, C.W. and Lønstrup, L., 2009. *The optimal legal age in an OLG model with endogenous labour supply*, Discussion Papers on Business and Economics No. 5/2009. Odense: University of Southern Denmark.
6. Macinkiewicz, E. and Chybalski F. (2016). *A new proposal of pension regimes typology: Empirical analysis of OECD countries* [paper in review process].
7. Merkuryeva, I. (2012). *Late Career Unemployment and the Decision to Retire*. Madison: University of Wisconsin-Madison. Retrieved 10.02.206 from http://paa2013.princeton.edu/papers/130709.

8. Radl, J. (2013). *Retirement Timing and Social Stratification: A comparative Study of Labor Market Exit and Age Norms in Western Europe*. London: Versita.

9. Rhodes, M., and D. Natali. 2003. *Welfare regimes and pension reform agendas*. Paper given at the Conference 'Pension Reform in Europe: Shared Problems, Sharing Solutions', London, 5 December. Retrieved 17.02.2016 from http://www.lse.ac.uk/europeanInstitute/research/hellenicObservatory/pdf/pensions_conference/Rhodes-Pensions.pdf.

10. Soede, A. and Vrooman, C. (2008). *A comparative typology of pension regimes*. Enepri Research Report No. 54, Brussels: Centre for European Policy Studies.

11. Staubli, S. and Zweimuller, J. (2012). *Does Raising the Retirement Age Increase Employment of Older Workers?* Working Paper No. 20. Zurich: University of Zurich. Retrieved 20.02.2016 from http://webcache.googleusercontent.com/search?q=cache:sH03wd9OD5sJ:ftp.iza.org/dp5863.pdf+&cd=5&hl=pl&ct=clnk&gl=pl.

THE REQUIREMENTS AND OPPORTUNITIES FOR PROMOTION OF CROATIAN HEALTH TOURISM

Vedran Kruljac
Special Hospital for Medicinal Rehabilitation Varaždinske Toplice, Croatia
vedran.kruljac@vz.t-com.hr

Bozo Skoko
Faculty of Political Science of the University of Zagreb, Croatia
bskoko@fpzg.hr

ABSTRACT
The paper deals with the possibilities of improving the supply and promotion of health tourism in Croatia. By analyzing the goals and procedures set forth in the Action Plan for the Development of Health Tourism in the Republic of Croatia and the activities undertaken to this end so far and considering the recent achievements of the countries with the most propulsive approach to and results in the promotion of the treatment of foreign patients, this work identifies the key barriers to the development of Croatia's health tourism and Croatia as a destination that has all the possibilities to include in its rich tourism supply the health care services for foreign citizens and establish itself permanently in the international market. The suggestions for resolving the identified deficiencies, order of actions, descriptions of activities, coordination of responsibilities and the suggestion for a different approach to promotion made in this paper draw upon the Action Plan and are accompanied by concrete international examples the implementation of which should guarantee the exploitability of the rich natural, material and human resources of the Republic of Croatia in order to contribute to the global health tourism supply and visible changes on the economic map of this part of Europe and beyond.
Keywords: Croatia, health tourism, media, promotion, public relations.

1. INTRODUCTION
Development policies in many countries stimulate health tourism as a significant contribution to economic growth and diversification. In some countries it is included in business and commercial promotion and often in tourism as such; its is therefore considered as part of tourism development strategy or – like in India – as part of a strategy consolidating various types of tourism (Connell, 2011, pp. 162).

Croatia has substantial assets in this area because the specific natural qualities that its health tourism is or could be based on are evenly distributed throughout the country and the medicinal properties of its individual destinations have been known since antiquity. These are: geological formations (mountains, limestone caves, mines, medicinal sands, therapeutic oils), climate (annual insolation, temperature, humidity, air currents, seasonal changes, climate zones – Mediterranean climate, mountain climate, special microclimates), water (sea water, mineral waters, medicinal mud) and plants (forests, medicinal herbs…).

However, these natural advantages have not been exploited sufficiently for the purpose of development of Croatia's health tourism (Kušen, 2011, pp. 95). Besides, Croatia has access to Adriatic Sea with its therapeutic properties, available for health tourism 365 days a year. The country also has some rarities – even in European and global contexts – such as Naftalan near Ivanić Grad and its therapeutic oils (found only there and in Baku, Azerbaijan).

Although the development of Croatian medicinal tourism has in principle been highlighted as one of the priorities of the development of tourism supply in the past decade, too little has actually been done about it – with the exception of private sector, which has expanded the supply with its individual projects. Admittedly, a move was made when the Action Plan for

Development of Health Tourism in the Republic of Croatia ("Action Plan") was presented on 8 June 2015 as a result of the cooperation of the Ministry of Tourism, Ministry of Health and Institute for Tourism (Kruljac, 2015, pp. 312). In the Action Plan presented by the Institute for Tourism on 8 December 2014, not a lot of attention was given to the promotion of this type of tourism; however, it did mention that the promotion of health tourism primarily came down to independent efforts of individual service providers, while the promotion on national level was relatively limited (Action Plan 2014, pp. 16).

This is why this paper will review what does the Action Plan consider as adequate promotion of Croatian health tourism, how does it comply with the viewpoints of experts, and what models can Croatia implement in the appropriate branding of its health tourism.

2. PAST ACTIVITIES IN PROMOTION OF HEALTH TOURISM IN THE REPUBLIC OF CROATIA

According to the Action Plan, the reason for the lack of adequate promotion is the fact that large public medical institutions such as clinical and general hospitals or policlinics still show no interest for health tourism. In other words, Croatia's health tourism is currently mostly limited to the services provided by the growing number of specialized private health-care institutions. Current market position of health tourism in Croatia is primarily determined by individual efforts of private practitioners and private clinics to penetrate the market, affordable prices for internationally acceptable quality in several fields of medical expertise and credibility of personnel and equipment. On the national level, health tourism supply is still sporadic, inadequately diversified, relatively unorganized and indistinctive. We cannot talk about clusters organized on a specialist basis or about vertical integration and linking of various stakeholders into an integrated destination value-chain. We should add to this the lack of systematic national promotion and strong sales network of incoming agencies and specialized facilitators. This is why Croatia is still not an internationally distinctive health tourism destination. Finally, when it comes to demand, the lack of statistical analyses of this specific tourist product prevents us from establishing even an approximate number of its current users (Action Plan 2014, pp. 16).
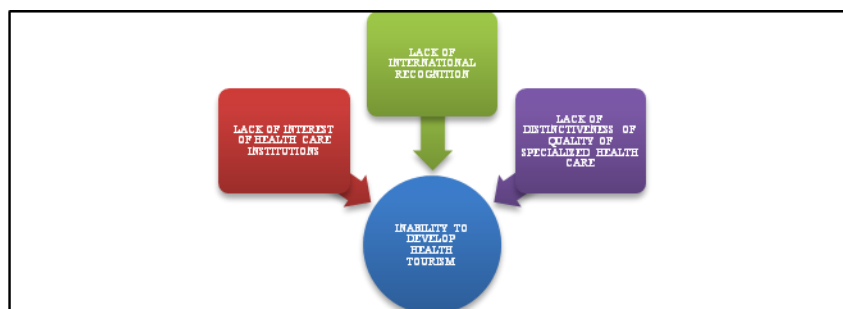
Figure 1: Barriers to the development and promotion of health tourism (Graph based on National Program – Action Plan for Development of Health Tourism 2014)

In its analysis of competing destinations, Action Plan indicates the importance of the distinctiveness of specialized health-care supply for the presentation of health tourism. Thus, it has been established that Slovenia is positioning itself as a new destination for health tourism, primarily specializing in dental medicine, orthopedics and sports medicine, while Hungary is positioning itself as "European dental medicine center", specializing also in plastic surgery, ophthalmology, orthopedics and IVF treatments (Action Plan 2014, pp. 19). Austrian private sector (public health is reserved for Austrian citizens) is focused on surgery, oncology, orthopedics and IVF and is oriented to the demand from the CEE countries and Near East. Using the European Union funds, Poland and Czech Republic have substantially improved the

quality of their medical institutions and – owing to the good perception of the quality of their medical services, prices significantly lower than in Western Europe (from 50 percent to as much as 70 percent lower) and government-stimulated promotion (Polish Health tourism Promotion Consortium and Czech Medicaltourism.cz are financed by the EU) – are positioning themselves as new European hubs for plastic surgery, dental medicine, orthopedics and IVF, targeting the patients from the US, UK, Germany and Russia. Turkey has also appeared as one of the most aggressive providers of health tourism, investing with equal intensity in facilities, quality of service and distinctiveness. Today, it has more prestigious Joint Commission International ("JCI") hospital certificates than any other European country (Turkey – 49; Austria – five; Slovenia – two). Given their resources and tradition, Romania, Bulgaria and Serbia can be considered as future competitors in the regional health tourism market, despite their still undeveloped and internationally recognized potentials. Romania has some three thousand thermal and mineral springs in around seventy health resorts, Bulgaria also abounds with mineral springs and medicinal mud centers, and Serbia has a long-established tradition of spas (Action Plan 2014, pp. 19).

Finally, based on an analysis of Croatia's regional competitors, Action Plan sees the following as preconditions for a successful promotion of its health tourism:

1. Integrated supply – Combining medicine, wellness and recreation within a single center (thermal baths);
2. Ensuring quality – Introducing national and/or international medical institution accreditation systems (e. g. Best Health Austria, ISO, DNV, JCI, ISPA, ESPA) and continued training of personnel on all levels of responsibility (e. g. Austrian BFI system and a number of health tourism management study programs);
3. Specialized sales and promotion – Web pages of service providers, national tourist boards, national marketing alliances or associations and/or specialized incoming agencies and facilitator agencies, and
4. Continued investments (Action Plan 2014, pp. 19).

3. STRATEGIES AND EXAMPLES OF SUCCESSFUL PROMOTION OF HEALTH TOURISM

The promotion of health tourism relies on informing consumers about health care services and their advantages and possibilities, acquainting them with various elements of marketing such as product, price and place and developing consumer awareness of certain products while creating their loyalty to a brand in the process. Promotion includes advertising, sales promotion, personal selling, direct marketing and public relations. In health tourism, advertising and public relations are the most frequently used methods of promotion. Advertising is a form of non-personal promotion oriented to the general public. A typical one-way communication with a consumer sends a message through various media: television, radio, press, brochures and Internet. Public relations activities include sponsoring of events and organizing charitable work (Jin, 2015, pp. 171). At that, it is important to put this segment into the context of the overall promotion of Croatian tourism. Also, promotion of health tourism has certain specific characteristics when compared with the classic marketing mix in other fields. Thus, Menvielle at al. (Menvielle et al., 2011, pp. 57) add to the four traditional Ps (product, place, price and promotion) three more Ps, specific for health tourism services; these are: physical dimension, personal contact and providing of the service. Consequently, what is important is a combination of material and immaterial dimensions of supply. Physical dimension is the first impression we get at our first encounter with some clinic or hospital (the appearance of buildings, face lifting, distinctiveness, medical aid quality…). Friendliness, kindness and expertise of the personnel,

as well as their knowledge of foreign languages, are of particular importance because they represent the emotional dimension of supply. The third segment includes the quality and price of medical services. These are also important elements in communication of health tourism since they provide additional arguments for accepting an offer – in other words, they define the level of satisfaction.

As regards the academic approach to defining health tourism promotions strategies, India has certainly done the most: a number of works that can be considered relevant for such an approach to branding of health tourism on national level have been published in the past years. Undoubtedly, India has a huge potential for becoming a consolidated branded destination of medical and wellness tourism. Participating in the branding of Indian health tourism are various experts and other stakeholders in health tourism, although the latter ones have not been included in the national marketing strategy; instead, they sell their products and/or services in the international market independently. In India, the stakeholders in health tourism do not share a common goal as those in Singapore, Malaysia, Republic of Korea and some other countries, where associations of tourist authorities, chambers of commerce, ministries of health and private organizations have been established (Bankar, 2014, https://www.linkedin.com/pulse/20140524111528-60533361-brand-positioning-strategies-of-medical-tourism-a-case-study-of-india).

The foreign patients seeking health care services in India are:

1. Persons who are not Indian residents – the treatments they receive in India are of the same quality as in their own countries, but at substantially lower prices;
2. Patients from other developing countries (Pakistan, Nepal, Bangladesh etc.) – the treatment they receive in India is of a much higher quality than in their own countries;
3. Patients with public health insurance from developed countries (Great Britain, for instance) – the waiting time in India is much shorter than in their own countries; and
4. Patients with private health insurance from developed countries (US, for instance) – the costs of treatment in India are much shorter than in their own countries (Kumar, 2009, pp. 89).
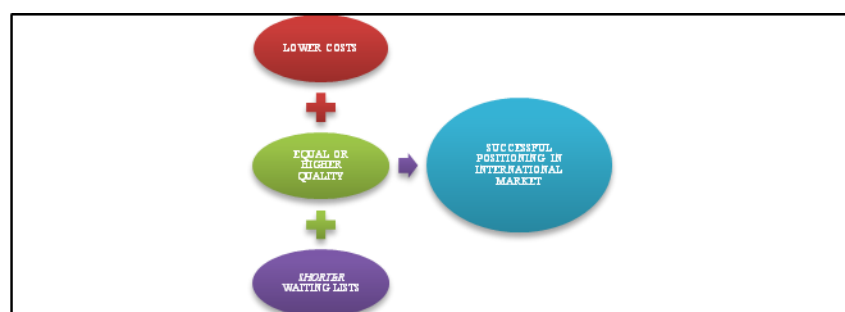
Figure 2: Factors of competitiveness of health tourism on international level (Graph based on Kumar, 2009)

Other countries have similar structure of the promotion of health tourism. Thus, the Association for Promotion of Costa Rican Health Care System consists of six health consortiums, three private hospitals, several universities and a hotel network. They are all involved in promotion of Costa Rica as a medical hub. Health tourism Chamber of Commerce in Poland brings together private stakeholders in order to promote the country's health care system. In Turkey, Ministry of Tourism and Culture promotes hospitals as eagerly as, for example, Topkapi Museum or the cavern hotel in Cappadocia. Thailand's State Tourist Administration provides

information available in Thai embassies, on its website and in its offices overseas. Cyprus has its Health Services Promotion Board and Republic of Korea has its Council for Korea Medicine Overseas Promotion (Reisman, 2010, pp. 133-134). Obviously, most medical-tourism generating countries have their respective government bodies specialized for promotion of health tourism on national level. This, however, does not affect autonomous promotional efforts of private stakeholders and – subject to their capacities – their direct contacts with international consumers.

Besides the abovementioned most expert approach to such promotion, it would seem that India has the most integrated promotion of health tourism, which has certainly contributed to the country's fast-growing success in this branch. Central for this is the portal India Healthcare Tourism.com which, using the slogan "Welcome to India, A Premier Healthcare Destination", provides a complete and easy-to-survey insight into all relevant information about India's health tourism: the most responsible persons (Prime Minister and Minister of Trade and Industry), most important information about Indian health care system, specialist treatments, locations, communications, service providers, accommodation and – particularly importantly – the *Success Stories* section, which allows patients to share their positive experience with Indian health care system and is linked to Facebook and Twitter.

Image 1: Portal India Healthcare Tourism.com
(Source: http://www.indiahealthcaretourism.com)

As probably the best known destination for the people of the third age in the world, Florida has it public-private agency Visit Florida – established by a 1996 law – that functions as the official marketing company of this state, specialized for developing programs for attracting visitors from all over the world. Aiming at development of health tourism, the contest Discover Florida Health was launched in November 2014: after the four-week evaluation by a committee made up of the representatives of Florida's Ministry of Health, Chamber of Commerce, academic community, tourist boards, tour operators, and Health tourism Association (the world's leading association for such tourism in the world), 25 prizes in a total amount of USD 3.1 million were awarded. Nine grants were given for promotion of destinations and 16 for promotion of medical facilities. Eligible for the contest were organizations for promotion of destinations and physicians and/or health care institutions with individual and/or joint projects (Visit Florida, 1 January, 2016). Although visually less attractive than its Indian counterpart, the portal that presents Czech health tourism has all the sections required for an integrated general promotion of the health tourism supply of a country: a description of Czech Republic as a health tourism destination, treatments offered, patients' stories, a list of service providers, communications and accommodation. The distinguishing feature of this portal is its online application form for medical treatments and an overview of approximate prices of treatments, allowing comparisons with the cost of identical services in other countries. As lower prices constitute the most important reason for seeking medical treatments abroad, a list of approximate prices should certainly be inevitable part of health tourism presentations of individual destinations both online and in any other format (Health Czech s.r.o, 01.01.2016).

Image 3: Portal HealthCzech.com (Source: http://www.healthczech.com/)

In 2010, Cyprus enacted its Strategy for the Organization, Development and Promotion of Health Tourism. While it does resemble to Action plan, it offers much more concrete promotion solutions than it Croatian version:

1. Ensuring stimulation of turning large hospitals and medical centers based on international standards in profitable economic subjects; quality assurance in the delivery of services provided by all stakeholders in the management of health traveler's: The ability to educate and provide information and guidance to all stakeholders concerning service delivery management based on international standards should become available.
2. Coherent approach to ensuring quality in provision of services; attracting potential capital investment in health tourism industry: In order to attract and safeguard investors willing to invest in this sector, it is necessary that all investments are made through the state, with the state being in the position of making all suitable arrangements for this transaction to take place.
3. Creating conditions for potential capital investments in health tourism;
4. Internationalizing hospital managements (using the Near East practice as a role model);
5. Continued monitoring of patients during and after therapies;
6. Developing medical facilitator activities in order to develop *one-stop-shop* packages;
7. International accreditation of hospitals;
8. Online availability of complete information on health service providers;
9. Using Internet in all other spheres enabling appropriate development of health tourism;
10. Developing accommodation infrastructure intended for foreign patients;
11. Creating a wide network of airline ticket sellers and
12. In cooperation with central authorities, introducing the highest possible flexibility of visa regime (Strategy for the Organization, Development and Promotion of Health Tourism in Cyprus, 2010, pp. 17-20).

4. POSSIBILITIES FOR IMPROVEMENT OF PROMOTION OF CROATIA'S HEALTH TOURISM

In the years to come, Croatia will necessarily enter a new phase of promotion that will require content-related, conceptual and technical changes. Now that its positioning as a Mediterranean tourist country known globally by its natural sights, clear blue sea and a thousand islands (Miličević et al., 2012) has been completed, the time has come for Croatia to tell the world a more concrete story about its overall natural, cultural, creative and all other potentials (in the context of tourism supply) and enrich its existing image of a country offering "sun and sea" with new attractions that will position it as a country of diversity and resources, where everybody – from history and classical music lovers to those who seek vitality to adventurers, gourmets and healthy life aficionados – can find something for themselves.

Consequently, promotion should become more direct and concrete and based on individual products or specificities of individual destinations, so that potential tourists could gain an

impression that it has been created particularly for them and not for everybody. In order to contribute to such an impression, a promotional message should be personalized (based on other people's experience), not general. Since Croatia is a member of the European Union that offers new possibilities in the European market, primarily in terms of drawing attention, it should necessarily present itself to its new neighbors in a more complex, direct and substantial way (while connecting its tourism promotion with other forms of promotion and public relations – health care, economy, culture and the like) and partly neutralize the existing stereotypes that mostly come down to sun, sea and war.

In terms of communication, it is necessary to exploit the huge technical possibilities (digitalization, social networks etc.) that have become available to modern tourism and complement with them the classical model based on advertising in media, participating in fairs, nurturing contacts with international media… A possibility of a completely personal approach to promotion now exists and channels and messages can be suited to fit various target groups (for example, young people from 25 to 35 years of age can be addressed via Internet and social networks and those from 55 to 65 years of age can be approached by means of public relations, using combined advertising etc.). At that, it is particularly important to keep in mind the differences between the target groups and their preferences, lifestyles, ways of communication and the media they follow. Such an approach will enable a more direct strengthening of Croatia's image and, at the same time, a more efficient linking of tourists and potential tourists with individual products and destinations. This is the only way to neutralize the negative stereotypes and associations that Croatia unfortunately still often evokes at the population with higher incomes in North European countries and make them perceive the country as an elite tourist destination, not a destination for the lower or middle classes. The promotion should particularly focus on new active consumer segments – couples of 55-65 years of age and young couples (25-35) who often travel out of season and have significantly wider motives for their travels. Additionally, part of the promotion should be focused on the programs and products outside classical summer season in order to contribute to extending Croatia's tourist season and positioning the country as a year-round tourist destination.

As we can see from the above given examples, particular stress should be made on the so-called new media because the Internet as a medium has a growing relevance for the promotion of tourism supply and tourism products. Besides speed, easy access, a large quantity of information and the possibility of a detailed analysis of the efficiency of advertising campaigns for the tourist offers of individual destinations, the Internet also boasts high price competitiveness when compared to other media. It is also a medium of the new generations. When obtaining information, planning trips, booking accommodation, buying tickets for events etc., they mostly rely on the Internet. Croatia's tourism promotion on the Internet and social networks must become more systematic, better coordinated and more functional. New communication technologies offer tourism subjects multiple possibilities for creating and promoting destination images, while providing at the same time the technical possibilities for obtaining information about services, sharing experience, booking etc. There are three key components that make this segment of promotion attractive: establishing a dialogue with visitors and potential visitors; enabling users to download information when they want to or feel the need to (unlike classical advertising in the traditional media aiming at short-term goals); and enabling multimedia communication that makes it possible to communicate with an addressee via text, image, video etc. (in other words, enabling networking of various sources of information, contents and other). Particularly important here is to offer rich contents and present them in diverse, interesting forms that can be customized for various addressees and to ensure regular updating and networking with other related sources of information. Proactive approach and timeliness must become priorities when communicating via this channel (from regular publishing of information on official websites to participating in forum discussions) and

advertising must be connected with the public relations contents and must allow direct booking and purchase. The entire website system must be much better networked (from the central portal to regions to products), so that its visitors are able to find the necessary information as soon as possible, instead of getting lost in the quantity of contents. Also, the official websites should be optimized in order to become the central information and communication points. A large majority of communication tools and public relations techniques are based on two-way communication that enables tourism subjects constant studying and understanding of the desires, needs and expectations of the public and tourists and continued development and strengthening of the relations with them.

While it may seem at first sight that only a good idea is what is required for using communication tools and techniques, the reality is completely different. The use of the tools and techniques requires prior consideration of numerous factors such as: communication goals, the population we communicate with, and the specific features of media as agents between us and target segments of the public. In other words, a research should be carried out in order to help bring visitors and potential visitors even closer to us. It is also important to develop clear and attractive messages and link them to credible sources. Preferably, public relations activities oriented to other countries and health tourism promotion activities in general should be coordinated from a single center (in order to ensure efficiency and reduce costs). To this end, it would be wise to establish a separate section of Croatian Tourist Board ("CTB") that would coordinate the public relations and promotion of the country's health tourism, continually inform international public, and also coordinate the cooperation with media and providers of such services in Croatia. In order to improve efficiency and increase the presence in international media markets, we suggest that professional public relations agencies be hired in key countries in order to strengthen Croatia's brand as a health tourism destination on the basis of the strategy and key messages. It is therefore important to ensure coordination between national communication and individual subjects in health tourism, because a foreign visitor's decision whether to accept a concrete offer or not also depends very much on the country's image and the interconnectedness of its tourism brand and health tourism.

5. CONCLUSION

In order to summarize the preconditions for the promotion of health tourism of the Republic of Croatia, three key problems hindering the development of such services in the country should first be solved in line with the regulations in force and Action Plan. The lack of interest in the development of health tourism manifested by the most relevant health care factors in Croatia should not be a problem at all if the central government imposes competition of health-care service providers by supporting financially the best rated development projects in health tourism on the basis of competing for the European Union funds and the model implemented in Discover Florida Health program described in section 3 of this paper. By using the same principle, the central government could remedy the insufficient degree of international recognition of Croatian health care institutions and the lack of distinctiveness of the specialist quality of the country's health care system by supporting – not necessarily financially – the acquiring of the international certificates already mentioned in Action Plan. Taking into account the examples of the countries with the highest growth of income from health tourism, it would be desirable to establish a specialized agency that would consolidate the activities related to health tourism currently carried out by the Institute for Health Tourism Services of the Ministry of Health and Autonomous Office for Implementation and Monitoring of Tourism Development Strategy of the Ministry of Tourism.

As far as promotion and branding are concerned, they do not have to wait for an investment boom or for the certification of a certain number of health care institutions to be implemented; such activities can begin immediately and be regularly updated in accordance with the shifts in

Croatia's development as a health tourism destination. The promotion and branding should preferably be assigned to the marketing, PR, IT and similar professionals with positive results in such and similar spheres, were they Croatian or foreign economic subjects. In this respect, while promotion at international fairs and abroad can remain within the scope of work of CTB, planning promotional campaigns, preparing promotional materials and devising Internet presentations should be assigned to professionals (who should necessarily apply to a call for proposals), prvided that all these activities be jointly coordinated by a specialized agency of the central government. At any rate, promotion should include all the factors constituting the integrated identification of health tourism destinations: a list of (approximate) prices of services, essential information on Croatian health care system and tourism supply, specialist treatments, wellness offer, gastronomy, additional programs, locations, service providers, traffic information, accommodation, information for Croatian diaspora as a possible primary target group, and patients' experience; when it comes to presentation on the Internet, it should also include the possibility of online booking for treatments and active presence on the most relevant social networks should be ensured.

A successful promotion must also be accompanied by the other activities initiated by the central government: creating conditions for potential capital investment in health tourism; internationalization of hospital managements (not only because of the lack of Croatian professionals, but also in order to increase the quality of health-care institution management); prescribing continued monitoring of patients during and after the therapy; developing medical facilitator activities in order to develop *one-stop-shop* packages; customizing accommodation infrastructure to foreign patients; creating a wide network of airline ticket sellers; and introducing the highest possible flexibility of visa regime. Attracting potential capital investment in health tourism industry: In order to attract and safeguard investors willing to invest in this sector, it is necessary that all investments are made through the state, with the state being in the position of making all suitable arrangements for this transaction to take place.

LITERATURE:
1. Bankar, <u>A</u>. P. (2014). *Brand Positioning Strategies of Medical Tourism: A case study of India*. LinkedIn, https://www.linkedin.com/pulse/20140524111528-60533361-brand-positioning-strategies-of-medical-tourism-a-case-study-of-india.
2. Connell, J. (2011). *Medical tourism*. CABI, Wallingford, Canbridge (MA/USA).
3. Health Czech s.r.o. Retrieved 01.01.2016 from <u>www.healthczech.com</u>.
4. Jin, K. N. (2015). *Marketing medical tourism in Korea*. Edward Elgar Publishing, *Handbook on Medical Tourism and Patient Mobility*, N. Lunt, D. Horsfall, J. Henefeld, Cheltenham, Northampton, 164-173.
5. Kruljac, V. (2015). *Mogućnosti za brownfield projekte zdravstvenog turizma u Hrvatskom zagorju*. Hrvatska akademija znanosti i umjetnosti, Radovi Zavoda za znanstveni rad Varaždin, 26/2015, 309-337.
6. Kumar, S. (2009). *Designing promotional strategies for medical tourism in India: A case study of an ophthalmic hospital in NCR*. Health and Population: Perspective sand Issues, Vol. 32 (2), 86-95.
7. Kušen, E. (2011). *Positioning medical tourism in the border framework of health tourism*. Tourism, Vol. 59, 1/2011, 95-99.
8. Menvielle, L, Menvielle W. and Tournois N. (2011). *Medical tourism: A decision model in a service context*. Tourism, Vol. 59, 1/2011, 47-61.
9. Miličević, K, Skoko B. and Krešić, D. (2012). *The Power of Tourism in Creating a National Brand: The Case of Croatia*. V. Richards, *Destination Branding & Marketing IV*. Cardiff: Welsh Centre for Tourism Research and Cardiff Metropolitan University.

10. Nacionalni program – Akcijski plan razvoja zdravstvenog turizma (2014). Institut za turizam.

11. Reisman, D. A. (2010). *Health Tourism: Social Welfare Through International Trade*. Edward Elgar Publishing, Cheltenham, Northampton.

12. Services export promotion council. Retrieved 01.01.2016 from www.indiahealthcaretourism.com.

13. Strategy for the Organization, Development and Promotionof Health Tourism in Cyprus (2010). Quale Vita Healthcare Consulting Ltd.

14. Visit Florida. Retrieved 01.01.2016 from www.visitfloridablog.org.

MODELLING MIGRATION FROM THE EU CANDIDATE AND POTENTIAL CANDIDATE COUNTRIES TO THE EU MEMBER STATES

Vesna Bucevska

Faculty of Economics-Skopje, University "Ss. Cyril and Methodius", Macedonia
vesna.bucevska@eccf.ukim.edu.mk

ABSTRACT

The EU candidate and potential candidate countries have a long history of economic emigration to the EU member states. However, the recent influx of refugees from North Africa, the Middle East and South Asia to Europe has raised not only the political, but also traditional economic concerns of large immigration flows. In light of the recent migration developments and the increased migration fear index among the EU member states, the purpose of our paper is to answer the question if the fear of labour migration from the EU candidate and potential candidate countries to the EU member states is justified or not. In order to achieve this objective, we examine a number of determinants of migration from the EU candidate and potential candidate countries to the EU member countries and specify and estimate an extended gravity model of migration, based on panel data analysis, for six EU candidate and potential candidate countries (Albania, Bosnia and Herzegovina, Croatia[1], Macedonia, Serbia and Turkey) and EU-27 member states in the period 2001-2014. Our results indicate that the difference in income level between the EU-27 and EU candidate and potential candidate countries, measured as real GDP per capita, the gross average monthly wages in the EU candidate and potential candidate countries and the stock of the EU candidate and potential candidate countries' nationals residing in the EU-27 member states as a share in the total population of the countries of origin are the main determinants of migration from the EU candidate and potential candidate countries to the EU-27. One of the most important finding of our analysis is that the achieved progress of the EU candidate and potential countries on their way towards full EU would have a positive, but only marginal significant impact on the emigration from these countries to the EU member states.

Keywords: EU candidate countries, EU potential candidate countries, gravity model, international migration, panel data.

1. INTRODUCTION

Since the 1990s, the EU has emerged as a top destination region of international migrants. Today one fourth of the world's international migrants are living in the EU member countries. However, the recent influx of refugees from North Africa, the Middle East and South Asia to Europe has raised concerns about the political, social and economic consequences of large population inflows (Halla et al., 2015). Major immigration policies, including the open border concept in the Schengen area, are now under threat. Fears about terrorism and crime add to traditional economic worries about the effects of large immigration flows on labour markets (Boeri et al., 2015). The Migration Fear Index for October-November 2015 is roughly three-to-four times higher than the baseline in France and the UK, and more than ten times higher in Germany (Baker et al., 2015).

On the other hand the differences in the income level between the EU candidate and potential candidate countries and the EU member states remain huge. According to Eurostat data as of December 2015 the EU member state Croatia, followed by the candidate country Turkey have the GDP level less than 50 % below the EU-28 average while the other candidate countries

---

[1] Croatia became the 28th member of the European Union on the 1st July 2013

Montenegro, Serbia, Macedonia and Albania are between 60 % and 70 % below the EU-28 average. The potential candidate country Bosnia and Herzegovina is placed at 71 % below the EU-28 average (Eurostat, 2016). This, along with the insufficient social protection in the EU candidate and potential candidate countries could create a potential pressure for labour migration from these countries to the EU member states.

In light of the recent migration developments and the increased migration fear index among the EU member states, on one hand and the huge differences in the income level between the EU candidate and potential candidate countries and the EU member states, on the other hand, the purpose of our paper is to answer the question if the fear of labor emigration from the EU candidate and potential candidate countries to the EU member states is justified or not. In order to achieve this objective, we examine a number of determinants of migration from the EU candidate and potential candidate countries to the EU member countries and specify and estimate an extended gravity model of migration, based on panel data analysis, for six EU candidate and potential candidate countries (Albania, Bosnia and Herzegovina, Croatia, Macedonia, Serbia and Turkey) and EU-27 member states in the period 2001-2014. Our results indicate that the difference in income level between the EU-27 and EU candidate and potential candidate countries, measured as real GDP per capita, the gross average monthly wages in the EU candidate and potential candidate countries and the stock of the EU candidate and potential candidate countries' nationals residing in the EU-27 member states as a share in the total population of the countries of origin are the main determinants of migration from the EU candidate and potential candidate countries to the EU-27. One of the most important finding of our analysis is that the achieved progress of the EU candidate and potential countries on their way towards full EU would have a positive, but only marginal significant impact on the emigration from these countries to the EU member states.

The rest of the paper is organized as follows. In the next section we provide a brief overview of the literature and some stylized facts regarding migration from the EU candidate and potential candidate countries to the EU member states. In Section 3 we describe the theoretical model together with its empirical specification and the data used. Estimation results are presented in section 4. Section 5 concludes.

2. MIGRATION FROM THE EU CANDIDATE AND POTENTIAL CANDIDATE COUNTRES TO THE EU - LITERATURE REVIEW AND RECENT TRENDS

From a methodological point of view there are two groups of empirical studies which try to identify the migration determinants and estimate migration potential: econometric studies which mainly use macro-analytical model based calculations, and surveys which examine conditions at micro level through surveys. Since the purpose of our paper is to specify and estimate an econometric model of migration from selected EU candidate and potential candidate countries to the EU member states, below we will review those studies that attempt to assess future labor migration with econometric models.

There are several papers that estimate econometric models to predict the migration potential of the EU candidate countries of the previous enlargement rounds. Bauer and Zimmermann (1999) estimate a log-linear model and use that model to forecast future migration flows from Central and Eastern European countries to the EU member countries. Fertig and Schmidt (2001) criticise the approach of predicting future migration flows by fitting ad hoc specifications to historical data and attempt to overcome the problem of extrapolation by using various econometric methods, such as variance components and GMM (Generalised Method of Moments) models, to estimate the migration flows that are expected to accrue to Germany from the countries of Central and Eastern Europe after EU enlargement. Bruecker (2001) estimates the migration potential of ten accession candidate countries from Eastern and East-Central Europe to EU-15 on the basis of a time series analysis of migration to Germany in the period

from 1967 to 1998. Using panel estimation techniques Zaiceva (2006) estimates the potential migration from eight EU accession countries as well as Bulgaria and Romania and finds that potential migration flows from Central and Eastern Europe will be modest. Moreover, legal introduction of free movement of workers seems not to increase migration significantly, contrary to what one might expect.

Another strand of empirical papers estimate so-called gravity models, that is, the dependent variable migration stock or net migration rates have been regressed against a set of standard macroeconomic variables (levels of GDP per capita, employment or unemployment rates etc.) as well as on the gravity variables (distance between the countries, population size etc). On the basis of such a model Orlowski et al. (2000) predict future migration pressure from ten CEECs into Austria. Hille and Straubhaar (2001) exploit Southern EU enlargement and estimate a gravity model for the period of unrestricted mobility.

The majority of the above reviewed empirical studies derive a rather modest forecast of migration flows from the EU candidate countries to the EU member states.

With respect to current migration flows to the EU member states, according to Eurostat (2016) a total of 3.4 million people immigrated to one of the EU-28 Member States during 2013. Among these 3.4 million immigrants, there were an estimated 1.7 million citizens of non-member countries. Germany reported the largest number of immigrants (692.7 thousand) in 2013, followed by the United Kingdom (526.0 thousand), France (332.6 thousand), Italy (307.5 thousand) and Spain (280.8 thousand). Relative to the size of the resident population, Luxembourg recorded the highest rates of immigration in 2013 (39 immigrants per 1 000 persons), followed by Malta (20 immigrants per 1 000 persons) and Cyprus (15 immigrants per 1 000 persons).

In Figure 1 we show the annual migration flows from the EU candidate and potential candidate countries to the EU-27 member states in the period 2007-2013. As indicated in Figure 1 the number of immigrants from Croatia, Macedonia, Serbia, Bosnia and Herzegovina and Montenegro has been increasing, and the number of migrant workers coming from Turkey and Albania has been decreasing. Among these countries the biggest rise has been recorded by Macedonia and Croatia. In 2013 compared to 2007 the number of migrant workers who emigrated from Macedonia to the EU member states has increased 2.4 times and the number of Croatian citizens who migrated to these countries has increased 2.24 times. The steepest fall of almost 70% was recorded by Albanian immigrants, followed by a decline of 13.67% of the Turkish immigrants. This decline is due to the political and economic stabilization of Albania and successfully implemented reforms in Turkey.

Figure following on the next page
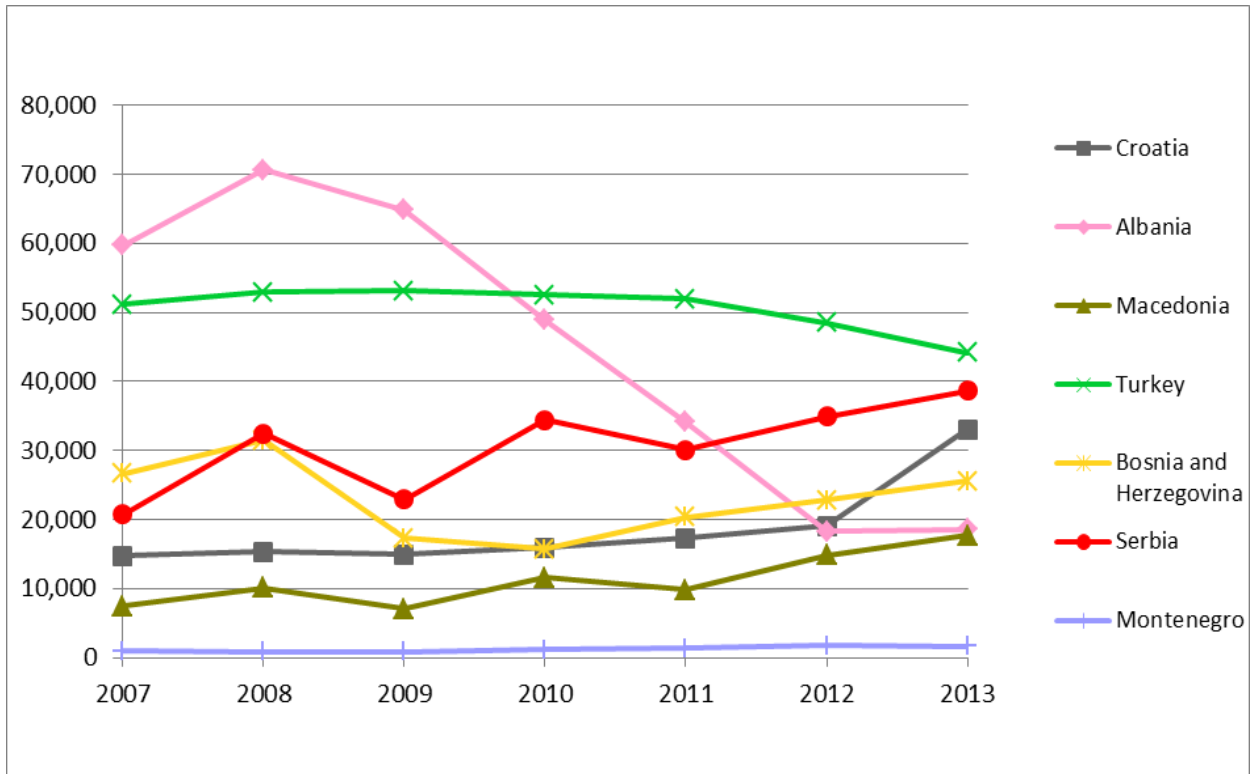
Figure 1: Annual migration flows from the EU candidate and potential candidate countries to the EU-27 member states in the period 2007-2013.

As regards the stocks of immigrants in the EU member states, which reflect longer-term migration patterns as well as more recent flows, it becomes apparent from Figure 2 that the stock of the EU candidate and potential candidate countries' nationals residing in the EU-27 remained stable in the period 2007-2013 in spite of the financial and economic crisis which hit Europe. "While the economic crisis has certainly affected migration flows, the overall effects on migrant stock have been modest or even negligible. Migration flows to the EU peaked in 2007, but the overall decline since then has not been especially marked. In some countries immigration has dropped dramatically, while in others it has remained stable or even increased. " (UK Parliament, 2012).

Figure following on the next page
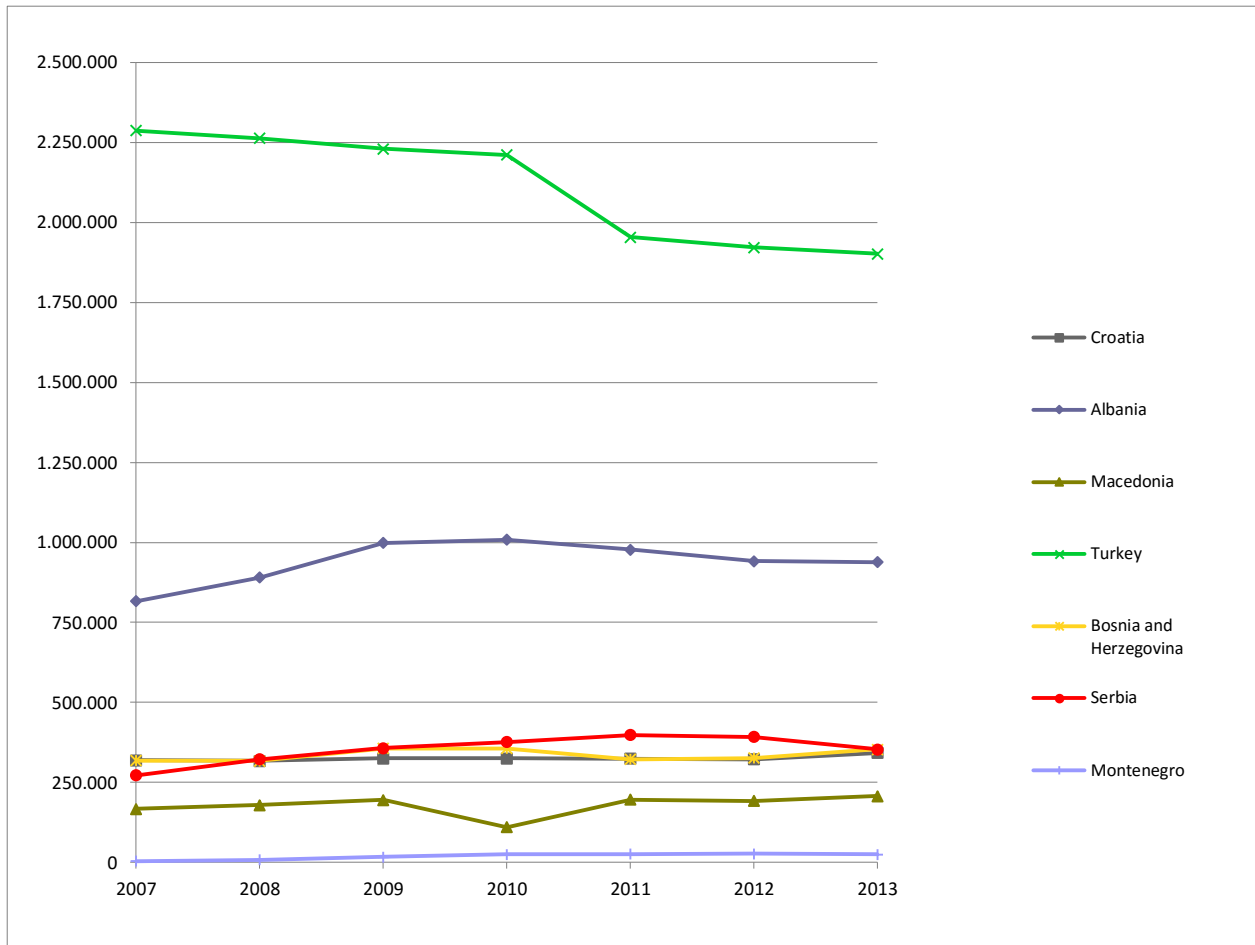
Figure 2: Stock of the EU candidate and potential candidate countries' nationals residing in the EU-27 member states in the period 2007-2013.

3. MODEL, DATA AND RESULTS

In order to estimate the migration from the EU candidate and potential candidate countries to the EU member states I specify and exploit the so-called gravity model. This model is based on the well known Newton's law about universal gravitation, according to which the attractive force between two bodies is directly related to their size and inversely related to the distance between them. In 1966 Lowry adapted the Newton's gravity model to migration study saying that the number of people moving from one to another region depends positively on the population size in each region and negatively on the distance between the two regions. In order to assess the impact of the economic variables on the migration flows, he introduced the wages and unemployment rates and suggested the following basic model:

$$M_{ij} = k \left[\frac{u_i}{u_j} \cdot \frac{w_j}{w_i} \cdot \frac{L_i L_j}{D_{ij}} \right] e_{ij}$$

$$(1)$$

where M_{ij} is the flow of migrants from region i to region j, k is a gravitational constant, u is the unemployment rate, w is the hourly wage in manufacturing sector, L is the labour force, D is the airline distance between the two regions and e is the error term. In this model the unemployment rate and the wage level play the roles of push and pull factors. An increase

(decrease) in the value of one of those variables in the region of origin/destination, relative to the value of the same variable in the destination/origin region, can discourage (encourage) migration.

The above mentioned basic model can be extended by including all the exogenous push and pull factors:

$$M_{ij} = k^{\beta_0} \frac{P_i^{\beta_1} P_j^{\beta_2}}{D_{ij}^{\beta_5}} \frac{X_j^{\beta_3}}{X_i^{\beta_4}} \qquad (2)$$

where X_i includes all the possible exogenous variables for the origin region that may act as push factors for migration while X_j includes all the exogenous variables that may pull migrants in the destination region j.

For the purpose of econometric analysis the model has to be transformed in a linear form by taking the logs of both sides of equation:

$$ln\, M_{ij} = \beta_0\, ln\, k + \beta_1\, ln\, P_i + \beta_2\, ln\, P_j + \beta_3\, ln\, X_j + \beta_4\, ln\, X_i + \beta_5\, ln\, D_{ij} \quad (3)$$

This model is known as an extended gravity model (Greenwood, 1997). For the purpose of my study, I slightly have modified the above model to the following one:

$$\ln EMIGRRATIO_{ij} = \beta_0 + \beta_1 RGDPPC_{t-1} + \beta_2 \ln WAGES_{t-1} + \beta_3 \ln STOCK_{ijt-1} + \beta_4 URCC_{t-1}$$
$$+ \beta_5 UREU27_{t-1} + \beta_6 DIST_{ij} + \beta_8 CC_i + \beta_9 AN_i + u_{ijt} \qquad (4)$$

where:
$EMIGRRATIO_{ij}$ = the gross flows of immigrants from country of origin i to country of destination j divided by the population of the country of origin i in a particular year t (t=1,2,...14);
i= 1,2,...6 is the country of origin (6 EU candidate and potential candidate countries)
j=1 denotes the destination countries (EU-27)
$RGDPPC_{i-1}$ = difference between real GDP per capita in destination countries and real GDP per capita in the country of origin i in year t-1
$WAGES_{i-1}$ = gross average monthly wages in the country of origin in year t-1
$UREU_{t-1}$ = unemployment rate in the destination countries in year t-1
$URCC_{t-1}$ = unemployment rate in the country of origin i in year t-1
$DIST_{ij}$ = aerial distance between the capital cities of the country of origin i and the country of destination j
$STOCK_{ij}$ = share of stock of immigrants from the country of origin i living in the destination country j in the total population of the country of origin in percent
CC_i = a dummy variable indicating if the country of origin i has a status of the EU candidate country (1 if it has, and 0 otherwise)
AN_i = a dummy variable indicating if the country of origin i has opened negotiations for EU membership (1 if it opened negotiations, and 0 otherwise)
u_{ijt} = an error term

The model has a log-log specification. Therefore, the estimated parameters actually represent elasticities. All variables, except dummy variables, are in logarithms. As migration decisions are based on experiences, and not on spontaneous reactions to short-term economic movements, the explanatory variables *RGDPPC, WAGES, UERCC, UEREU and STOCKS* enter the model with a lag of one year, thus avoiding the problem of simultaneity and endogeneity.

The difference in the living standard is measured by the difference between real GDP per capita in EU-27 and real GDP per capita in the countries of origin as well as by gross average monthly wages in the EU candidate and potential candidate countries. Labour market situation in the countries of destination *j* and countries of origin *i* are measured by the unemployment rates in these countries and are denoted as $UEREU_j$ and $UERCC_i$, respectively. The higher the unemployment rates in the destination countries, the more difficult it should be to migrate to these countries. On the other hand, high unemployment rates in countries of origin, especially among young people, force them to flee their countries.

The focus of the gravity model is on the geographical distance as a key determinant. It is usually measured by the aerial distance between the capital cities of two countries and serves as a proxy for the direct costs of migration (transportation costs).

In order to capture not only the economic factors, but also the "micro foundation" of migration decisions i.e. the influence of the potential migrant's individual situation on that decision, such as the existence of social network links between the country of origin and EU27, we include the explanatory variable $STOCK_{ij}$, representing the share of stock of immigrants from the country of origin *i* living in the destination country *j* in the total population of the country of origin in percent. The importance of social networks in the migration process has been documented in several studies which show that while migration is in fact initiated by economic motives, it often becomes a rather complex self-sustaining social process over the years. Otherwise, not any economically disadvantaged person will emigrate, because location specific social capital in the country of origin can have hindering effects (Haug 2000).

Finally, we add two dummy variables: *CC* and *AN*. The dummy variable *CC* indicates if the country of origin *i* has a status of the EU candidate country or not. The second dummy variable, *AN* indicates if the country of origin *i* has opened negotiations for EU membership.

Our study of the main determinants of migration from EU candidate and potential candidate countries to the EU member states has two dimensions: it involves different countries and migration has a temporal dimension. Therefore the most appropriate estimation method would be Least squares method with fixed cross section effects using panel data. Estimation results are presented in Table 1.

Table following on the next page

Table 1: Estimation results (author's own calculations)

Dependent Variable: EMIGRRATIO
Method: Panel Least Squares
Date: 02/21/16   Time: 12:55
Sample (adjusted): 2002 2013
Periods included: 12
Cross-sections included: 6
Total panel (unbalanced) observations: 69

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.817318	0.192022	-4.256380	0.0001
RGDPPC(-1)	0.001664	0.000480	3.466943	0.0010
LOG(WAGES(-1))	-0.035256	0.015336	-2.298829	0.0253
LOG(STOCK(-1))	0.075165	0.015616	4.813256	0.0000
URCC(-1)	0.000467	0.000697	0.669467	0.5060
UREU(-1)	-0.002692	0.002417	-1.113528	0.2703
CC	0.008927	0.005739	1.555484	0.1256
AN	-0.005603	0.006850	-0.817895	0.4169
DISTANCE	-3.19E-06	6.13E-06	-0.519795	0.6053

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.965768	Mean dependent var		0.100070
Adjusted R-squared	0.957677	S.D. dependent var		0.087076
S.E. of regression	0.017914	Akaike info criterion		-5.027491
Sum squared resid	0.017649	Schwarz criterion		-4.574194
Log likelihood	187.4484	Hannan-Quinn criter.		-4.847653
F-statistic	119.3618	Durbin-Watson stat		1.050766
Prob(F-statistic)	0.000000			

As we can see from Table 1, the estimated model is well fitted (96.58% of the variations of emigration ratio are explained with variables in the model and only 3.42% of the variations remain unexplained). Our results show that the difference in income level between the EU-27 and EU candidate and potential candidate countries, measured as real GDP per capita, the gross average monthly wages in EU candidate and potential candidate countries and the stock of the EU candidate and potential candidate countries' nationals residing in the EU-27 member states as a share in the total population of the countries of origin are the main determinants of migration from the EU candidate and potential candidate countries to the EU-27. All other variables are with the expected sign, but they are not statistically significant. One of the most important finding of our analysis is that the achieved progress of the EU candidate and potential countries on their way towards full EU integration would have a positive, but only marginal significant impact on the emigration from these countries to the EU member states.

4. CONSLUSION

In light of the recent migration developments and the increased migration fear index among the EU member states, the purpose of our paper is to answer the question if the fear of labour migration from the EU candidate and potential candidate countries to the EU member states is justified or not. To achieve this objective we examine a number of determinants of migration from the EU candidate and potential candidate countries to the EU member countries and specify and estimate an extended gravity model of migration, based on panel data analysis, for six EU candidate and potential candidate countries (Albania, Bosnia and Herzegovina, Croatia, Macedonia, Serbia and Turkey) and EU-27 member states in the period 2001-2014. Our findings indicate that the difference in income level between the EU-27 member states and the EU candidate and potential candidate countries, the gross average monthly wages in the EU candidate and potential candidate countries and the stock of the EU candidate and potential candidate countries' nationals residing in the EU-27 member states as a share in the total population of the countries of origin are the most significant factors driving labor migration from the EU candidate and potential candidate countries to the EU member states. All other variables are with the expected sign, but they are not statistically significant. One of the most important finding of our analysis is that the achieved progress of the EU candidate and potential countries on their way towards full EU integration would have a positive, but only marginal significant impact on the emigration from these countries to the EU member states. Based on these findings, we conclude that the fear of high immigration pressure from these countries on EU member states is not justified and could be counter-productive.

LITERATURE

1. Baker, S. R., Bloom, B. and Davis, S. J. (2015). "Immigration fears and policy uncertainty", VoxEU.org, 15 December. Retrieved 15.02.2016 from http://www.voxeu.org/article/immigration-fears-and-policy-uncertainty**.**
2. Bauer, T. and Zimmerman, K. F. (1999). "Assessment of Possible Migration Pressure and its Labour Market Impact Following EU Enlargement to Central and Eastern Europe", *IZA Research Report 3*, July, IZA Bonn, pp. 1-108.
3. Boeri, T., Phillippis, M. D., Patacchini, E. and Pellizzari, M. (2015). "Immigrants, residential concentration and employment in eight Italian cities", VoxEU.org, 24 November. Retrieved 15.02.2016 from http://www.voxeu.org/article/immigration-residential-concentration-and-employment.
4. Brücker, H. (2001). "Die Folgen der Freizügigkeit für die Ost-West-Migration. Schlussfolgerungen aus einer Zeitreihenanalyse der Migration nach Deutschland,1967-1998", *Konjunkturpolitik* 52 (Supplement), pp. 17-54.
5. Eurostat (2016). Retrieved 17..02.2016 from ec.europa.eu/eurostat/data/database
6. Fertig, M. and Schmidt, C. M. (2001). "Aggregate-Level Migration Studies as a Tool for Forecasting Future Migration Streams". In Djajic, S. (ed.), *International Migration: Trends, Policies and Economic Impact*, Routledge, pp. 110-136.
7. Greenwood, M. J.(1997). "Internal migration in developed countries", in Rosenzweig, M. R. and Stark, O. (eds.), 1997, Handbook of Population and Family Economics, vol. 1B, pp. 648- 720, Amsterdam, Elsevier.

8. Halla, M., Wagner, A. and Zweimüller, J. (2015). "Immigration and far-right voting: New evidence". VoxEU.org, 29 November. Retrieved 15.02.2016 from http://www.voxeu.org/article/immigration-and-far-right-voting-new-evidence.

9. Haug, S. (2000). "Migrationstheorien und Migrationsforschung". *Mannheimer Zentrum für Europäische Sozialforschung, Arbeitsbericht* Nr. 30. Retrieved 19.02.2016 from http://www.mzes.uni-mannheim.de/publications/wp/wp-30.pdf.

10. Hille, H. and Straubhaar, T. (2001). "The Impact of the EU Enlargement on Migration Movements and Economic Integration: Results of Recent Studies". In: OECD (ed.), *Migration Policies and EU Enlargement - The Case of Central and Eastern Europe*, OECD, Paris, pp. 79-100.

11. Orlowski, W. (2000). "Migration from central and eastern European countries after the accession: Effects for regions, labor markets, and social security systems", Research Bulletin, 2(9), Central Statistical Office, Warsaw, pp. 7-21.

12. UK Parliament (2012). "European Union Committee - Eighth Report The EU's Global Approach to Migration and Mobility" 11 December 2012, Retrieved 15.02.2016 from http://www.publications.parliament.uk/pa/ld201213/ldselect/ldeucom/91/9105.htm

13. Zaiceva, A. (2006). "Reconciling the Estimates of Potential Migration into the Enlarged European Union". *IZA Discussion Paper* No. 2519, IZA-Bonn, pp. 1-33.

FEMINISATION OF OIL-RESOURCE CRISIS IN NIGER DELTA IN NIGERIA

Victor Ojakorotu
Department of Politics & International Relations
North West University, Mafikeng, South Africa
Victor.Ojakorotu@nwu.ac.za

Olutola Oluwole Idowu
Doctoral Candidate, Department of Politics & International Relations
North West University, Mafikeng, South Africa

ABSTRACT
Oil resource crisis in the Niger Delta has taken on different dimensions which are of serious concern both to the Nigerian rental state, the Transnational Oil Corporations operating in the region, and the international system as a whole occasioned by global political economy ramifications. The question of development has been in the front burner of every state in the international system. Oil extraction and processing as a development means for the Nigerian rental state produce a lot of genuine untoward externalities and costs socially, economically, and environmentally. Apart from the children, the most vulnerable are no doubt the womenfolk. This paper relies on social constructivism to provide explanation for the feminisation of oil-resource crisis in the Niger Delta, as this may not be adequately captured within the theoretical framework of any of the typical liberal and neo-liberal approaches. Even though the paper acknowledges that the women struggle for an equitable and distributive resource governance to bail the region out of resource curse contradiction has for the most part being peaceful, it raises concern over the long lifespan of their vulnerability as they are still much at the receiving end of the oil-crisis left-over, as well as the renewed post-amnesty conflicts in the region. With little or nothing to show by the Transnational Oil Companies (TOCs) in the form of Corporate Social Responsibility (CSR) as a social construct to mitigate oil resource governance crisis and its attendant negative socio-economic and environmental consequences with a view to restoring resource equity, and engender peace in the region, the feminisation of oil crisis in the region will continue without any end in sight at least in the foreseeable future. To avoid the likelihood that the feminisation takes the form of women employing their most powerful weaponry, it is required that the Nigerian rental state and its colluding TOCs should as a matter of urgency prioritise intervening actions. These should be such that are geared towards good oil resource governance with genuine concern for gender equality, popular participation, and resource distributive justice as regards oil extraction and processing in the region. In particular, the TOCs should refocus and reenergise their CSRs towards facilitating real economic activities for the local women to effectively draw their attention away from the oil struggle in the region.
Keywords: Feminisation, Oil-Resource Crisis, Resource Curse, Transnational Oil Companies (TOCs), Corporate Social Responsibility (CSR), Niger Delta

1. INTRODUCTION
Nigeria's Niger Delta typically reminds of a region of the oppressed minorities that is richly endowed with oil and gas resources, yet paradoxically embroiled in deep-rooted resource crisis that has continued to attract both domestic and international concerns. As a direct response to the long termed neglect, deprivation and underdevelopment of the oil rich region, the teething peaceful protests and other less violent agitations of the marginalised Niger Delta people accentuated into a full-blown militancy, which now seems to be a perpetual feature of the region in particular and the Nigerian state in general. Aghedo and Osumah (2014: 5) contend that "the

Niger Delta militancy was driven by the demands for remediation of environment and distributive equity". Despite the initial repressive responses mostly under the past military governments and partly under the Nigerian nascent democracy in the Fourth Republic, and lately the more dialogical and welcoming amnesty initiative to address the untoward fallouts of oil exploration, exploitation and production, the conflict situation in Niger Delta has always been characterized by resource war between the militant groups on the one hand, as well as the government and its licensed multinational oil companies on the other. As a globally sourced resource-endowed region, the aftereffects manifest in extensive severe impacts on the local people and the host communities, as well as the Nigerian state and its monoculture economy with high degree of vulnerability to the volatility of international oil prices (Mähler, 2010: 14). Studies no doubt abound with findings that the many years of oil activities for commercial purposes in the region have not yielded any significant development in terms of the socio-economic transformation of the local people and the host oil-producing communities (Aghedo, 2013; Aghedo and Osumah, 2014; Anugwom, 2011; Badmus, 2010; Dode, 2012; Egwemi, 2010; Inokoba and Imbua, 2010; Mähler, 2010; Odoemene, 2011a and 2010b; Oluwaniyi, 2010; Omadjohwoefe, 2011). To date, there is hardly any tangible proof to indicate that the crisis situation in the region has abated significantly enough to allow for uninterrupted exploration, production, utilisation and marketing of the oil resource from which the international stakeholders and global oil markets benefit the more. Notwithstanding that a significant proportion of the country's national revenue derives from the oil in the region (Anugwom, 2011: 243; Nwajiaku-Dahou, 2012: 298; Badmus, 2010: 330; Dode, 2012: 236; Inokoba & Imbua, 2010: 101; Odoemene, 2011a: 124; Olankunke, 2010: 136).

Although the amnesty programme brought about relative peace and stability in the region as many arms were retrieved from the militants in exchange for state pardon and financial inducements, the social rots of the pre-amnesty periods remain visible of which the inhabitants and the host communities in the region are still greatly enmeshed. The region is yet rid of militancy and militants even though their combative activities have considerably declined following the introduction of the amnesty programme (Aghedo and Osumah, 2014: 5). The post-amnesty era has also no doubt thrown up some challenges which continue to position the region as the epicentre of oil conflicts conjointly with its attendant socio-economic spin-offs.

Whilst it is accounted that the women have had a fair share of the struggle mostly the peaceful moves to bail the region out of the resource curse contradiction, they are still much at the receiving end of the left-over, and equally vulnerable to the renewed post-amnesty conflicts in the region. It interests this paper to provide insights into the feminisation of the Niger Delta oil crisis; assess the plights of the Niger Delta women given the current situation; and proffer recommendations for proper amelioration.

2. THEORETICAL FRAMEWORK

Looking for a worthwhile theoretical explanation to underpin the feminisation of oil-induced crisis is in itself a difficult task. Not only is the concept of feminisation culturally bound, so also are the varying socio-economic and environmental issues that connect with oil resource endowment and its extraction. Mitigating the untoward externalities arising from oil resource extraction and processing should be such that's locally driven. The difficulty also extends to understanding the complex interactions between the actors - the rental state, Transnational Oil Companies (TOCs), as well as the oil producing host communities - that are involved and often play a number of diverse roles in the development and marketing of the oil resource within the historical, cultural, socio-economic, political, and environmental milieus where they operate. Clearly, the issue at hand in this paper no doubt appeals to a number of theories of International Relations, especially from classical liberal and neoliberal approaches to constructivism. The fact that it entails the dynamics of interactions involving state actors, domestic structures and

politics, transnational actors and international political economy ramifications leaves a lot to accommodate within the liberal/neoliberal perspectives. These perspectives cover the "second image approaches" that seek to explain the international outcomes of state actions, as well as the "third-image approaches" with its primary focus on the role and impact of non-state actors like the TOCs and relevant international regimes governing their activities (Dunee et al., 2007: 90; Keohane and Nye, 1987).

However, a theory that will adequately address the question of feminisation of oil-induced crisis in any state or locality should look beyond the individualistic nature and regulatory attributes of the actors as the liberalists/rationalists tend to do. Such should also focus on the inter-subjective connection between the actors on the one hand, and the sociology and political economy of their operating environment on the other as equally critical influencing factors. For this singular reason, and also considering the culturally embedded variables associated with feminisation of oil crisis in Niger Delta, this paper adopts social constructivism to underpin its analysis. Our choice of social constructivism is further justified in that the factors responsible for resource crisis though seem common across resource owning states, the specific reactions of the aggrieved marginalised host communities and their people differ from one resource owning state to the other. Sometimes they are inherently embedded in the social, economic and political structures operating in that particular resource owning state.

Social constructivism as a theory is of the view that there should be a growing shift in the Liberalists' main focus on material factors of state and international regimes to the impact of ideas. This, to the constructivists, is nothing but an attempt to establish a social reality. The argument is that it is not enough to look at realities as static, their meanings and attributions are but a function of the particular historic and cultural contexts to which they relate. The belief is that the peculiarity of the social values, norms and assumptions in rationalising social and political happenings are equally of importance, without which ordinarily their actual meanings would have been lost. Constructivism permeates individual thoughts and meanings to include societal attributes that define them. As argued, "explicitly social phenomena such as states or alliances or international institutions, that is the collective subjects of international relations, may build on the basic material of human nature, but they take specific historical, cultural and political forms that are a product of human interaction in a social world" (Dunne et al., 2007: 168).

The key theoretical underpinnings of critical constructivism concern with the difference across context rather than a single objective reality, as well as the social dimensions including the norms, rules, and language at the particular situational level. Critical constructivism not only allows actors multiple choices in the course of interactions, but also in the process brings to being realities that are distinctively peculiar to a particular history, culture and political setting. As such, "individuals or states cannot be separated from a context of normative meaning which shapes who they are and the possibilities available to them" (Dunne et al., 2007: 170). Rather than emphasising how structures constrain, as rationalists do, constructivists focus on the constitutive role of norms and shared understandings, as well as the relationship between agency and structure. (Dunne et al., 2007: 170). The underlying notion is that actors have distinct identities shaped by the cultural, social, political, as well as material circumstances in which they are embedded. They are not static but ever evolving as they interact with each other and their environment. (Dunne et al., 2007: 171). According to Berger and Luckman (cited in Geels, 2010: 499), constructivism focuses on inter-subjective sense-making and symbolic constructions of reality through which people create shared interpretations.

In the context of this paper, social constructivism provides a suitable theoretical framework for explaining the extractive activities in the oil rich Niger Delta as a developmental means, and their attendant socio-economic and environmental consequences which have now become intolerable even to the vulnerable, especially the womenfolk. The theory acknowledges the

importance of resource equity, justice and a harmonious society, without which true development will continue to elude the Niger Delta region and its people, forcing on them the development crisis and other associated issues of concern like food insecurity, unemployment, poverty and hunger, diseases, etc. Lastly, it accounts for the varied inter-play of interactive influences especially among the key actors in the oil-resource governance and oil-conflict management. Actors in the specific case of the oil crisis in Niger Delta include the Nigerian rental state, their colluding TOCs partners, the marginalised oil-resource host communities in the Niger Delta, and the indigenous populace. These actors according to Geels (2010: 499-500) are knowledgeable interactive agents who take cognisance of the rules, interpret and tailor them to the demands of the specific socio-cultural environment in which they operate.

3. OIL RESOURCE CURSE
Extractive activities anywhere in the world usually come with some social, economic, and environmental costs. In most cases, the endowment of crude oil, gas and other finite mineral resources which ordinarily should be seen as a blessing, turns out to be a curse. The inability to unlock natural resource wealth for the benefits of their respective rental states, and its local populations, coupled with the attendant socio-economic and environmental crises typify what has been described as "resource curse", also referred to as the "paradox of plenty" (Maconachie et al., 2015: 5).
Due to the rising commodity prices, demand and consumption dictated by the global oil market, oil extraction is increasingly becoming more difficult and expensive. Besides, as an additional stressor, oil extraction produces a lot of environmental complications ranging from pollution (air, water and noise), land and soil damage, deforestation, loss of biodiversity, conflict over land use, labour hazards, health risks, and so on. In the situation, the obvious fact remains that the externalised socio-economic and environmental costs of oil extraction and processing far outweighs that of production.
There is also no doubting the fact that mineral resource crisis generally incentivised the evolution of the various multilateral regulatory mechanisms/initiatives that seek to promote best practices to ensure efficient and transparent mineral resource management. Not only such that are targeted towards achieving tangible socio-economic development, but also in the process helps to mitigate the negative outcomes associated with the resource curse, thereby promoting resource and environmental sustainability (Khadiagala, 2015: 23, 38). These mechanisms/initiatives include the Extractive Industries Transparency Initiative (EITI), the Kimberley Process Certification Scheme (KPCS), the African Mining Vision (AMV), Publish What You Pay (PWYP), Regional Initiative on Natural Resources (RINR), the International Conference on the Great Lakes Region (ICGLR), and the Gulf of Guinea Commission (GGC). However, the question of whether the mechanisms have worked or not is still a subject under academic interrogation. Some scholars have contended that the mechanisms/initiatives appear not to be achieving the desired results in that most resource owning states, especially the developing ones, hardly prove themselves as better managers of their own mineral resources for lack of institutions that promote popular participation, equity, transparency, accountability, and environmentally friendly utilisation of such mineral resources (Khadiagala, 2015:27).The same seems to affect the social construct of Corporate Social Responsibility (CSR) meant to provide to fill in the gap created as a result of poor mineral resource governance. The CSR like any other social concept has been viewed in many different ways given its multifaceted nature, its basic understanding is well captured in its definition as "actions that appear to further some social good, beyond the interests of the firm and that which is required by law" (cited in Orlitzky et al., 2011: 8). It usually takes the form of road construction, provision of health and educational infrastructures, training supports, creation of jobs and entrepreneurial capacity building aimed at generating self-income for the local people and resource host communities

who are in turn obliged to guarantee and promote peace to allow for uninterrupted extractive activities in the concerned states (Renouard and Lado, 2012: 474).

CSR is of utmost importance to oil resource sustainability and state's pursuit of sustainable national development, considering that the extractive industries produce genuine socio-economic and environmental externalities (Gilberthorpe and Hilson, 2015: 508; Renouard and Lado, 2012: 472). As a strategic social phenomenon that is now becoming a common reference point as a buffer to fill the development gap created by poor finite resource governance, CRS is geared towards addressing the socio-economic and environmental sustainability crises; restore resource equity; as well as engender peace and political stability in the resource owning state. Unfortunately, the overall performance of TOCs, especially in resource owning developing states is not so encouraging, and indeed far below expectation. As rightly observed, "despite all the well-meaning rhetoric about CSR, with vast sums of money being spent on community development projects, those living within the oil-producing regions are among the most impoverished and marginalized in the country". (Maconachie et al., 2015: 23).

While it has been observed that in some instances the TOCs may lack competent community relations strategies or the means to implement CSR programs in communities (Maconachie et al., 2015: 18), it could be that of outright refusal in some other cases. Part of the problems faced by the TOCs is such that they often find themselves locked between the state's interest and that of the host communities, and in effect "sometimes the only genuine CRS approach is the act of refusal" (Gilberthorpe and Hilson, 2015: 508). Whatever the challenges, it is quite clear that there is growing awareness regarding the utility of CSR as a social mechanisms to mitigate oil resources crisis, and therefore ensure socio-economic and environmental sustainability (Orlitzky et al., 2011:7). Nevertheless, it should be acknowledged that the extractive industries are usually less transparent with respect to their explorative activities, given that it profits them more to act in that manner. However, such unwarranted confidentiality further exacerbates the oil resource crisis, and should be avoided.

4. OIL CRISIS IN THE NIGER DELTA

The discovery and all explorative activities surrounding the business of crude oil in the Niger Delta which have been on for many years strategically position the region as of significant economic interest nationally and internationally. With the presence of TOCs such as Shell, ExxonMobil, Total, Chevron, Elf, Agip (Eni) and Texaco in joint ventures with the Nigerian National Petroleum Corporation (NNPC), the magnitude of explorative activities in the region can only be under-estimated. Short of the expectation that the oil endowment would engender no mean all-round socio-economic transformation of the region and its people, the opposite appears to be the case. Instead, the oil resource has factored as the key motivator underlying poor economic growth and other socio-economic problems together with resource-triggered conflicts in the region. As rightly observed, the region has experienced violent agitations which have not only been rampant, but also assumed worrisome dimensions in terms of the dramatic shifts in tactics and methodologies as evidenced in ransom kidnapping, hostage taking, blowing up of flow stations, wanton destruction of oil installations, and so on (Aghedo and Osumah, 2014: 1-2). These incidents no doubt reinforced other social problems such as inhuman treatment the extreme being sexual abuses, relatively high rate of poverty, different forms of excruciating hardship, food insecurity, lack of basic amenities and damaged environment, which have continually pervaded the Niger Delta socio-economic atmosphere (Inokoba and Imbua, 2010; Odoemene, 2011a and 2011b; Omadjohwoefe, 2011).

Basically, violent conflicts in the Niger Delta region are underpinned by perceptions of alienation and exclusion of the local people and the host oil-producing communities. Although the history of agitations and protests in the region is without doubt traceable to the 1966 Isaac Boro's mobilisation of his fellow people and the eventual unilateral declaration of the Niger

Delta Republic under the platform of the Niger Delta Volunteer Force [NDVF] (Aghedo and Osumah, 2014: 3-4; Odoemene, 2011a: 125-126; Omadjohwoefe, 2011: 253), the execution of Saro Wiwa and eight Ogoni others heralded the emergence of several militant groups and unprecedented increased militancy in the region (Aghedo and Osumah, 2014: 7; Egwemi, 2010: 137). The development and upsurge of movements due to lack of popular participation, perceived marginalization, exclusion and alienation of a vast majority of the populace in terms of resource allocation and its equitable distribution for the development of the region had since taken a more destructive dimension. Littered all over the region are such social movements and militant groups like the Mid-West State Movement (MWSM), the Calabar Ogoja Rivers State Movement (CORM) and the Conference of Rivers Chiefs and Peoples, Movement for the Survival of Ogoni People (MOSOP), Niger Delta Vigilante Movement (NDVM), Niger Delta Liberation Force (NDLF), Supreme Egbesu Assembly (SEA), the Niger Delta People Volunteer Force (NDPVF), Niger Delta Volunteer Force (NDVF), Ijaw Youth Council (IYC), the Coalition For Militant Action in the Niger Delta (COMA), the Niger Delta People Salvation Front (NDPSF), Movement for the Emancipation of the Niger Delta (MEND), amongst other less prominent ones.

Arising from the poor resource management governance therefore, oil exploration and production has been responsible for severe environmental damage in the Niger Delta. This results from oil spills that have led mainly to the contamination of water resources and the destruction of farmlands, as well as gas flaring with harmful potential for wild and marine lives, air pollution and other potentially deleterious consequences for a healthy living of the inhabitants of the region (Badmus, 2010: 335; Egwemi, 2010: 137; Mähler, 2010: 16). Besides, the region suffers from lack of adequate access to health care and clean water. While there are also issues with the housing situation amongst majority of the Niger Delta population which is yet to improve significantly, unemployment especially among the youths remains yet another critical social challenge facing the region (Badmus, 2010: 338). The rate of unemployment, poverty, and infrastructural decay in the Niger Delta is undoubtedly relatively high, thus leaving most people of the region with adaptive and survival instincts of any readily available coping strategies – violent and non-violent. The cumulative effects of all these are depicted in the varying expressions of the apparently dissatisfied Niger Delta people – adult men, youths and the womenfolk, hoping to rid their oil-rich region of the environmental damage and other socio-economic negative fallouts.

The oil crisis experienced in the Niger Delta at a time was heavily militarized, propelled by the multinationals' oil activities and support from the Nigerian state through the provision of official security services, and also complemented by the engagement of private security services by the oil companies to provide some level of protection against any habitual attacks by the irate militants (Mähler, 2010: 20; Oluwaniyi, 2010: 310). On the part of the successive national governments (aside the coercive strategic responses and the more palliative amnesty initiative as earlier noted), a number of other intervening measures had been put in place to address the oil conflict situation in the region. These include the establishment of the Niger Delta Development Board (NDDB) in 1961, the Niger Delta Basin Development Authority (NDBDA) in 1979, Oil Mineral Producing Areas Development Commission (OMPADEC) in 1992, the Niger Delta Development Commission (NDDC) in 1999 and, of lately in 2008, a full-fledged Federal Ministry of Niger Delta Affairs (the first of its kind in the political economic history of the country), to mention but a few (Aghedo and Osumah, 2014: 7-8; Dode, 2012). While the deliberate efforts by both the national and respective states' governments in the region yielded little or no significant improvements at least such that meet the expectations of the marginalised Niger Delta people, the oil-conflict situation in the region is further exacerbated by the failure of the oil multinational conglomerates to live up to their CSR. No tangible achievements seem to have been recorded with respect to CSR in the form of road construction,

provision of health and educational infrastructures, training supports, creation of jobs and entrepreneurial capacity building as earlier mentioned. As they are not benefiting from the extraction of their nature-given oil and gas resources, the host communities chose to disturb rather than promoting peace in the region.

As a social construction to mitigate governance crisis together with the fallouts of the oil conflict in the Niger Delta region, it is expected that the TOCs through the CSR should be able to fill the development gap created by poor administration of the extractive sector, and as such help address social crisis, restore resource equity, and engender peace in the region. After all, the essence of CSR is to cover up where governments are yet to succeed in the provision of public goods, considering that the extractive industries produce genuine socio-economic and environmental externalities (Gilberthorpe and Hilson, 2015: 508; Renouard and Lado, 2012: 472). Unfortunately, the TOCs operating in the oil business in the Niger Delta grossly under-performed in this particular regard. According to George et al. (2012: 8), "The MNCs especially in the oil industries in Nigeria are operating the concept of corporate philanthropy instead of corporate social responsibility and this invariably makes them to become corporate social irresponsible organisations". Not only are there evidences as to the fact that the TOCs operating in the Niger Delta lack competent community relations strategies or the means to implement CSR programs in communities as Maconachie et al. (2015:18) has argued, the situation regarding their ineptitude portends to a large extent instances of outright refusal.

5. INVOLVEMENT OF WOMEN IN THE NIGER DELTA CRISIS

Generally, the youths have been the most active in the oil conflict in the Niger Delta. Nevertheless, the womenfolk have been part of the struggle one way or the other (Aghedo and Osumah, 2014: 6; Oluwaniyi, 2010: 309). For the most part, the women struggle usually takes the form of the more peaceful and non-violent aspects such as staging peaceful street protests with placards, organising public gatherings and meetings, lobbying, interest groupings, etc. As widely held, women are the champions for peace in any society (Olankunle, 2010: 133).

However, sometimes the women-led struggle in the region may assume a revolutionary dimension when pushed to the wall like the 2002 ten-day occupation of Escravos export terminal and flow stations in protest against the untoward activities of TOCs in the Niger Delta under the Escravos Women Coalition, the takeover of many oil companies' flow stations and facilities in 2003 (Akubor, 2011: 29; Olankunle, 2010: 137; Turner and Brownhill, 2004: 76; Stevens, 2006; 597) to mention but a few. The most striking feature of the 2002 struggle in particular remains the fact that the women's main weapon was nakedness; what Stevens (2006) conceptualised as "women's aggressive use of genital power", and also the fact that Chevron/Texaco was forced to sign a Memorandum of Understanding (MoU) committing it to a number of ameliorative measures (Turner and Brownhill, 2004: 67-68) - the extent to which it adhered to the MoU is however a debatable issue.

Unfortunately, being the principal custodians of their communities and the major income earners in the region (Odoemene, 2011a: 130), the Niger Delta women are the most marginalised. They are more often relegated to the back being subordinate to their men counterpart, and usually not carried along both in the struggle and the ameliorative processes as they are also socially excluded. In this regard, Renouard and Lado (2012: 477) reveal that "it is difficult for women to challenge men on oil-related issues when in consultation meetings". As such, they are without doubt the most vulnerable to the eventualities of the crisis and are therefore at the receiving end of its ugly fallouts including sexual abuses like rape and other forms of sexual harassment, human rights violations, discrimination, military brutality, displacement and refuge-taking, trafficking, flogging, maiming, kidnapping, killing, arson and destruction of personal properties, etc. (Akubor, 2011: 27; Odoemene, 2011a; Odoemene, 2011b). To say the least, the Niger Delta Women subsistence economic life is direly threatened

by oil explorative activities in the region. The situation compelled their involvement in the Niger Delta oil crisis, perceived to be ignited by the reasoning that the women in the region engage mostly in farming and fishing as their major means of livelihood and are therefore the most negatively affected by explorative activities (Anugwom, 2011: 243; Odoemene, 2011a: 129). In the situation that not small proportion of the farmlands in the region have been taken over for oil explorative activities or destroyed as a result, and that water sources have also been spilled with crude oil and other harmful chemicals of which the marine-life is adversely impacted with easy spread of water borne diseases, the women suffer a great deal of excruciating hardships compared to the men who are more active, restive, resilient and conflict-monger. Their plights are further worsened by the general poor state of socio-economic development in the region as typified in abject poverty, injustice, economic deprivation, destitution, lack of basic social amenities, unemployment, HIV/AIDS and other terminal diseases, and so on.

Although the history of the involvement of women in the political economic struggle in Nigeria as a whole is usually echoed with quick reference to the Aba Women's Riots of 1832 and that of Abeokuta in 1948 (Aghedo and Osumah, 2014: 3; Olankunle, 2010: 134), the situation in Niger Delta has no doubt reawakening thoughts pointing to the fact that the Nigerian women when pushed too far become a critical aspect of the violent struggle for national resource distributive equity and socio-economic emancipation of not only the Niger Delta region and its inhabitants, but the Nigerian state and its populace as a whole.   As earlier noted, the alternative ameliorative solution that could have palliated the poor resource management on the part of the Nigerian state, and therefore served as a solution to the plights of the women in the region in the form of CSR is replete with capacity and other corporate social challenges. This portends the situation in today's Niger Delta. With the likelihood of renewed oil conflicts resulting from the administrative bottlenecks and other governance challenges with which the amnesty programme is currently confronted with, the Niger Delta women are still helpless and hopeless.

6. CONCLUSION AND POLICY RECOMMENDATION
The oil crisis in the Niger Delta region of Nigeria has continued unabated. The successive governments' repressive responses under the military and partly under democracy in Nigeria's Fourth Republic appear to have contributed to the deepening of the crisis and further exacerbated its socio-economic and environmental adverse repercussions. The TOCs also seem not have helped the governance failure using the concept of CSR as a bail out. Although the amnesty programme introduced lately as a more liberal government intervention in resolving the crisis has engendered some level of relative peace and stability in the region, the administrative challenges regarding its sustainability imply that there is no end in sight to the oil crisis in Niger Delta at least in the foreseeable future.

As the most vulnerable and affected by the negative fallouts of the crisis and given the current situation, the women who have been part of the struggle at one point or the other (and in one form or other) will likely continue to seek ways of attracting both local and international concerns for their plights and marginalisation. But when this is approached employing their most powerful weaponry, it becomes a more worrisome situation that urgently requires intervening prioritisation by both the resource rental national government and its TOCs partners. Aside the need to pivot good governance such that addresses gender inequality and resource distributive injustice in the region in particular and the entire Nigerian state, the TOCs should refocus and reenergise their CSRs towards facilitating real economic activities for the local women to effectively draw their attention away from the oil struggle in the region.

LITERATURE

1. Aghedo, Iro & Osuma, Oarhe (2014). Insurgency in Nigeria: A Comparative Study of Niger Delta and Boko Haram Uprisings. Journal of Asian and African Studies: 1-15.

2. Akubor, Emmanuel O. (2011). The Travail of Women in the Crises in the Niger Delta Area. Anthropologist, 13(1): 27-31.

3. Amadi, Bede O. (2012). Poverty Alleviation through Corporate Social Responsibility in Niger Delta, Nigeria. Asian Social Science, 8(4): 57-67.

4. Anugwom, Edlyne E. (2011) "Wetin We for Do?" Women Entrepreneurs and the Niger Delta Conflict. Journal of Small Business & Entrepreneurship, 24(2): 243-252.

5. Badmus, Isiaka A. (2010). Oiling the Guns and Gunning for Oil: Oil Violence, Arms Proliferation and the Destruction of Nigeria's Niger-Delta. Journal of Alternative Perspectives in the Social Sciences, 2(1): 323- 363.

6. Dode, Robert O. (2012). The Political Economy of Resource Curse and the Niger Delta Crisis in Nigeria: Matters Arising. European Journal of Sustainable Development, 1(2): 235-248.

7. Dunne, T., Kurki M. & Smith, S. (Ed.) (2007). International Relations Theories: Discipline and Diversity. Oxford: Oxford University Press.

8. Egwemi, V. (2010). From Militancy to Amnesty: Some Thoughts on President Yar'adua's Approach to the Niger Delta Crisis. Current Research Journal of Economic Theory 2(3): 136-141.

9. Geels, Frank W. (2010). Ontologies, Socio-Technical Transitions (to sustainability), and the Multi-Level Perspective. Research Policy, 39: 495–510.

10. George, Olusoji J., Kuye, Owolabi L. & Onokala, Uchechi C. (2012). Corporate Social Irresponsibility (CSI) a Catalyst to the Niger Delta Crisis: The Case of Nigerian Oil Multinational Companies versus the Militants of Niger Delta Region of Nigeria. Journal of Management Research, 4(2): 1-11.

11. Gilberthorpe, Emma & Hilson, Gavin. (2015). Natural Resource Extraction and Indigenous Livelihoods: Development Challenges in an Era of Globalization. Human Ecology, 43: 507-509.

12. Inokoba, Preye K. & Imbua, David L. (2010). Vexation and Militancy in the Niger Delta: The Way Forward. Journal of Human Ecology, 29(2): 101-120.

13. Khadiagala, G. M. (2015). Global and Regional Mechanisms for Governing the Resource Curse in Africa, Politikon: South African Journal of Political Studies, 42(1): 23-43.

14. Keohane R. and Nye, J. (Jr.). (1987) Power and Interdependence Revisited. International Organization, 41(4): 725-753.

15. Mähler, Annegret (2010). Nigeria: A Prime Example of the Resource Curse? Revisiting the Oil-Violence Link in the Niger Delta. GIGA Working Papers, 120: 1-37.

16. Maconachie, R., Srinivasan, R. & Menzies, N. (2015). Responding to the Challenge of Fragility and Security in West Africa: Natural Resources, Extractive Industry Investment, and Social Conflict. Fragility, Conflict, and Violence Group, World Bank.

17. Nwajiaku-Dahou, Kathryn (2012). The political economy of oil and 'rebellion' in Nigeria's Niger Delta. Review of African Political Economy, 39: 132, 295-313.

18. Odoemene, Akachi (2011a). Social Consequences of Environmental Change in the Niger Delta of Nigeria. Journal of Sustainable Development, 4(2): 123-135.

19. Odoemene, Akachi (2011b). The Nigerian Armed Forces and Sexual Violence in Ogoniland of the Niger Delta Nigeria, 1990–1999. Armed Forces & Society: 1-27.

20. Olankunle, Michael F. (2010). Women's Response to the Question of Development in the Niger Delta, Nigeria. Journal of Comparative Research in Anthropology and Sociology, 1(1): 133-149.

21. Orlitzky, M., Siegel, D. S. & Waldman, D. A. (2011) Strategic Corporate Social Responsibility and Environmental Sustainability. Business & Society 50(1): 6-27.

22. Oluwaniyi, Oluwatoyin O. (2010). Oil and Youth Militancy in Nigeria's Niger Delta Region. Journal of Asian and African Studies, 45(3): 309-325.

23. Omadjohwoefe, Ogege S. (2011). Amnesty Initiative and the Dilemma of Sustainable Development in the Niger Delta Region of Nigeria. Journal of Sustainable Development4(4): 249-258.

24. Renouard, Cécile & Lado, Hervé (2012). CSR and inequality in the Niger Delta (Nigeria).Corporate Governance: The International Journal of Business in Society, 12(4): 472 - 484.

25. Turner, Terisa E. & Brownhill, Leigh S. (2004). Why Women are at War with Chevron: Nigerian Subsistence Struggles Against the International Oil Industry. Journal of Asian and African Studies, 39(1/2): 63-93.

26. Stevens, Phillips, Jr. (2006). Women's Aggressive Use of Genital Power in Africa. Transcultural Psychiatry, 43(4): 592-599.

RELATIONSHIP BETWEEN RESEARCH AND DEVELOPMENT AND ECONOMIC GROWTH IN THE EU COUNTRIES

Vlatka Bilas
Faculty of Economics and Business, University of Zagreb, Republic of Croatia
bilas.vlatka@gmail.com

Mile Bosnjak
SKDD – CCP Smart Clear Inc., Republic of Croatia
mile.bisnjak76@gmail.com

Tomislav Cizmic
PhD Student at Faculty of Law, University of Mostar (Bosnia and Herzegovina)
Republic of Croatia
tomislav.cizmic@euroherc.hr

ABSTRACT

The issues of economic growth and development are constantly re-evaluated, especially after occurrence and severe consequences of the economic and financial crisis of 2008-2009. The world trends are changing and market is more competitive as ever. These changes are visible in several ways: increased competition from emerging economies, economic structure of countries is changing concerning the importance of manufacturing and services sectors, strategies of positioning in global value chains, geopolitical centers of power, as well as policy initiatives to foster competitiveness and economic growth and development. This paper empirically tested the Granger causality between R&D expenditure and gross domestic product growth in the period 2003-2013. We defined two variables: (1) gross domestic expenditure on research and development as percentage of gross domestic product and (2) gross domestic product (GDP) per capita annual growth rates on the sample of European Union countries. Unidirectional causality from GDP per capita annual growth rate to gross domestic expenditure on research and development with lag two has been confirmed at 5% significance level. Following Granger causality test results in our model we took GDP per capita annual growth rate as an independent variable and R&D expenditures as the dependent one. Afterword we used dynamic panel data and panel generalized method of moments as an estimator. Gross domestic expenditure on research and development on average depends on gross domestic expenditure on research and development previous year with coefficient 0.77 and on annual GDP per capita growth rate with coefficient -0.0073. Even though the sample countries are heterogeneous in terms of GDP per capita level statistically significant effects has been confirmed. The empirical results confirm that most developed European Union countries invest less, measured in relationship to the GDP per capita growth rate, but invest more in absolute terms. It is obvious that the European Union as an integration of rather heterogeneous countries faces many challenges with maintaining and strengthening its position on the world market. Also, the paper gives some overviews of fostering these activities in Croatia.
Keywords: Croatia, EU, research and development

1. INTRODUCTION AND THE THEORETICAL BACKGROUND

Future economic progress will be driven by the invention and application of new technologies and research and development (R&D) is one category of spending that develops and drives these new technologies (Greenstone, 2011).

It is inevitably fact that the amount of research and development is highly important for achieving long term sustainable economic growth (Czarl and Belovecz, 2007). In fact, the innovation-based growth hypothesis suggests that there is a positive linkage between innovation and economic growth (Cetin, 2013). Innovation is the application of knowledge to the production of goods and services and it means improved product and service quality and enhanced process effectiveness (Department for Business Innovation & Skills, 2014). Also, innovations are perceived as key success factor to economic growth and development (Kinkel, Lay and Wengel, 2005).

New growth theories support the view that the key driver for economic growth is innovation (Bayarcelik and Tasel, 2012). Investment in research and development has been considered as one of the key strategies to secure technological potential, and thereby innovation and economic growth. The importance of technological change as a source of economic growth, hence innovation is recognized more than ever and these issues represent very rich research area.

R&D expenditure stimulates innovation and contributes in this way to increase and diversify production, performance, productivity and economic efficiency (Avram, Avram and Avram, 2014). Research and development, resulting in new goods, new processes and new knowledge, is a major source of technical change (Guellec and van Pottelsberghe de la Potterie, 2001).

There are obvious differences of the level of R&D activities in more and less developed countries. R&D activities in developed countries are main source of technological change. However, it is not the case in developing countries. For that reason, Kniivilä (2007) claims that in developing countries international technology diffusion is essential for productivity growth.

There is also a issue of private sector and public sector involvmenet in R&D activities. Private sector does not have a role to undertake R&D for the general benefit. It focuses R&D on "applied" projects, which has to pay off to them. In contrast, government should facilitate the kind of "basic" research projects that can affect entire industries, rather than individual firms (Greenstone, 2011).

Bayarcelik and Tasel (2012) used panel regression model to examine the relation between researchers employed in R&D departments, R&D expenditures, patents as innovation indicators, and GDP as economic growth for chemical firms listed on the Istanbul Stock Exchange between 1998 and 2010. They found positive and significant relation between R&D expenditure and the number of R&D employees in influencing economic growth.

Křístková (2012) tried to quantify the impact of R&D activity on the long-term economic growth of the Czech Republic within the recursively dynamic Computable General Equilibrium framework. She modelled the effect of R&D investment via accumulation of knowledge and treated this accumulation as special factor of production. Her main findings were that knowledge accumulation can contribute to higher economic growth. Among others, she also investigated the efficiency in R&D investment and found evidence that in the long run investment in capital goods are more efficient in achieving higher economic growth.

Avram, Avram and Avram (2014) results confirm a strong and stable relationship between R&D expenditures, GDP and gross fix capital formation in Romania. Goschin (2014) found similar results for Romania which indicated a significant impact of R&D expenditures on the regional economic growth process in Romania over 1995-2010.

Guellec and van Pottelsberghe de la Potterie (2001) found interesting results: (i) business R&D has high spillover effects, (ii) governments should provide appropriate funds for financing R&D activities in the public sector, especially higher education, (iii) business research develops technologies that in many cases have been first explored by the public research and (iv) governments should ensure the openness of their country to foreign technology and optimum level of absorptive capabilities needed for making the best of foreign technology. One of the points of their research is confirmed by Nicolaides (2014) who claims that universities play a critical role in supporting the production of knowledge that contributes to higher standards of living and their R&D initiatives are crucial to development. In the innovation process, the transfer of technology from the universities is also very important and it is important that the universities and researchers have incentives to pursue commercialisation (Svensson, 2008).

Cetin (2013) examined the causal relationship between R&D expenditures and economic growth on the sample of nine European countries for the period 1981-2008 applying standard Granger and Toda-Yamamoto tests for causality. Standard Granger causality test results showed that R&D expenditures cause GDP in the cases of Finland, France and Spain and that GDP causes R&D expenditures in Denmark and there is no causality between variables in other countries. However, the majority of empirical literature assessing the link between R&D and economic growth by using the new growth theories found a strong positive relationship (Cetin, 2013).

Belitz et al. (2015) examined the effects of investment in research and development on economic growth in OECD countries. Their results show that an increase of one percentage point in research and development spending in the economy as a whole leads to a short-term average increase in GDP growth of approximately 0.05 to 0.15 percentage points. They stated that it is difficult to separate the effect of aggregate R&D into contributions from private- and public sector R&D.

Ulku (2004) used various panel data techniques and uses patent and R&D data for 20 OECD and 10 Non-OECD countries for the period 1981–1997 and found positive relationship between per capita GDP and innovation in OECD and non-OECD countries, while the effect of R&D stock on innovation is significant only in the OECD countries with large markets.

Khan (2015) concluded on the basis of the reviewed literature that R&D plays a significant role in the economic growth of a country. Blanco, Gu and Prieger (2015) estimated the impact of R&D on total factor productivity and output in the private sector at the state level in the US from 1963 to 2007. Their results showed that R&D has a large effect on both at the state level in the long run.

There are also some opposite views. For example, according to Department for International Development of UK AID from the British people (2014) the evidence suggests that the potential for research and innovation to contribute to technology-transfer fueled growth in low-income countries tends to be overestimated.

Paper consists of four parts. The first part is devoted to introduction and theoretical background. Second part of the paper deals represents methodology and research results and third part discussion with special emphasis on what has been done in Croatia concerning political measures so far. The last part of the paper represents the conclusion.

2. METHODOLOGY AND RESEARCH RESULTS

In order to empirically test the Granger causality between R&D expenditure and GDP growth in the period 2003-2013, we defined two variables: (1) gross domestic expenditure on research and development (R&D) as percentage of gross domestic product and (2) gross domestic product (GDP) per capita annual growth rates for the period 2003-2013. The data sample consist of 28 EU member states, namely Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and United Kingdom. We obtained data from Eurostat.

Economic time series often do not exhibit the characteristic of stationarity due to containing different trends. In order to test stationarity in the observed time series Augmented Dickey–Fuller unit root (ADF) tests has been applied. Since we found both of the variables of interest integrated of the same order for decision on endogeneity we follow Granger causality test results.

The Granger causality test assumes the evaluation of the following model:

$$Y_t = \mu_t + \sum_{i=1}^{p} \alpha_i \cdot Y_{t-i} + \sum_{j=1}^{q} \beta_i \cdot X_{t-i} + \varepsilon_t$$

Where, μ_t is the deterministic component and ε_t is white noise. The null hypothesis can be tested using F-test. If the p-value is lower than the defined level of significance, the null hypothesis is not accepted and the conclusion is that the first observed time series Granger-causes the second time series.

Following Granger causality test results in Table 1 unidirectional causality from GDP per capita annual growth rate to R&D expenditures with lag two has been confirmed at 5% significance level.

Table 1: Granger causality test results with panel data R&D and GDP per capita growth rate (Authors)

No. of lags	Null hypothesis	No. of observations	F-statistic	p-values
1	R&D does not Granger Cause GDP_PC_GR	278	1.12070	0.2907
	GDP_PC_GR does not Granger Cause R&D		0.38208	0.5370
2	R&D does not Granger Cause GDP_PC_GR	250	0.82009	0.4416
	GDP_PC_GR does not Granger Cause R%D		3.26220	0.0400

Afterword we used dynamic panel data and panel generalized method of moments and an estimator assuming R&D as the dependent variable and annual GDP per capita growth rate as the independent one. A dynamic panel methodology is used to explain the relationship between R&D and GDP per capita growth rate. Introducing a lagged dependent variable, as in the our equation, would cause the least-square estimator being biased and inconsistent because it will be correlated with the error term. To overcome this problem, Arellano and Bond (1991) suggested using a generalized method of moments (GMM) estimator which we use in our

analysis. Therefore, we apply linear dynamic panel-data model that includes lags of the dependent variable as covariates and contains unobserved panel-level effects, and uses the entire set of available instruments.

Table 2: Dynamic panel data model estimates using panel generalized method of moments as an estimator assuming R&D dependent variable and annual GDP per capita growth rate the independent one (Authors)

R&D (-1)	0.720254*** (0.009094)
GDP_PC_GR(-2)	-0.007101*** (0.000207)
number of observations	222
number of countries	28

Notes: Estimations are performed using the PMG estimator; all equations include a constant term; standard errors are in brackets; ***, **, * denote significance at the 1%, 5% and 10% significance level, respectively.

Following Table 2 R&D expenditures on average depends on R&D expenditures previous year with coefficient 0.77 and on annual GDP per capita growth rate with lag two having coefficient -0.0073. Even though the sample countries are heterogeneous in terms of GDP per capita level statistically significant effects has been confirmed. Like it's shown in Table 2 the relationship between GDP per capita growth rate with lag two and R&D expenditure is negative so we want to give some potential explanation on the negative relationship between the variables of interest. When country exhibit GDP per capita growth rate, R&D expenditures as a percentage of GDP are not increased up to year two. Furthermore, as the GDP increases R&D expenditures are higher in its absolute amount as well. But, the surpluses that arises out of GDP growth is not directed toward R&D up to two years in future.

3. DISCUSSION: ANY LESSONS FOR CROATIA?
Conclusively, conducted research showed that EU countries on higher level of development invest less (measures in ratio to the percentage of GDP per capita growth), although they invest more in absolute terms. It is explained in further text.

The Europe 2020 strategy has set a target to rise up R&D expenditures to 3% of GDP in the EU for 2020. In 2013, the EU countries reached 2.02 % of R&D expenditures in GDP. In the same year, R&D expenditure ranged from 0.48 % to 3.32 % across the EU (Eurostat).

Albu (2011) claims that Europe 2020 target is put to test, due to increasing dispersion among member countries. Each country has its own goal set considering this target. The goal for Croatia is 1.40%. According to Eurostat's latest projections, and if current reforms and financial efforts continue, investment in R&D is forecast to rise to 2.2 % by 2020.

The EU is currently lagging behind other global players such as the United States, Japan and South Korea in terms of business R&D expenditure, patent applications and tertiary education (Eurostat). According to European Commission (2014) EU member states need to prioritize growth enhancing expenditure, notably on research and innovation and should focus on three main axes of reform, relating to the quality of strategy development and the policy making process (1) the quality of programmes, (2) focusing of resources and funding mechanisms and (3) the quality of research and innovation performing institutions.

There are a large range of policy instruments that could affect the share of GDP that is invested in R&D (Griffith, 2000). According to Griffith (2000) there are policies directly targeted at R&D like direct funding of government R&D labs, universities or business, investing in human capital formation, patent protection laws and R&D tax credit and policies not directly targeted at R&D which may have a significant impact on the level of R&D investment include competition policy and regulation.

For the first time in its history Croatia brought its Industrial strategy for the period 2014-2020, Innovation strategy for the same period and it is about to officially bring Smart specialization strategy. Industrial strategy identifies key industrial sectors of Croatia, and strategic goals which include horizontal measures (for the whole industry) and vertical measures (for the strategic industries). Each year operational program of implementation strategy for that particular year should be brought. Innovation strategy is about measures to be implemented in order to increase R&D&I activities in private and public sectors. Smart specialization strategy represents a combination of industrial and innovation policies. It identified five sectors of specialization with 13 sub-sectors and it represents ex ante condition to using the EU funds, including for R&D activities. One of the main goals includes increase in the capacities of R&D&I sector to perform excellent research and to serve the needs of the economy. The main issue is how to increase private sector involvement.

Considering the policy argument, Croatia just started the process of designing and implementing policy measures that we can expect to have positive implications on the share of R&D in GDP, but not visible in the short run. However, without these measures we would not be in the positions to even hope some better results in the medium run, or form the scientific point of view, we will be able to say whether they were well designed and implemented after at least medium run and concrete data to analyze.

4. CONCLUSION
R&D is crucial for nation's future competitiveness. The goal of this paper was to examine the relationship between R&D activities and economic growth. We empirically tested the Granger causality between R&D expenditure and gross domestic product growth in the period 2003-2013, we defined two variables: (1) gross domestic expenditure on research and development as percentage of gross domestic product and (2) gross domestic product (GDP) per capita annual growth rates on the sample of European Union countries. Unidirectional causality from GDP per capita annual growth rate to gross domestic expenditure on research and development with lag two has been confirmed at 5% significance level. Afterword we used dynamic panel data and panel generalized method of moment's and an estimator assuming research and development expenditures as the dependent variable and annual GDP per capita growth rate as the independent one. Gross domestic expenditure on research and development on average depends on gross domestic expenditure on research and development pervious year with coefficient 0.77 and on annual GDP per capita growth rate with coefficient -0.0073. Even though the sample countries are heterogeneous in terms of GDP per capita level statistically significant effects has been confirmed. The empirical results confirm that most developed European Union countries invest lower, measured in relationship to the GDP per capita growth rate, but invest more in absolute terms. It is obvious that the European Union as an integration of rather heterogeneous countries faces many challenges with maintaining and strengthening its position on the world market.
In addition, it should be stressed that small open economies such as Croatia, in order to achieve higher economic growth, and converge to the more developed EU member countries should increase their R&D activities. There are many policy measures to be helpful in this process and

many of them are recently designed and started with their implementation or are to be started (Industrial strategy, Innovation strategy, Smart Specialization strategy, etc.). These measures represent good starting point but the final result will depend on the effectiveness of their implementation. Considering the introduction of these measures, Croatia is lagging behind the rest of the EU28 countries, but still has a chance to fulfil the gap by its effective implementation.

The limits of conducted research are present in a way that the source of R&D expenditure is not distinguished (domestic/foreign, public/private). One possible way of deepening this research should be in that direction because for less developed countries, the R&D sources are mainly public, and private sector contributes in a really smart portion. The greatest challenge is to include and motivate private sector for R&D activities in order to obtain future and maintain present levels of competitiveness.

LITERATURE

1. Albu, N. (2011) Research and Development spending in the EU: 2020 growth strategy and perspective. Working Paper FG 1, 2011/Nr.08, SWP Berlin.
2. Avram, A., Avram, C. D., Avram, V. (2014) Research and development expenditures between discretionary costs and source for economic growth. *Romanian Journal of Economics*, 2 (48): 49-66.
3. Bayarcelik, E. B., Tasel, F. (2012) Research and Development: Source of Economic Growth. *Procedia - Social and Behavioral Sciences*, 58 (2012): 744-753.
4. Belitz, H., Junker, S., Podstawski, M., Schiersch, A. (2015) Growth through Research and Development. *DIW Economic Bulletin*, 35.2015: 155-468.
5. Blanco, L., Gu, J., Prieger, J. (2015) The Impact of Research and Development on Economic Growth and Productivity in the US States. Retrieved 07.03.2016. from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2607818.
6. Cetin, M. (2013) The hypothesis of innovation-based economic growth: a causal relationship. *International Journal of Economic and Administrative Studies*, 6 (11): 1-16.
7. Czarl, A., Belovecz, M. (2007) Role of Research and Development in the 21st Century. *Revista Informatica Economică*, 4 (44): 25-28.
8. Department for Business Innovation & Skills (2014) Innovation Report 2014, Innovation, Research and Growth.
9. Department for International Development of UK AID from the British people (2014) What is the evidence on the impact of research on international development? Retrieved 10.03.2016. from http://r4d.dfid.gov.uk/pdf/outputs/Misc_EcoDev/impact-of-research-on-international-development.pdf.
10. Engle, R. F., Granger, C. W. J. (1987) Co-Integration and Error Correction: Representation, Estimation, and Testing. *Econometrica*, 55 (2): 251-276.
11. European Commission (2014) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Research and innovation as sources of renewed growth. Brussels, 10.6.2014.
12. Eurostat, database.
13. Goschin, Z. (2014) R&D as an engine of regional economic growth in Romania. *Romania Journal of Regional Science*, 8 (1): 24-37.
14. Granger, C. W. J. (1969) Investigating Causal Relations by Econometric Models and Cross-spectral Methods. *Econometrica*, 37 (3): 424-438.
15. Greenstone, M. (2011) The Importance of Research and Development (R&D) for U.S. Competitiveness and a Clean Energy Future. MIT Center for Energy and Environmental Policy Research, WP 2011-010.

16. Griffith, R. (2000) How important is business R&D for economic growth and should the government subsidise it? The Institute for Fiscal Studies, Briefing Note No. 12.
17. Guellec, D., van Pottelsberghe de la Potterie, B. (2001) R&D and productivity growth: panel data analysis of 16 OECD countries. OECD Economic Studies No. 33, 2001/II.
18. Khan, J. (2015) The Role of Research and Development in Economic Growth: A Review. Munich Personal RePEc Archive Paper No. 67303.
19. Kinkel, S., Lay, G., Wengel, J. (2005) Innovation: More than research and Development, Growth opportunities on different innovation paths. MPS – Bulletin No. 33.
20. Kniivilä, M. (2007) Industrial development and economic growth: Implications for poverty reduction and income inequality. In: United Nations. Department of Economic and Social Affairs (2007) *Industrial Development for the 21st Century: Sustainable Development Perspectives*, 295-332.
21. Křístková, Z. (2012) Impact of R&D investment on economic growth of the Czech Republic – a recursively dynamic CGE approach. *Prague Economic Papers*, 4: 412-433.
22. Nicolaides, A. (2014) Research and Innovation – the drivers of economic development. *African Journal of Hospitality, Tourism and Leisure*, 3 (2): 1-16.
23. Svensson, R. (2008) Growth thorugh research and development - what does the research literature say? Vinnova Report, VR 2008: 19.
24. Ulku, H. (2004) R&D, Innovation, and Economic Growth: An Empirical Analysis. IMF Working Paper, WP/04/185.

EGG MARKET IN POLAND AT THE BEGINNING OF THE XXI CENTURY

Franciszek Kapusta
University of Environmental and Life Sciences
Street Norwida 25, 50-375 Wroclaw, Poland
Franciszek.kapusta@wp.pl

Rafal Parvi
WSB University in Wrocław
Faculty of Economics in Opole
Street Fabryczna 29-31, 53-609 Wroclaw, Poland
rafalp4@o2.pl

ABSTRACT
This paper examines share price of the companies listed on the WIG-SPOŻYW and their fair value between 2006-2016. Data from Q1 2006 to Q1 2016 was collected from the Stooq.pl (Polish portal of shares). Two hypotheses are tested: (1) value of the shares based on the market price; (2) value of the shares as the fair value of shares.
The production of eggs takes place within the poultry segment – the egg production, which is an important component of the Polish food industry. It is systematically developing and modernising. The systematic increase in the production and export of eggs and egg products as well as the improvement of the technical and economic self-sufficiency of Poland in this field of management constitute a result of these actions. Like any other business, it needs to be modernised in order to meet the requirements of its consumers and win in a competitive market. Since it is the activity which is not directly related to the land, it should be a factor that activates and involves labour resources in the areas of large labour surpluses in agriculture.
Keywords*: Egg market, fair value of shares, company, market value of shares.*

1. INTRODUCTION
The egg production operates side by side with the meat segment, and they often even cooperate. The current egg production should be defined as a logistics chain of deliveries of the products made from raw materials, which are obtained from poultry (especially eggs), and it is understood as a network of relations of the interdependent organisations that manage, control and improve the product and information flows. The main entities of the egg market are: suppliers – purchasing officers (breeders of new mallards, producers of: feed for poultry, hatching eggs, commodity chicks, machinery and devices, farm equipment, cleaners, medications, packaging, etc.), agricultural producers – egg producers, plants collecting and processing eggs, distributors (the retail and wholesale ones), as well as corporate and individual consumers. The development of the egg production has economic justification, the example of which can be a level of transformation (conversion) of feed protein to egg white, which amounts to 22% and it is higher comparing to the conversion of the broiler production of 17.5%, pork of 14% or beef of 4.5% (Trziszka, 2000, pp.14).
From the biological point of view, the productivity of hens is high. A laying hen of the high-efficiency line and breed obtains its laying capacity in the 20th week of life, demonstrating full vitality until the 72th week, and during this period (about one year) it can lay more than 300 eggs, which is 10 times more than its weight, and which contains more than 2.5 kg of the highly efficient and biologically active protein (Trzuszka, 2000, pp. 14).
Poultry are mainly bred for the purpose of obtaining meat and eggs (there are also by-products, e.g. feathers).

2. PURPOSE, SCOPE AND METHODOLOGY OF THIS PAPER

The aim of this paper was to analyse the functioning of the egg market in Poland, as well as its international relations with particular focus on the European Union countries, and to assess the Polish self-sufficiency in production and consumption of eggs.

This paper has a nature of the retrospective analysis, which was written with the use of statistical materials of the Central Statistical Office (CSO), market analyses of the Institute of Agricultural and Food Economics, and also the consistent and constant subject literature. The collected material was developed and interpreted by using the following methods: the statistical method (Stachak, 1997, 132-133), and the comparative method in the vertical and horizontal form (Kapusta, 1976, pp. 11-12). The self-sufficiency assessment was done by the Kapusta method (Kapusta, 2012, pp. 263-264). The technical self-sufficiency was determined by four indicators, that is:

a) calculating the difference between export and import (in natural units),

b) *Ss* indicator, being the quotient of the domestic production (*Pk*) and domestic consumption (*Zk*) (in this case: consumption, hatching and feeding, processing as well as losses and defects) according to the following formula:

$$S_s = \frac{Pk}{Zk} \times 100;$$

where: S_s – self-sufficiency degree,
Pk – domestic production,
Zk – domestic consumption,

c) the share of consumption in production (in %),

d) the share of import in consumption along with processing (in %)

e) the share of export in domestic production (in %).

The economic self-sufficiency was determined by calculating the trade turnover balance in terms of value (PLN, USD, EUR). The self-sufficiency in this context depends not only on the volume of trade on the natural basis, but also the abilities to place own products in global markets and to purchase foreign products. Moreover, this result is highly influenced by a level of the forming prices affecting the mentioned products.

The analysis results were presented with the use of the tabular technique in connection with the language description.

3. CHARACTERISTICS OF POLISH POULTRY

Eggs for consumption purposes are mainly obtained from domestic fowl. The object of mass consumption around the world mainly includes chicken eggs (with a weight of 45-73 g), and in some countries, to a lesser extent, duck eggs (with a weight of 60-90 g); goose eggs (with a weight of about 200 g), turkey eggs (approx. 85 g), guinea fowl eggs (approx. 40 g), pigeon eggs (approx. 10 g), ostrich eggs (approx. 1500 g) and quail eggs (up to 15 g). In some countries, the eggs of gulls and lapwings are considered a delicacy.

As chicken eggs are the most widely consumed, they will be further discussed. The concentration of the chicken egg production is increasing, while the self-sufficiency is decreasing (in %): 2007 – 19.3, 2008 – 18.7, 2009 – 18.1, 2010 – 17.6, 2011 – 17.5, (Rynek drobiu i jaj, 2013, No 43, pp. 30) and 2014 – 17.6 (Rynek drobiu i jaj, 2013, No 48, pp. 38)

Chicken eggs are subject to the quality and weight grading. The quality grading divides eggs into 2 grades marked with A and B symbols. The things that are assessed include a shell, a height of the egg space (the main quality criterion), egg white, yolk, a germ cell, odour and cuticle.

The A grade eggs are mainly intended for direct trading in the market, while the B grade unsorted eggs from a producer can be directed to the food processing industry. Eggs that do not conform to the mentioned grades may be used for technical purposes.

The A grade eggs belong to four weigh classes marked with the following symbols (Anders, 2000, pp. 437-460): XL – very large with a weight of 73 g or more, X – with a weight of 73-63 g, M – with a weight of 63-53 g, S – small with a weight of 53-48 g.

The A grade eggs include a producer code, which should have the labelling of the system of keeping hens, a symbol of the country (Poland – PL) as well as a farm number, and if required, a number of the hen house and flock.

In the European Union, the system of keeping hens is marked with Arabic numerals (Anders, 2004, pp. 49-50): 1 – free range farming system, 2 – barn production system, 3 – caged hen farming system, 0 – ecological system.

The B grade eggs, in turn, are divided into (Anders, 2000, pp. 437-460): non-refrigerated, unfixed, refrigerated, and fixed ones – these are eggs, which along with lowering the temperature or without refrigeration, were fixed in a modified atmosphere or by the use of other treatments, e.g. oiling.

The poultry production is distributed and subject to major changes in all of its segments. These changes are mostly reflected in terms of the number of bred birds of each species (Table).

Table 1: Changes in the number of poultry in 2000-2013 (thousands of animals)and the implementation of the EU directive on improving the welfare of birds affected the reduction in the capacity of cages and flock of birds (Source: Rocznik statystyczny rolnictwa i obszarów wiejskich 2005 [Statistical Yearbook of Agriculture and Rural Areas 2005], CSO, Warsaw 2005, pp. 296-297; Rocznik statystyczny rolnictwa 2010 [Statistical Yearbook of Agriculture 2010], CSO, Warsaw 2010, pp. 184-185; 2014, pp. 123-124)

Specification	Years												
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012[a]	2013
Chicken poultry in total	50694	48393	133395	119811	113488	111653	123682	114266	114540	130959	139964	112477	117054
including individual economy	44742	43323	122980	108987	100101	98226	107819	100259	99238	115112	126393	100891	103398
Laying hens in total	45075	42178	44549	43001	45201	40707	46289	47487	47736	50659	49909	44112	47430
including individual economy	39323	37210	38041	36353	37431	33450	37334	37753	38183	40455	42345	38366	39047
Geese in total	538	698	2864	2307	2018	827	781	861	866	1463	1430	1219	1314
including individual economy	509	674	2793	2200	1953	797	726	806	827	1407	1399	1175	1281
Ducks and other in total	3572	3593	4406	3706	4559	3560	3110	2832	2845	2672	2644	2572	2593
including individual economy	3551	3586	4395	3625	4497	3455	3046	2759	2788	2596	2544	2449	2345
Turkeys in total	778	762	5656	4465	5008	6855	6683	6370	8493	7366	8175	9156	8161
including individual economy	749	679	4592	3492	3808	5644	5461	5206	6159	5736	6571	7968	6786

According to the data contained in Table 1, it can be concluded that changes of the bred poultry of various species and its use are conducted in a different way, and thus:

- chicken poultry – in general (all breeders) - an increase in the number of bred birds occurs in a fluctuating manner, and the share of the individual economy amounts to 88.3% in 2001 and 2013.

- the share of laying hens in the total number of hens decreased from 88.9% in 2001 to 40.5% in 2013, because since 2003, there has been a dynamic growth of the bred hens for meat (broilers),

- although the number of laying hens kept in the individual economy in the analysed period did not change significantly, the share of this economy in the business decreased from 87.2% in 2001 to 82.3% in 2013.

- geese – the number of kept livestock significantly fluctuates; in 2001-2004, a dynamic growth took place, then there was the regression in farming until 2007., and then a next increase occurred. Nevertheless, the state of these birds in 2013 was larger than the state in 2001 by 144.2%, and the share of the individual economy in this activity increased from 94.6% in 2001 to 97.5% in 2013.

- the number of bred ducks and other birds decreased by 27.4% and the share of the individual economy in farming decreased from 99.4% in 2001 to 90.4% in 2013.

- turkeys – their number also changes in a fluctuating manner, except that the trend is clearly upward; in the analysed period, the number of birds increased more than ten times from 778 thousand to 8161 thousand of birds, and the share of the individual economy in farming decreased from 96.3% in 2001 to 83.2% in 2013.

In accordance with the above analysis, it should be concluded that the bird breeding of individual species has its own characteristics, which cannot be met by all breeders.
The object of trading the table eggs in Poland includes chicken eggs, and in small quantities, quail and ostrich eggs.
The main entities acting in the egg market include farms and hatching plants of the reproductive level, farms and hatching plants of commodity chicks, production farms of table eggs, processing plants of eggs and entities of the domestic and foreign trade of goods.
In Poland, all breeding flocks of poultry (breeding and reproductive ones – grandparents and parents) are subject to the assessment of value in use.
Generally, in Poland, the following animals can be distributed to the reproductive flocks: 35 hybrids of laying hens (including 13 for intensive production), 18 hybrids of meat chicken, 8 hybrids of turkeys, 3 hybrids of geese and 15 hybrids of ducks.
The categorisation into the intensive modern poultry meat production, which with its technologies and management system makes reference to the best in the world, and into the traditional poultry meat production - economically weak, vulnerable to competition in the market and with difficulty adjusting to the evolving progress, increasingly perpetuates. The intensive poultry meat production is steadily gaining importance; the number of producers as well as the mass of the slaughter poultry and eggs obtained from them are increasing.
In the intensive poultry meat production, the role of the economic balance increases; the production is based on the high-efficiency of work and the capital with the low-cost production.

4. PRODUCTION AND DIRECTIONS OF THE EGG DISTRIBUTION IN POLAND IN 2001-2013

The eggs, the production and consumption of which are subject to significant changes, occupy an important position in the poultry production (Table 2). In the domestic market, chicken eggs are mainly in trading for food purposes.
It should be noted that the sizes presented in the table of egg production are not definitive. There are indeed differences in the estimates of sizes of the egg production, and hence, also in their use.
The effectiveness of any industry, including the egg production, should be defined by the technical and economic self-sufficiency (Table 2).
So how does the self-sufficiency of our country, in terms of egg products, in 2001-2013 develop? Did the Polish integration with the European Union affect its size?
For many years, the overall supply of eggs in the market has been determined by the level of domestic production. The import of eggs, which is still small, is increasing with fluctuations. However, it does not play a significant role in the supply of the market with eggs. The supply of the market with eggs is mainly determined by the farm production. However, the return to production in small flocks, including organic production, should be noted. The annual demand for eggs as a raw material for the food industry is estimated to be 1.3-1.5 billion. They are intended for the production of pastry, mayonnaise, dressing, pasta, alcoholic emulsion and ice cream. The processing of table eggs to egg products (yolk, white, egg powder) is increasing – approx. 30 million pieces of eggs are annually consumed, i.e. less than 4% of their production, which is a very small amount. The seasonality of production and consumption of eggs indicates

the need to increase the processing of eggs during their overproduction – in Western countries and the United States, 25-30% of eggs are provided for this purpose.

Table 2: The estimate of supply and distribution of table eggs (in thousands of tonnes) and self-sufficiency (Source: Rocznik statystyczny rolnictwa i obszarów wiejskich 2006 [Statistical Yearbook of Agriculture and Rural Areas 2006], CSO, Warsaw 2006, p. 406; Rocznik statystyczny rolnictwa 2010 [Statistical Yearbook of Agriculture 2010], p. 308; 2012, p. 352; 2014, p. 358; Rynek Drobiu i Jaj 2011 No. 39, p. 20; 2009 No. 36, p. 20, Rocznik Statystyczny Rzeczpospolitej Polskiej 2011 [Statistical Yearbook of the Republic of Poland 2011], CSO, Warsaw 2011, p. 469; Rynek Drobiu i Jaj, IERiGŻ-PIB, ARR, MRiRW, 2013 No. 43, p. 25; 2015 No. 48, p.32. Own calculations)

Specification	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Production	451	499	518	521	545	546	556	590	614	637	587	538	564
Import	3	1	2	10	16	16	18	28	35	32	40	36	30
Supply	454	500	520	531	561	562	574	618	649	669	627	574	594
Hatching and	27	41	42	46	51	53	57	56	58	68	65	51	59
feeding	421	447	447	448	447	433	390	410	421	422	361	298	279
Consumption with processing	0	0	1	2	0	1	1	1	2	2	2	1	1
Losses and defects Export	6	12	30	35	62	75	126	151	168	177	199	224	255
Balance (E-I)	100.7	102.3	105.7	105.0	109.4	112.1	124.1	126.3	133	145	159	188	225
Ss	100.7	102.3	105.7	105.0	109.4	112.1	124.1	126.3	127.7	129.5	137.1	153.7	166.4
The share of consumption in production (in %)	93.3	89.6	86.3	86.0	82.0	79.3	70.1	69.5	68.6	66.2	61.5	55.4	49.5
The share of import in consumption (in %)	0.7	0.2	0.4	2.2	3.6	3.7	4.6	6.8	8.3	7.6	11.1	12.1	10.8
The share of export in production (in %)	1.3	2.4	5.8	6.7	11.4	13.7	22.7	25.6	27.4	27.8	33.9	41.6	40.0
Balance (E-I) [Euro]	.	.	.	.	29.8	44.5	88.7	110.1	125.3	143.7	129.4	223.0	187.5

The Polish self-sufficiency in the egg production began to grow even in the pre-accession period (2003). After the Polish accession to the European Union, this self-sufficiency has clearly increased and *Ss has constantly grown.*

The Polish participation in the trade of eggs is also increasing, the result of which is an increase in the share of import and export in the egg consumption within the country. The trade turnover balance of eggs both in terms of the quantity and value in 2005-2011 is increasingly positive. More information about the trade of eggs and their products are provided in Table 3.

The increase in the production of eggs and its increasing export orientation is, among others, a consequence of structural changes made in the Polish market of table eggs, consisting of the growing concentration of laying hens in the farm breeding.

Table following on the next page

Table 3: Foreign trade turnover of eggs and their products (in thousands of tonnes and million euro) * They include only table eggs (without hatching eggs) with the code 04070030, both in import and export, albumins are not taken into consideration.
(Source: Rynek Drobiu i Jaj 2009 No. 36, pp. 20-21; 2012 No. 41, pp. 20-21; 2013 No. 43, p. 25; 2015 No. 48, p. 32)

Specification	Years								
	2005	2006	2007	2008	2009	2010	2011	2012	2013
in thousands of tonnes									
Total export	58.3	61.7	108.7	132.7	149.7	165.9	183.6	199.2	230.3
- table eggs*	55.2	57.1	99.5	120.4	135.3	150.7	168.9	177.9	210.3
- egg products	3.1	4.6	9.2	12.3	14.4	15.2	14.7	21.3	20.0
Total import	11.8	11.1	10.6	19.7	29.3	22.4	25.0	13.5	21.6
- table eggs*	10.6	8.3	6.9	15.6	24.5	14.7	14.7	7.7	14.9
- egg products	1.2	2.8	3.7	4.1	4.8	7.7	10.3	5.8	6.7
Total turnover balance	46.5	50.6	98.1	113.0	120.4	143.5	158.6	185.7	208.7
in EUR million									
Total export	39.5	55.3	100.1	132.7	155.9	149.2	153.4	247.4	216.3
- table eggs*	36.4	49.5	86.8	113.3	134.4	128.2	132.9	211.5	186.4
- egg products	3.1	5.8	13.3	19.4	21.5	21.0	20.5	35.9	29.9
Total import	9.7	10.8	11.4	22.6	30.6	25.0	24.0	24.4	28.8
- table eggs*	6.5	6.5	5.4	13.4	22.5	13.7	11.5	9.2	14.2
- egg products	3.2	4.3	6.0	9.2	8.1	11.3	12.5	15.2	14.6
Total turnover balance	29.8	44.5	88.7	110.1	125.2	124.2	129.4	223.0	187.5

This process created several leading farms with a significant market share. A great emphasis is also put on growing concern for the welfare of hens kept in the cage system, reflecting in enlarging the floor area of a cage per one hen as well as better equipment in cages. Another problem is the EU directive related to the combating a threat of Salmonella. Egg producers must periodically give the samples to the laboratory in order to test them for the presence of Salmonella bacteria. Such adaptations to new requirements will raise the current costs of breeding the laying hens. They also require investments, which smaller producers cannot always afford. As a result, some of them leave the market. Such processes will continue in the coming years.

5. MAJOR POULTRY PRODUCTION PROBLEMS IN POLAND

The existing variations in the price of feed and the increasing demands in terms of the welfare of birds adversely influence this sphere of activity, which is demonstrated in the economic situation of egg producers and processors. Producers often make decisions under the influence of the former market situation, without regard to the predictions in this area. The role of the processing industry and trade in creating the production emerge. In this situation, the development of integration in this industry is becoming an urgent need for action. It is estimated that in Poland, only 10-30% of producers conclude prior agreements on the supply of their production.

Obstacles to the development of the poultry production undoubtedly include high production costs and outdated organisation of production.

1. In the poultry production, feed which constitute 60-70% of total costs, are the most important. The optimal use of feed should be subordinated to the use of other means of production. The quality of feed for poultry produced in Poland is steadily improving, which is supported by the feed law and a degree of the feed quality. Unfortunately, poor and bad feed is still used as well as a good one.

2. In the poultry breeding in Poland, hen houses built in the previous years, especially in the 1970s, are used on a large scale. These hen houses are mostly adjusted to the modern efficient technologies. Other means of production are adjusted to the technical conditions in hen houses, which reduces the efficiency of production. Therefore, there is an urgent need to change the production technology.

3. Changing the production technology is closely associated with the genetic value of a breeding material. The common opinion is that the available inventory for breeding in Poland is characterised by a low genetic value. The best production results in Poland are achieved by approx. 15-20% of producers. They are the ones who are able to adjust the production conditions to the latest requirements of the breeds. The genetic and technological progress is so big that it allows to increase the bird productivity per unit every year.

4. The poultry production is capital intensive and involves a high risk. Therefore, an issue of the availability and costs of capital resources is so important. It can be expected that the increasing competition of banks in the credit market will contribute to the cheapening of raising funds for this activity.

5. There is a need for the continuous adjustment of production conditions in Poland to the requirements of the EU countries, regarding the production quality, hygiene, veterinary medicine, animal rights, sorting and packing of eggs, and also the production record keeping, etc.

All in all, the Polish poultry industry must be systematically restructured to a wide range in order to become competitive to this type of production in the EU countries.

6. ANALYSIS AND VALUATION OF THE FOOD SECTOR COMPANIES QUOTED ON THE WARSAW STOCK EXCHANGE (WSE) IN POLAND.

The WIG-SPOŻYW index, presented in Figure 1, shows that from 2007 to December of 2008, the food sector's companies in Poland showed a downward trend in their values.
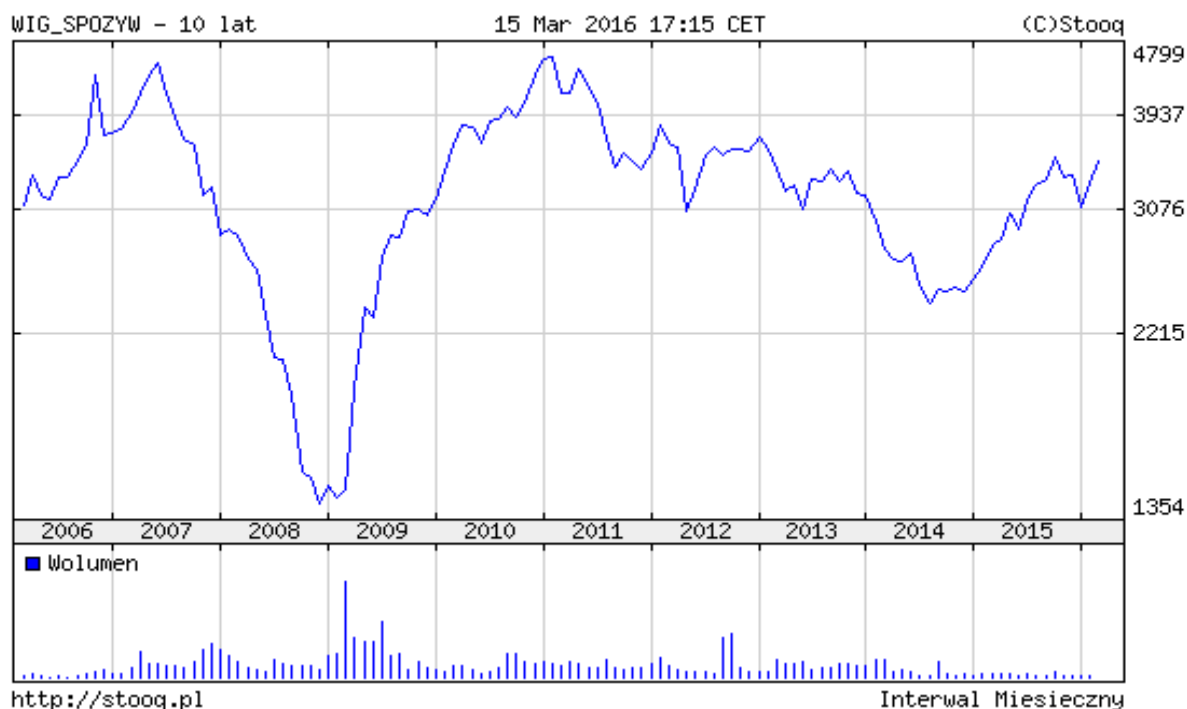
Figure 1. WIG-SPOZYW in the period from 01.2006 to 03.2016((data of the stooq.pl).

However, since the first quarter of 2009, it has been possible to notice a significant upward trend, in which the augmentation and consolidation at the level of 3,573 points on the index take place. The values reported on March 03, 2016 reflect the upward trend and confirm it.

However, the market values do not reflect their fair value (Borowski, 2014, pp. 1-5, Jajuga, 1996, pp. 34-57).

In the food sector, we can see one company, which reported its maximum on 15 March 2016, and that is OVOSTAR. While the other companies did not show its maximum value, and even fair value, though they can show the net profit and the good financial condition. Some companies were overvalued by over 90%. That company is PAMAPOL. Only OVOSTAR is trying to remain to be a flagship company, and recover its value of the previous years (Table 4).

Table 4: The food sector's companies quoted on the Warsaw Stock Exchange in Poland as of 15.03.2016 (own development based on the data of the Warsaw Stock Exchange, data of the Bankier.pl)

Name	Average rating	rating	Current price PLN	Maximum price PLN from the beginning of the stock exchange quotation
OVOSTAR	3.5/5.0	AAA	92.48	115.00
PAMAPOL	3.5/5.0	B	1.29	30.61

In table 5, the most important ratios presenting the financial condition of the food sector's companies were presented. In 2 surveyed companies, the generated profit per share was reported in one company. It shows that the food companies prosper properly on the financial market and are able to record higher or lower profits (Parvi, 2014, pp. 262-267, Parvi, 2015, pp. 177-184, pp. 109-114).

The price to the operating earnings shows the profit of the company, and this state of affairs was reported in 2 examined stock exchange quoted companies (Damodaran, 2012, pp. 45-46, Pastusiak, 2010, pp. 34-46, Jędrzejczak, 2011, pp. 133-138). OVOSTAR and PAMAPOL generated positive digit ratio under one.

In contrast, analysing P/BV and P/P, it should be noticed that both the price to the book value and the price to profit demonstrate that nine companies operate excellently on the market and have a value of c. 1.0 and above, and the best of them is OVOSTAR. Other companies do not differ significantly from average values (Parvi, 2014, pp. 179-185, Veale, 2001, pp. 88-125).

Table 5: Technical evaluation of the construction sector's companies quoted on the Warsaw Stock Exchange in Poland as of 15.03.2015 (own development based on the financial data of the companies quoted on the Warsaw Stock Exchange in Poland)

Name	P/OE (price/ operating earnings)	P/BV (price/ book value)	P/P (price/ profit)	Profit per share
OVOSTAR	5.00	1.83	1.97	(EUR) 1.360
PAMAPOL	5.49	0.42	0.11	0.097

In table 6, the studies concerning, among others, the net profit, depreciation, EBITDA and assets of the construction sector's companies and the book value per share are presented. According to the obtained values, it is clear that only OVOSTAR and PAMAPOL showed a profit, which was confirmed by the previous ratios included in the table 5.

Table 6: The technical evaluation of the construction sector's companies quoted on the Warsaw Stock Exchange in Poland as of 31.12.2015 (own development based on the financial data of the companies quoted on the Warsaw Stock Exchange in Poland)

Name	Net profit (net loss) in thousands PLN	Depreciation in thousands PLN	EBITDA in thousands PLN	Assets in thousands PLN	Book value per share in PLN
OVOSTAR	(EUR) 6120	(EUR) 621	(EUR) 8396	(EUR) 101076	(EUR) 17.080
PAMAPOL	3363	2819	6989	320265	3.093

The book value per share shows that companies are overvalued. However, it is important not to follow this opinion because the values are only the book values value (Froehlich, 2013, pp. 67-75), and the calculation of them is purely mathematical and financial. In case of using the economic attitude and interpretation, it would occur that the companies do not have the fair value (table 4) (Parvi, 2014, pp. 168-177, Parvi, 2015, pp. 51-67, pp. 82-85, pp. 83-88, Thompson, 2008, pp. 52-54, Pierce, 2004, pp. 110-115).

The profitability of the equity as well as the profitability of assets is not shown by OVOSTAR (no data). Therefore, according to the presented study, it is possible to observe that the flagship food (egg production)) concerns have the profitability and they are not threatened by any disturbance of the financial liquidity (Table 7).

Table 7: The food sector's companies quoted on the Warsaw Stock Exchange in Poland as of 15.03.2016 (own development based on the financial data of the companies quoted on the Warsaw Stock Exchange in Poland)

Name	ROE	ROA
OVOSTAR	No data	No data
PAMAPOL	0.70	0.39

Currently, the value of companies significantly deviates from the maximum value achieved a few years ago. The only exception is OVOSTAR, which achieved the maximum value in its history. Other companies have the value less than 90% of the maximum one (table 8).

Table 8: The food sector's companies quoted on the Warsaw Stock Exchange in Poland as of 15.03.2016 (own development based on the financial data of the companies quoted on the Warsaw Stock Exchange in Poland)

Name	Current value	Maximum value	Fair value	Deviation from the fair value in PLN
OVOSTAR	92.48	115.00	112.00	3.00
PAMAPOL	1.29	30.61	15.80	14.81

However, the fair value which should be reflected by the share prices of the examined companies significantly differs from the calculated value, which was presented in the table 9. In some cases, it is even 90% of the current value. However, the fair value is significantly higher than the current value of the examined companies, and in one company, OVOSTAR, it is only similar.

7. CONCLUSION

The egg production is an important segment of the food economy; it is constantly developing and improving. The effect of it is an increase in the production of eggs and their products, as well as an increase of export and improvement of self-sufficiency (technical and economic) of Poland.

Like any other field, it needs to be continuously modernised in order to meet the requirements of consumers and win in the competitive market.

Because it is the activity independent of the farm areas – mainly based on the purchased feed – it should be particularly intensively developed in the areas with large labour resources; involve labour resources and increase the level of income of the rural population.

The fair value of the WIG-SPOŻYW (egg) sector's companies quoted on the Warsaw Stock Exchange in Poland should be reached within three years, that is up to 2017 because it is the right estimation of further fast development of the Polish WIG-SPOŻYW (grain production) sector.

LITERATURE

1. Anders E., Standaryzacja i przepisy handlowe w produkcji jajczarskiej, (in:) T. Trziszka (ed.), Jajczarstwo, Eds. AR, Wrocław 2000, pp. 437-460.
2. Anders E., Zasady sortowania i znakowania jaj kurzych w nowych przepisach Unii Europejskiej – part 1, "Polskie Drobiarstwo" 2004 No. 3, pp. 49-50; part 2, "Polskie Drobiarstwo" 2004 No. 4, pp. 17-19.
3. Borowski K., (2014).*Wyznaczanie punktów zwrotnych indeksu Wig przy pomocy wybranych metod analizy czasowej. Bossa.pl,* pp. 1-5.
4. Jajuga K., Jajuga T. (1996). *Inwestycje.* Wydawnictwo Naukowe PWN, Warszawa, pp. 34-57.
5. Jędrzejczak M., (2011). *Estymacja wartości godziwej. Podejście symulacyjne*, Powszechne Wydawnictwo Ekonomiczne, Warszawa, pp. 133-138.
6. Kapusta F., (1976). *Zmiany struktury agrarnej i kierunków produkcji rolniczej w Legnicko-Głogowskim Okręgu Miedziowym*, PWN, Warsaw, pp. 11-12;
7. Kapusta F., (2012). *Agrobiznes*, Difin, Warszawa, s. 263-264.
8. Parvi R., (2014). *Share price of the companies listed on the WIG-UKRAINE and their fair value", Share price of the companies listed on the WIG-UKRAINE and their fair value",* Itall Ltd., pp. 179-185.
9. Parvi R., (2014). *Investment funds and their financial effectiveness*, Goce Delchev University Macedonia & THOMSON Ltd. Slovakia, *EDIS* - Publishing Institution of the University of Zilina, pp. 262-267.
10. Parvi R., (2014). *Share price of companies listed on WIG20 and their fair value.* EDIS - Publishing Institution of the University of Zilina EIIC – 3 rd Electronic International Interdisciplinary Conference, pp. 169-177.
11. Parvi R., (2015) *Valuation of shares and their fair value of the companies listed on the WIG20 quoted on the Warsaw Stock Exchange in Poland within 2005-2015*, EDIS Publishing Institution of the University of Zilina, Volume 3, Issue 1, December 2015, ISSN 2453-7144, CD ROM ISSN 1339-5572, ISBN 978-80-554-1170-5, pages 51-67.
12. Parvi R., (2015) *Analysis of the Chemical sector in Poland on the example of chemical industry companies quoted on the stock exchange*, Sciemce Publishing London. ISBN 978-0-9928772-8-6. London, November 2015. Volume II, Issue II. pp. 82-85.
13. Parvi R., (2015) *Fair value of the banking sector companies quoted on the Warsaw Stock Exchange in Poland within 2006-015 and their financial analysis*, ISSN 2453-6962, CD-ROM

ISSN 1338-9831, ISBN 978-80-554-1126-2, Volume 4 Issue 1, November 2015, EDIS Publishing Institution of the University of Zilina, pp. 83-88.

14. Parvi R., (2015) *Valuation of shares and their fair value of the companies listed on the WIG30 quoted on the Warsaw Stock Exchange in Poland within 2005-2015*, Czech Technical University in Prague. Czech Institute of Academic Education z.s. 2015 (IAC-MEM in Budapest). ISBN 978-80-905791-3-2. pp. 177-184.

15. Parvi R., (2015) *The analysis of companies of the fuel sector based on the example of companies quoted on the Warsaw Stock Exchange in Poland and their fair value*, ISSN 1339-9071, CD-ROM ISSN 1339-3561, ISBN 978-80-554-0891-0, Volume 3 Issue 1, May 2015, EDIS Publishing Institution of the University of Zilina, pp. 109-114.

16. Pastusiak R., (2010). *Przedsiębiorstwo na rynku kapitałowym*. Wydawnictwo CeDeWu, Warszawa, pp. 34-46.

17. Pierce R., (2004). *Stocks, Options & Spreads, Infinity Publishing,* pp. 110-115.

18. Rocznik statystyczny rolnictwa i obszarów wiejskich 2005. (2005). GUS, Warszawa: 296-297.

19. Rocznik statystyczny rolnictwa i obszarów wiejskich 2010. (2010). GUS, Warszawa: 184-185.

20. Stachak S., (1997). *Wstęp do metodologii nauk ekonomicznych*, Książka i Wiedza, Warszawa, pp. 132-133.

21. Stachak S., (2003). *Podstawy metodologii nauk ekonomicznych*, Książka i Wiedza, Warszawa, pp. 213-216.

22. Thompson B., (2008). *Stock Market Superstar*, Insomniac Press, pp. 52-54.

23. Trziszka T., (2000) *Historyczne, kulturowe oraz współczesne znaczenie gospodarcze jaj*, in: T. Trziszka (ed.), Jajczarstwo, WAR, Wrocław 2000, p. 14.

24. Veale S., (2001). *Stocks, Bonds, Options, Futures*, Prentice Hall Press, pp. 88-125.

25. Bankier.pl., „Rynki, giełda, notowania GPW",
http://www.bankier.pl/gielda/notowania/akcje, accessed: March 15th, (2016).

26. Stooq.pl, "WIG-SPOŻYW", stooq.pl/q/?s=wig_spozyw, accessed: March 03th, (2016).

COMPARATIVE ADVANTAGE OF TURKEY IN FREIGHT TRANSPORTATION SECTOR : IN COMPARISON WITH BRIC COUNTRIES

Hilal Yildirir Keser
PhD., Uludağ Üniversitesi SBMYO
Uludag University Vocational School of Social Sciences

Sema Ay
Assoc.Prof.(PhD), Uludağ Üniversitesi SBMYO
Uludag University Vocational School of Social Sciences

ABSTRACT

Technological developments, increase of the international competition, reduction of the transportation costs and tariffs cause the realization of each process in a different country by dividing the production activities into smaller sub-processes having different factor intensity. This case increases the importance of the services sector, especially of the logistics and transportation services which have significant share in the services sector. Turkey with the geograghical position advantage it has being located on the intersection of the international transport corridors passing through Europe and Asia creates an important force of competition in the transportation sector. Starting from this idea, in the study, it has been aimed to reveal the competitiveness of the transportation sector in Turkey with the RCA (Revealed Comparative Advantage) index. In addition to this, the comparison of the competitiveness of the transportation sector which has gained importance with recently increased trade volume in Brazil, Russia, India and China which are referred to as BRIC countries has been aimed. In terms of international competitiveness, it is thought that the comparative analysis with these countries will play a guiding role in determination of the policies towards the future. In this context, firstly, the issues of competitiveness and comparative advantage will be mentioned and then, the general situation analysis of the transportion sector in Turkey and the BRIC countries will be included. Finally, assessments will be made by calculating the RCA index related with the transportion sector for Turkey and the BRIC countries.
Keywords: Transportation Sector, Competitiveness, BRIC

1. INTRODUCTION

Transportation sector has been the sector which has been affected by the impacts of globallization. The growing volume of trade every other day forces the exported or imported goods to be transported in a most cost-effective and fastest way. Providing the transport services cost-effectively has been the essential condition of achieving competitiveness in other industrial sectors as well as the transportation sector strengtens the competition in itself. The transport infrastructure is of great importance in order to be able to have competitive advantage in the transportation sector. Having adequate seaport, airport, highway and railway in a country and their effective use, and also its geographical location enabling all types of transportation are considerd to be the basic requirements in achieving the competitive advantage.

The developing countries have started to pay more attention to the improvement of their transportation sectors along with their increasing trade volumes. The transportation services have recently become important for Turkey and the BRIC countries (Brazil, Russia, India and China) standing out as the fastest growing economies among the developing economies. The volume of the transportation services export in these countries is in a general trend of increase. However, this increase does not mean to have competitiveness. Being able to have the

competitiveness requires the ability of providing the existing export of trasportation services in fast, quality and cost-effective way.

Within the framework of this requirement, the aim of the study is to measure the competitiveness of the transportation sector for Turkey and the BRIC countries and to make a comparative analysis. In the study, primarily, after giving a brief theoretical information about competitiveness and comparative advantage, the aassesment of the general situation of the transportation sector in Turkey and the BRIC countries will be included. Then, the comparison of competitiveness of the transportation sector will be made by calculating the Revealed Comparative Advantages-RCA indexes of Turkey and the BRIC countries.

2. COMPETITIVENESS AND COMPARATIVE ADVANTAGES

The disappearance of the borders with globalization has led many countries to join the world trade by exporting the goods with similar features and to the increase of competition in the international arena. The countries which have products competitive in the world markets have had significant shares in the world trade. At this point, the concept of "competitiveness" has gained importance and has been a general term used to refer to the share that a country owns in international trade of goods or services. (Düzgün, 2007)

Competitiveness is seen as the key to success in national and international arena. There are many benefits that an economy with high competitiveness will obtain at micro and macro levels. Firstly, the competitiveness , especially on productivity, causes poisitive impacts on the economic performance of the country. Secondly, it enables to be open to the international economic activities, to get integrated with the world, to achieve high living stantards and to maintain the achieved standard. Thirdly, that the state makes the arrangements which will help healthy functioning of the competition environment provide flexibility for the economy in adaptation to the changing international environment. (Aktan and Vural, 2004)

In fact, the competitiveness is essentially based on the Absolute Advantages Theory of A. Smith and Comparative Advantages Theory of D. Ricardo. With the Absolute Advantages Theory, Adam Smith (1766) has argued that the countries need to export the goods and the services which they can produce more cheaply and import the ones which they produce more expensively. The first contribution of Ricardo to the theory is not related with the prices between the self-produced goods and services; it is related with the necessity of conducting foreign trade by taking the relative sense price differences of a goods or services compared to the goods and services in another country as the basis. The Comparative Advantages Theory put forth by Ricardo (1817), has focused on why a country should specialize on the export of certain categories of goods and services and should import the others.

According to the Comparative Advantages Theory, a country should export the goods that it is relatively able to produce cheaper (with less per unit labor cost) compared to its trade partners, should import the ones that it is relatively able to produce more expensively (with higher per unit labor cost). In this case, the revenues obtained from the foreign trade will both maximize the prosperity of the country and will lead to an increase in the world economic welfare through the free trade (Sharma, 2004). While Ricardo who put forth the comparative advantages which is the determinant of the international trade has emphasized mostly the physical and natural effects in theory, the subsequent economists have focused mostly on the factor equipment, technology and human factor. During process starting with Ricardo and extending up to Mill, Marshal, Heckscher-Ohlin and contemporary economists, the theoretical development of comparative advantages have continued (Goldin, 1990). During this process, the economists while postulating that free trade would provide contribution to the economic prosperity, they have essetially based their opinions on the comparative advantages theory, and stated that the revenues to be obtained from the international foreign trade would be a key to increasing the economic welfare and that the faster economic growth would be realized by taking the comparative advantages into consideration. (Bernhofen, 2005, Masters, 1995).

Since the price and non-price variables determining the comparative advantages in determination of the comparative advantages of a country compared to other countries or group of countries cover a great number of countries and a great number of goods, it has been necessary to make calculations based on the post-trade data in calculating the comparative advantages.

In this direction, the first step was put forth by Leisner (1958) in his article article titled "The European Common Market and British Industry" (Liesner, 1958:302-311). However, the index developed for comparing the competitiveness of England with the Common Market Countries has been made functional by Balassa (1965) (Erkan, 2012: 198). The RCA approach of Balassa (1965) assumes that the real form of comparative advantages can be extracted from the post-trade data. Balassa, for calculating the comparative advantage of a country on a particular goods or in its industrial trade, has developed an index rendering the ratio of the share of this goods or industry in the total world export to the share in total export of the country. The aim here is to be able to determine whether or not the country has comparative advantage rather than determining the resources lying under the comparative advantage. (Yalçınkaya et.al, 2014; Seymen, 2009:237; Erkan, 2012)

3. COMPARATIVE ADVANTAGE OF FREIGHT TRANSPORTATION SECTOR IN BRIC COUNTRIES AND TURKEY

The basis of the comparative advantage essentially depends on the relative cost variations of a goods or services. One of the most important factors of that the freight transport sector has comparative advantage is the transportation infrastructure existing in that country. The advanced technology transport vehicles to ensure the effectiveness of the transport systems, the number of the sea ports and large transaction volumes of these ports, wide highways, railway networks, efficient airports have been affecting the development of the transportation sector and have been enabling the higher quality service to be offered at a lower cost. With an overall look, it is seen that the countries which have strong infrastructure and where the transportation facilities can be easily improved vave more advantage compared to the other countries. (Öztürk ve Uzun, 2010:95)

The most important factor effective in the increase of the freight transportation is the intensity of the foreign trade in that country. The demand for transportation services increases along with the increase in the volume of foreign trade, the increased demand triggers the sector to gain power by strengtening the infrastructure of the sector. Indeed, policies towards increasing the advantages owned by the sector by giving priority to the private and public-based infrastructure investments as the result of the increased foreign trade volume in the BRIC[1] countries which recently have the highest growth rate and which are today among the strongest economies. On the other hand, the advantage of Turkey in the transportation sector due to the existing geographical location advantage has increased especially after the year of 2015 with private and public infrastructure investments. Within the scope of Global Competitiveness Index published annually by WEFORUM, the situation of the countries in the transportation infrastructure has been presented. Table1 shows the situation of the overall transport infrastructure of Turkey and the BRIC countries according to WEFORUM.

---

[1] The BRIC description consists of the initial letters of the countries Brazil, Russia, India and China was first offered by economist Jim O'Neill. The BRIC countries are regarded as the fastest growing, rising markets in the world economy. It is of particular importance due to the fact that the total surface area of the BRIC countries covers more than one fourth of the surface of the world and their population consists of the 40 percent of the world population. (Goldman Sachs, 2001;Narin ve Kutluay, 2013: 41). In "Dreaming with BRICs" published by Goldman Sachs in 2003, it is foreseen that in the year of 2015, the world's largest economy will be China, the largest econmy will be India, the fourth largest economy will be Brazil and sixth largest economy will be Russia. Meanwhile, it is also noted that China and India will be global actors in the manufacturing and services sectors, and Brazil and Russia in the raw materials sector. (Goldman Sachs, 2001; Sandalcılar, 2012)

Table 1. Quality of Overall Transport Infrastructure of Turkey and the BRIC Countries

	Turkey		Brazil		Russia		India		China	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank
2011-2012	5,3	34	3,6	104	3,6	100	3,8	86	4,2	69
2012-2013	5,3	34	3,4	107	3,5	101	3,8	87	4,3	69
2013-2014	5,1	41	3,4	114	3,8	93	3,9	85	4,3	74
2014-2015	5,1	33	3,1	120	4,1	74	3,7	90	4,4	64
2015-2016	4,9	33	2,9	123	4,1	64	4	74	4,5	51

Source: WEFORUM, 2016

When compared with the BRIC countries, it can be said that Turkey is in better condition in the transport infrastructure. That Turkey geographically is located on the point of intersection of the continents of Asia, Europe and Africa and that it is on the route of the international corridors already provides a significant advantage. In addition to this, the importance given to the transport infrastructue investments has been an importatnt factor in the improvement of the transport sector. In the current situation, China comes in the first row among the BRIC countries and Russia, India and Brazil follow respectively.

The Logistics Performance Index (LPI) published by the World Bank biannually presents the situation and improvement of the countries in the transportation and logistics sectors. As seen on Table 2, China takes the first row in terms of logistic performance when compared with Turkey and the BRIC countries. Turkey follows China very closely in the general LPI value of 2012 and 2014. The "International Shipment" which is one of the sub-indexes included within the scope of the Logistics Performance Index indicates the effectiveness of the freight transportation services and provides information about the development of the sector. On the basis of this sub-index, China ranks the first row.

Table 2. The LPI values of Turkey and the BRIC Countries

	2007		2010		2012		2014	
	LPI Value	International Shipment Value	LPI Value	International Shipment Value	LPI Value	International Shipment Value	LPI Value	International Shipment Value
Brazil	2,75	2,61	3,2	2,91	3,13	3,12	2,94	2,80
Russian Federation	2,37	2,48	2,61	2,38	2,58	2,59	2,69	2,64
India	3,07	3,08	3,12	3,13	3,08	2,98	3,08	3,20
China	3,32	3,31	3,49	3,31	3,52	3,46	3,53	3,50
Turkey	3,15	3,07	3,22	3,15	3,51	3,38	3,5	3,18

Source: Worldbank, 2016

When the transportation services export values of Turkey and the BRIC countries are examined, as seen on Figure 1, it is seen that China comes in the first row with large margin. The freight transportation services are intensively dependent on the foreign trade. The more the export and import volumes of the goods increase, the more the demand for the freight transportation increases. That China has recently begun to get significant share in the world trade is characteristics to account for the reason why the export of transportation services is so high. Especially, fulfilling large amount of maritime transpot has significantly increased the export of the freight transportation during past decade.

Figure 1. Export of Transportation Services of Turkey and the BRIC countries.
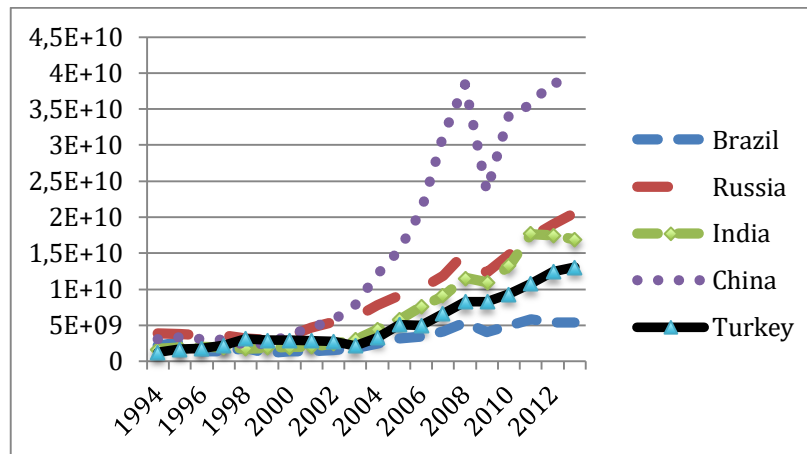
Source: WTO, 2016

In the export of transportation services, Russia, India, Turkey and Brazil follow China respectively. With an overall look, it can be said that the export of transportation services in Turkey and the BRIC countries is in an evidently ascending trend during the past decade.

4. MEASURING THE REVEALED COMPARATIVE ADVANTAGE (RCA) OF FREIGHT TRANSPORTATION SECTOR FOR TURKEY AND THE BRIC COUNTRIES

The Revealed Comparative Advantage (RCA) approach is one of the methods frequently used in measuring the comparative advantages (competitiveness). In the studies included in the literature, it is seen that RCA is generally used for measuring the competitiveness related to the markets for goods. However, the studies for measuring the competitiveness of the services sector and especially of the transportation sector have not been encountered very much. Kuznar (2007) has used the Balassa index in his study that he carried out in order to determine the competitivenes of the developing countries in the international services trade, and reached the conclusion that the economies with low and medium income levels have higher competitivieness. Hısanaga (2007), has reached the conclusion that the US has a strong competitiveness in the knowledge-based services, especially in the category of Royalties and License Fees in his study that he conducted on transportation, communication, finance, royalties and license fees, personal, cultural, and recreational goods, computer and information, and other business services. Seyoum (2007), has examined the competitivness in the trade, finance, transportation and travel services in the developing countries and consequently stated that the developing countries have more competitive structure especially in the transportation and travel services. Muhammadi and Yaghoubi (2008) have reached a similar conclusion in the study they have conducted. In the study they have conducted on computer and information, finance, transportation, and travel services in the developing countries, they have expressed that most of these countries have comparative advantage in the torism and transportation sectors. Marjan et.al. (2008), in their studies, have explained the comparative advantage of Slovania in transportation services compared with Eropean countries by using the Balassa index. Fourie and Fintel (2009), in their study conducted on transport, travel, communications, insurance, financial services, computer and information, royalties other business services, personal, cultural and recreational services, have reached the conclusion that Greece, Denmark, Egypt, and Norway have strong comparative advantage in the export of transportation services. Gümüş and Hızıroğlu (2015) in their study, have compared Turkey with the selected European countries in the selected services sectors within the framework of different RCA indexes and

Porter's Diamond Model approach. As conclusion, they have stated that Turkey has strong comparative advantage in the construction, tourism and transportation sectors.

4.1. Aim of the Study

The aim of the study is to measure the competitiveness of Turkey and the BRIC countries of which economies are rapidly growing and also make a comparative analysis of their competitiveness. In this way, it is aimed to make comparisons and assessments on the issue of competitiveness of these countries showing economic similarity with Turkey in the export of transportation services along with their competitiveness in the other industrial sectors and foreign trade.

4.2. Data and Method

In the study, the RCA (Revealed Comparative Advantage) index developed by Balassa (1995) has been used in order to reveal the competitiveness of the BRIC countries and Turkey in the transportation sector. The RCA index is formulated as follows:

$$RCAij = (Xij / Xit) / (Xwj / Xwt)$$

In case of RCAij > 1, the share of the goods k (sector) of the country j during the period t is greater than its share in the world's total export during the same period. The country has the revealed comparative advantage in mentioned product (sector) and has been specialized.

In case of RCAij < 1, the share of the goods k (sector) of the country j during the period t is smaller than its share in the world's total export during the same period. The country has been specialized in the mentioned product (sector) and does not have the revealed comparative advantage

And In case of RCAij = 1, the share of the goods k (sector) of the country j during the period t is equal to its share in the world's total export during the same period. The level of specialization of the country is the same as the world's specialization. (Hinloopen and Marrewijk 2000).

Hinloopen and Marrewijk (2000) has classified the RCA Index in four seperate categories in order to demonstrate the power of the comparative advantage between the countries.These categories are as shown in Table 2.

Table 3. RCA Classification

Class	RCA Index Value	Situation
Class A	0 < RCA index ≤ 1	Without Comparative Advantage
Class B	1 < RCA index ≤ 2	Weak Comparative Advantage
Class C	2 < RCA index ≤4	Medium Comparative Advantage
Class D	4 < RCA index	Strong Comparative Advantage

Source: Hinloopen and Marrewijk (2000) ; Erkan (2012)

In the calculation of the RCA Index, the total export figures and transportation service export figures for Turkey and the BRIC countries and the world total export and transportation service export figures between the years 1994 and 2013 have been used on annual basis. The data related with foreign trade have been compiled from the data of the World Trade Organisation (WTO).

4.3. Findings

In the study, according to the RCA index, ıf Turkey and the BRIC countries are considerd together, Turkey is the country which has the most competitiveness. As seen on Figure 2, Turkey is followed by India, Russia, Brazil and China respectively.

Figure 2. RCA of Turkey and the BRIC Countries
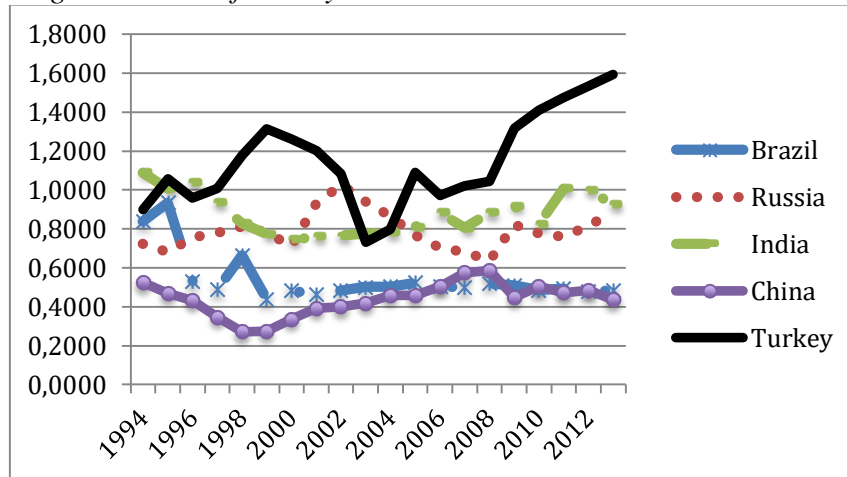
When the degree of the comparative advantages of the countries in the current situation is examined on Table 4, according to the Hinloopen and Marrewijk (2000) classification, it is seen that, despite their high rate of economic growth, the BRIC countries do not have comparative advantage in the transportation sector, and the comparative advantatge that Turkey has is weak. The transportation infrastructure is especially of great importance in the comparative advantage of the transportation sector. The inadequate infrastructure prevents the countries from using their existing potential and impede the development of the sector.

Table 4. The Current Comparative Advantage of Turkey and the BRIC Countries in Transportaton Sector

	Current RCA Index	Current Situation
Brazil	0,4844	Without
Russia	0,8883	Without
India	0,9270	Without
China	0,4370	Without
Turkey	1,5915	Weak

The foreign trade in Turkey has been remarkably increasing irecently and the presence of the region in the global trade has been increasingly stronger. It is expected that its share which was approximately 1.1% in the global trade volume of Turkey in 2014 should exceed 1.5% until 2015. This situation increases the importance of the transportation sector.

The advantageous geographical location of Turkey which provides opportunity for easy access to Eastern Europe, Central Asia, Middle East and Northern Africa makes the country to function as a base in the region where freight transportation of which value exceeding 2 trillion US dollars has been realized. The public and private infrasturcture investments made in the past decade has significantly increased the effectiveness of the transportation services. Many new airports have been built, two-way roads have been started to be used all over the country, the high-speed train network has begun to reach to the cities, and the capacity of the Turkish ports has increased. Ambitious targets have been set towards strengthening the transportation infrastructure even more and increasing the competitiveness of the sector.

There are major shortages in the physical infrastructure of Brazil regarding highways, ports and and airports and efforts for improvement have been continued. Brazil has a railway network of 30,000 km in length which is not considered to be effective. Railways are cheaper compared to road transport. The 25% of the freight transportation is carried out by railway. Brazil has a great

potential in terms of river and sea transport with 7000 km. coast line in length and 48,000 km of river line. In addition, it carries out the export of goods through its 46 ports. The ports which are usually managed by the state are operated by the private sector, and the efforts for modernaziation have been continued. Its air transport is prominent due to the wide lands it owns, and comes in the first place in the world civil aviation sector. Despite the observance of fall in the prices along with the recently made regulations the air transport is expensive.

Russia is a country with a large surface area. This situation becomes a disadtvantage in terms of transportation due to the reason of great distances between the labor, natural resources and business centers. On the other hand, that most of the rivers in the country flow in the north-south direction and not in the east-west direction complicates the access to the sea. Because of these reasons, the transportation costs in the country is 3 times higher than the average international costs. The rail transport and air transport are extensively used in Russia. However, the deficiencies relating to the transport infrastructure in Russia prevent the country from using its potential power for this sector and limit its competitiveness.

India has the largest railway network of the world with 63.300 km. Indian railways employ 1.4 million people and is the largest civillian employer of the world. The railway sector has not been able to achieve improvements due to the lack of investments, low prices and inadequate reforms. Importance has been recently begun to be given to the highway network which is inadequate. Highways have been carrying the 70% of the total freight transportation and the 85% of the total paseengers. Most of the 3.3 million km of road is inconvenient and uncared-for. India has 12 major ports. These major ports have been realizing the 75% of the total freight transportation. The ports of India have been operating inefficiently. The 90% of the trade in India is carried out through the ports. The ports require expanding investments because of the the reason that the foreign trade has grown more than 20% per year since 2002.

China has a significant share in the world trade and has been increasing its competitiveness in many sectors. However, the lack of inrastructure in its current situation prevents it from gaining competitiveness in the transportation sector. It is estimated that the transportation infrastructure in China can only meet the 60% of the demands. In China where the 90% of the international trade is carried out by seaways, the port infrastructure is especially of great importance. However, the insufficient number of ports and that most of the available ones cannot be utilized effectively, the lack of railway network, the lack of materials, advanced technology and trained personnel in the airway transportation are considered as obstacles in China's obtaining competitive advantage in the transportation sector.

5. CONCLUSION

Depending on the increase in the trade volume and competition in the world economy, the transportation sector has also started to develop rapidly. The development of the transportation sector is inevitable in the countries which have significant shares in trade. When the export of transportation services in the BRIC countries and Turkey which are expressed as the fastest growing economies of the last period, a general upward trend is observed. While China takes the first place in the export of transportation services, Russia, India, Turkey and Brazil follow China respectively. Turkey is in the first place in terms of the adequacy of the infrastructure investments. China, Russia, India and Brazil follow Turkey respectively. When it is considered in terms of effectiveness of the international transportations regarding the services and the prices, China is again in the first place, and this time, India, Turkey, Brazil and Russia are follow China respectively.

In this regard, it can be stated that the Chinese transportation sector is a pioneer among the BRIC countries and in Turkey. According to the RCA (Revealed Comparative Advantage) indexes of the stated countries, the RCA index of China for the year of 2005 has been calculated as 0.43, and the conclusion that it does not have the competitiveness has been reached due to

its being below 1. Besides the fact that China has the lowest index value, the index values of the other BRIC countries are also below 1 and they do not have competitiveness in the transportation sector. Turkey, however, has weak competitiveness with an index value of 1.59. Turkey's acquisition of a high competitiveness through using the geographical advantages it owns is considered to be associated with the infrastructure investments to be made in this field. Indeed, when we look at the common point of the BRIC countries in the transportation sector, it is obvious that the infrastructure investments are quite inadequate despite the fact that they have achieved significant economic growth during the last period.

LITERATURE

1. Aktan Coşkun Can - Ġstiklal Y. VURAL, Rekabet Gücü ve Rekabet Stratejileri. Rekabet Dizisi: 2, TĠSK Yayınları, Yayın No:254. Ankara, 2004.
2. Balassa, B. (1965), "Trade Liberalization and 'Revealed' Comparative Advantage", Manchester School of Economic and Social Studies, 33: 99-124.
3. Bernhofen, Daniel M., (2005), "An Emprical Assessment of the Comparative Advantage Gains from Trade: Evidence from Japan", The American Economic Review, V:95, No:1.
4. Düzgün Recep, "Türkiye'nin Uluslararası Rekabet Gücü: Çok DeğiĠkenli Ġstatistiksel Bir Analiz", Erciyes Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, Sayı:23 No:2, 2007, ss. 421-440.
5. Erkan, Birol (2012), "Ülkelerin Karşılaştırmalı İhracat Performanslarının Açıklanmış Karşılaştırmalı Üstünlük Katsayılarıyla Belirlenmesi: Türkiye-Suriye Örneği", Zonguldak Karaelmas Üniversitesi Sosyal Bilimler Dergisi, 8(15): 195-218.
6. Fourier, J., Fintel, D. V. (2009). "World rankings of comparative advantage in service exports" Stellenbosch Economic Working Papers, 03, 1-41.
7. Goldin, Ian, (1990), "Comparative Advantage:Theory and Application to Developing Country Agriculture-Research Programme on:Changing Comparative Advantage in Food and Agriculture", OECD Development Centre Working Papers, No:16.
8. Goldman Sachs (2001), Building Better Global Economic BRICs, Global Economics, 66, 2001, http://www.goldmansachs.com/ourthinking/topics/brics/brics-reports-pdfs/build-better-brics.pdf.
9. Gümüş Abdülkadir and Hızıroğlu Mahmut (2015), Measuring And Explaining Turkey's Competitiveness in Services Using Balassa Index and Diamond Model, İşletme Araştırmaları Dergisi, 7 (2), 195-213
10. Hinloopen, J. and C.V. Marrewijk (2000), "On the Empirical Distribution of the Balassa Index", Weltwirtchaftliches Archiv, 137: 1-35.
11. Hisanaga, M. (2007). "Comparative advantage structure of U.S. international services" Interfaces for Advanced Economic Analysis, Kyoto University, 1-21.
12. Kuznar, A. (2007). International trade in services in developing countries – threats and opportunities are developing countries competitive? TSG 2007 Athens Ninth Annual Conference 13-15 September 2007. Athens
13. Liesner, H.H. (1958), "The European Common Market and British Industry", Economic Journal, 68, 302-16.
14. Marjan Sternad, Matjaz Safran and Darja Topolsek (2012), International Comparative Advantage In Transport Services: The Case of Slovenia, Montenegrin Journal of Economics, 8(1), 179-186

15. Masters, William A., (1995), "Guidelines on National Comparative Advantage and Agricultural Trade", Agricultural Policy Analysis Project, APAP III Methods and Guidelines, Phase III, No: 4001.

16. Mohammadi, S., Yaghoubi, P. (2008) "Analysis of revealed comparative advantage in the e-service market" 2008 IEEE International Conference on System of Systems Engineering (Sose), 148-153.

17. Narin, M. ve Kutluay, D., (2013), "Değişen Küresel Ekonomik Düzen: BRIC, 3G ve N-11 Ülkeleri", Dosya, Ankara Sanayi Odası Yayını, ss. 30-50, Ocak/Şubat, http://www.aso.org.tr/b2b/asobilgi/sayilar/dosyaocaksubat2013

18. Öztürk Nazım and Uzun Meral (2010), Bölgesel Kalkınma Dinamikleri: Bölgesel Dengesizliklerin Ortaya Çıkmasında Rol Oynayan İktisadi Etmenler, Cumhuriyet Üniversitesi İktisadi ve İdari Bilimler Dergisi, 11(2), 91-110

19. Sandalcılar, Ali Rıza (2012), Bric Ülkelerinde Ekonomik Büyüme Ve Ihracat Arasindaki İlişki: Panel Eş Bütünleşme Ve Panel Nedensellik, Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi Y.2012, C.17, S.1, s.161-179.

20. Seymen, Dilek Aykut, (2009), Türkiye'nin Dış Ticaret Yapısı ve Rekabet Gücü, Dokuz Eylül Üniversitesi Yay., İzmir.

21. Seyoum, B.(2007). "Revealed comparative advantage and competitiveness in services" Journal of Economic Studies, 34, 376 - 388.

22. Sharma, Abhijit, (2004), "The Indian Economy Since Liberalisation:The Structure and Composition of Exports and Industrial Transformation (1980-2000)", Industrial Dynamics,Innovation and Development, United Kingdom

23. WEFORUM (2016), Global Competitiveness Reports (2011-2016), http://reports.weforum.org

24. WORLDBANK (2016), Worldbank Statistical Databank, http://data.worldbank.org

25. WTO (2015), Statistical Data Base, available at: http://stat.wto.org

PASSENGERS' TRUST IN INFORMATION SOURCES: EXAMPLES OF CROATIAN TRANSPORT ORGANIZATIONS

Hrvoje Jakopovic
Faculty of Political Science, University of Zagreb, Croatia
hjakopovic@fpzg.hr

Bozo Skoko
Faculty of Political Science, University of Zagreb, Croatia
bskoko@fpzg.hr

ABSTRACT
The authors review the trends of trust in information sources, particularly dwelling on passengers' opinions in public, air and railway transport. Contextualizing the uncertainties such as traffic accidents that transport organizations often have to face, the paper diagnoses efficient channels for informing target audiences. The opinion poll carried out among the passengers using the services of Croatian transport organizations Zagrebački električni tramvaj (ZET), Croatia Airlines (CA) and Hrvatske željeznice (HŽ) shows that Internet-based sources of information are considered to be the most trustworthy. Users' opinions rank high on the list of reliable sources of information when it comes to seeking information on products and services. Further, the results indicate that the potential of these channels has been underexploited because passengers have not recognized them as information sources yet. The authors confirm that the traditional marketing tools for disseminating information are becoming inefficient given the investment made, which is primarily manifested in the lack of passengers' trust. In the opinion of the users of CA services, the company's official website provides the most information about the organization's activities. As for the users of HŽ services, their source of information are usually the persons they know. The users of ZET, on the other hand, rely on their personal experience.
Keywords: information sources, media, trust, passengers, transport

1. INTRODUCTION
Mass media have changed the ways of perceiving and shaping reality. Under the influence of mediatization (Block, 2013; Couldry i Hepp, 2013; Livingstone, 2008; Schulz, 2004) as the process of penetration of media into the lives of societies and individuals, new instruments and tools for message transmission and communication have been developed. Digitalization of contents has launched the information revolution. The contemporary society has thus become an information society (Castells, 2010; 1996), with information and its exchange by means of information and communication technology (ICT) in its center. In this respect, following the development of press, radio and television, the Internet has become a medium enabling an even more extensive mass consumption than its predecessors.

On the other hand, while television has been considered the most popular medium for many years, recent reports on the use of television in the United States show a drop in the number of viewers, indicating a downward trend in the popularity of television in its traditional format (O'Reilly, 2015; Luckerson, 2014). The information and communication technology has contributed to it by creating new communication platforms. Besides, owing to technological progress, end users now have at their disposal various gadgets – such as smart phones, tablets, laptops and smart watches – enabling non-stop access to the Internet and its contents. The practical and consolidated nature of its contents and the fact that it converges the contents of the traditional media have made the Internet an omnipresent medium that is used everywhere

and at all times. Since the "gadget" is always by our side – in our pocket, in our bag on in our hands – virtual life could become more real than reality. As almost all professions nowadays use information and communication technologies in performing their activities, we can say that our society has undergone substantial changes. While trying to find its place in this context of creating the reality, public relations as a profession faces challenges, the greatest of them being creating a positive atmosphere between organizations and their audiences in the ever-changing media landscape. The desirable atmosphere includes, among other things, creation of an "image" that would present individuals, organizations and their products and services in a positive light. Organizations dealing with transport face numerous challenges in maintaining their services and image: for example, crises and loss of passengers' trust often occur due to traffic accidents and bad weather, as well as strikes of employees in Croatia's transport sector. This is why timely communication should be maintained and passengers should be provided with transparent information about possible changes in transport services. For example, the passengers using public transport in Dublin mostly rely on their own experience and on timetables printed on paper because, in their opinion, other transport service information channels are inadequate (Caulfield & O'Mahony, 2007). According to Burdette and Hickman (2001), passengers in air traffic prefer the information obtained from airline personnel by e-mail, telephone and Internet when preparing for future trips. As there are many channels available for this purpose, choosing the right one for reaching passengers of various profiles is a challenge for communication experts.

2. TRUST IN INFORMATION SOURCE

The study entitled Global Trust in Advertising (Nielsen, 2015) demonstrates how evaluation of information and information sources depends on culture and age. In respect of culture, Europeans are generally most distrustful when it comes to advertising sources, unlike South Americans who are very inclined to trust various types of advertising. As regards age, the Millennials (21-34) trust advertising the most and the members of Silent Generation (65+) trust it the least (Nielsen, 2015). According to the study, consumers of particular products and services consider as the most trustworthy the recommendations from the persons they know (84%), followed by brands' official websites (69%) and buyers' opinions published online (68%). On the other hand, consumers will place less trust in editorial contents such as newspaper articles (67%), TV commercials (62%), sponsorships (61%) and other traditional types of advertising (Nielsen Global Survey of Trust in Advertising, 2013). We can say that user opinions are perceived as unbiased and reliable information. The logic behind this perception is that they have no specific interest in praising or criticizing particular products or organizations, their only interest being to share their experience and help others in making decisions. User opinions on the Internet are an important source of information on services and products and numerous users place their trust in it. While often concealed in real world, attitudes, opinions and accompanying emotions are often shared in virtual world because of the perception of anonymity and safety of the familiar environment – one's own home, for instance – the Internet interactions take place in. The growth of Internet users is particularly rapid in the US (Figure 1).

Figure following on the next page
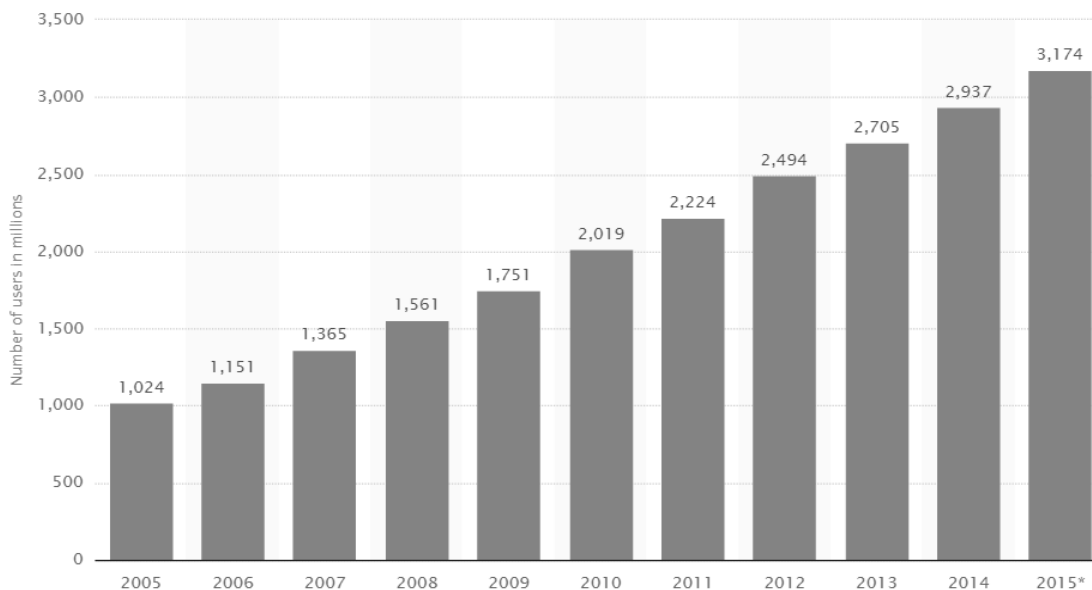
© Statista 2016

Figure 1: Number of Internet users worldwide from 2000 to 2015 (in millions) (Statista, 2016)

The survey entitled The Biggest Trends in Digital Media in 2015 (Parsely, 2015), carried out on publishers, confirms presence of the following trends: mobile overtakes desktop traffic (33%), social distribution takes over (21%), ad-blocking/viewability (16%), analytics driving content strategy (16%), rise in data journalism (5%) and other (1%). This creates room for direct and personal access to any passenger at any moment. An overview of Croatia's media market provided by a survey of media buying carried out by Croatian Association of Communication Agencies (HURA) in 2014 shows that funds are still mostly spent on advertising on TV (HRK 715 million). Then follows advertising the press (HRK 307 million), out of home advertising (HRK 126 million), radio (HRK 132 million) and Internet (HRK 117 million). However, while spending for out-of-home advertising and advertising in the press has been reduced compared to the past years, the share of Internet advertising in media buying in 2014 is still constantly growing (http://hura.hr/publikacije/hura-adex/, 2014).

3. THE CONTEXT OF CROATIA'S AIR, RAILWAY AND PUBLIC TRANSPORT

Croatia Airlines (CA)

Croatia Airlines is a Croatian airline launched on 7 August 1989, when it was registered under the name Zagal (Zagreb Airlines) as the first Croatian air carrier (http://www.croatiaairlines.com/, 2016). After the first democratic elections in Croatia, on 23 July 1990, Zagal changed its name to Croatia Airlines. On 18 November, the company joined Star Alliance, considered one of the most acclaimed airline associations in the world. According to available information (http://www.croatiaairlines.com/, 2016), Croatia Airlines' fleet has 12 airplanes. According to media reports, this Croatian national airline faced numerous setbacks in the period 2013 – 2014: strikes of its employees, operating losses and aircraft breakdowns. As a result, there were repeated reports that the company could be privatized.

Hrvatske željeznice (HŽ)

Hrvatske željeznice was founded in 1990. It is a public enterprise for railway infrastructure management and public passenger and cargo transport in the Republic of Croatia (http://www.hzpp.hr/o-nama, 2016). Since 2012, Hrvatske željeznice consists of three autonomous companies:

1. HŽ Cargo d.o.o.
2. HŽ Putnički prijevoz d.o.o.
3. HŽ Infrastruktura d.o.o.

The past few years have seen substantial media coverage of the setbacks faced by Hrvatske željeznice. The reports in 2013 and 2014 mentioned problems like train delays, operating losses, breakdowns and train accidents, as well as possible privatization of Hrvatske željeznice.

Zagrebački električni tramvaj (ZET)

Zagrebački električni tramvaj is a branch of Zagrebački holding d.o.o., a company fully owned by the City of Zagreb. In view of public transport in the city of Zagreb, ZET goes way back to 1891, when a street car pulled by a horse appeared in the city streets (http://www.zet.hr/, 2016). The trams were electrified in 1910. Bus transport became part of ZET in 1931. The company's rolling stock was modernized in 2005, when the first low-floor trams were introduced. ZET's rolling stock now includes: 426 buses, 277 trams (142 of which are low-floor cars), 20 vehicles for transport of disabled persons, as well as a number of school buses, tourist scenic buses and small tourist trains (http://www.zet.hr/, 2016). The 2013 – 2014 media coverage on ZET mostly dealt with fare evasion in trams and buses, high fares, traffic accidents and linking ZET operations with Zagreb's mayor Milan Bandić.

4. THE METHODOLOGY

4.1. The goal

Identifying the media used by users/passengers to obtain information on public, railway and air transport services. Establishing the level of user/passenger trust in various media informing about products and services.

4.2. The questions

RQ1: Based on their past or current experience with its services, what do individuals think about the organization?

RQ2: What information source provides individuals with the most information about the organization's activities?

RQ3: In what information sources individuals place more/less trust when seeking information about services and products?

4.3. The sample

The sample used in the opinion survey consisted of the volunteers from the population of the users of services of Croatia Airlines, Hrvatske željeznice and Zagrebački električni tramvaj. The population of the users of transport services was identified with the assistance of market research managers and spokespersons of Croatia Airlines, Hrvatske željeznice and Zagrebački električni tramvaj, who gave us access to the statistics on the use of their services and passenger migration. According to these sources, Croatia Airlines transported 1.8 million passengers in

2014; of these, passengers on international flights account for 1.3 million and those on domestic flights 500,000. Zagrebački električni tramvaj transported approx. 500,000 passengers daily, also in 2014. In the same year, Hrvatske željeznice transported 21.8 million people. The basic set, or group of individuals from whom the sample has been derived, is made up of service users with access to Internet who noticed the publicly available online survey. The survey was carried out between 15 February and 14 April 2015. The sample for Croatia Airlines has 51 respondents (N=51); the sample for Hrvatske željeznice has 52 respondents (N=52) and the one for Zagrebački električni tramvaj consists of 62 respondents (N=62). The sample sizes of up to N=50 are usually considered as smaller samples. Interestingly, the educational structure of the respondents confirms the ideas of Rosenthal and Rosnow (1975) about volunteer sample profiles, because volunteers with university qualifications, MAs and PhDs account for the most respondents in this survey.

4.4 The methods and procedures

The survey focused on the examination of attitudes and opinions that constitutes part of this paper was carried out using the free tool *LimeSurvey* (https://www.limesurvey.org/en/, 2015). The tool is also available at *Srce* (http://www.srce.unizg.hr/limesurvey/, 2015), enabling users with electronic identity in AAI@EduHr system to create polls by using *LimeSurvey* tool in Croatian language. The program enables creation of polls ranging from those with simple questions and answers to polls with multiple choices and tables for entering answers. The polls thus created were publicly available to the users of Croatia Airlines services on http://limesurvey.srce.hr/68218/lang-hr and to the users of Zagrebački električni tramvaj services on http://limesurvey.srce.hr/28688/lang-hr. The notice of their availability was sent via e-mail. The testing of the internal consistency of the questionnaire showed a high Cronbach's alpha coefficient (0.91).

5. THE FINDINGS

Despite the abovementioned setbacks that CA has faced in the past years, the results (Figure 2) show that the respondents' opinion about the company is mostly positive (29%), then neutral (31%), then very positive (8%) and mostly negative (4%). This predominantly positive image of Croatia Airlines was confirmed in the survey carried out on online users by Jakopović and Mikelić Preradović (2014).
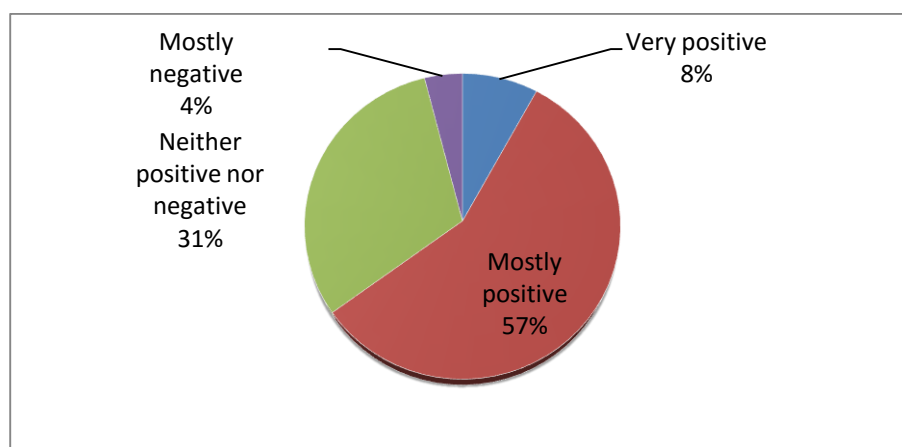
Figure 2. Service users' opinion about Croatia Airlines (N=51)

Most of their information on CA (Figure 3) the respondents obtain on the company's official website (33.33%), since it contains the flight timetable and offers information on changes in flights, as well as accurate information on prices of services. Then follow the experience of familiar persons (19.61%), television (15.69%) and Internet news (9.80%). E-mail (1.96 %), newspapers (1.96 %) and magazines (1.96 %) are the least consulted sources of information. User opinions on the Internet are not consulted at all.
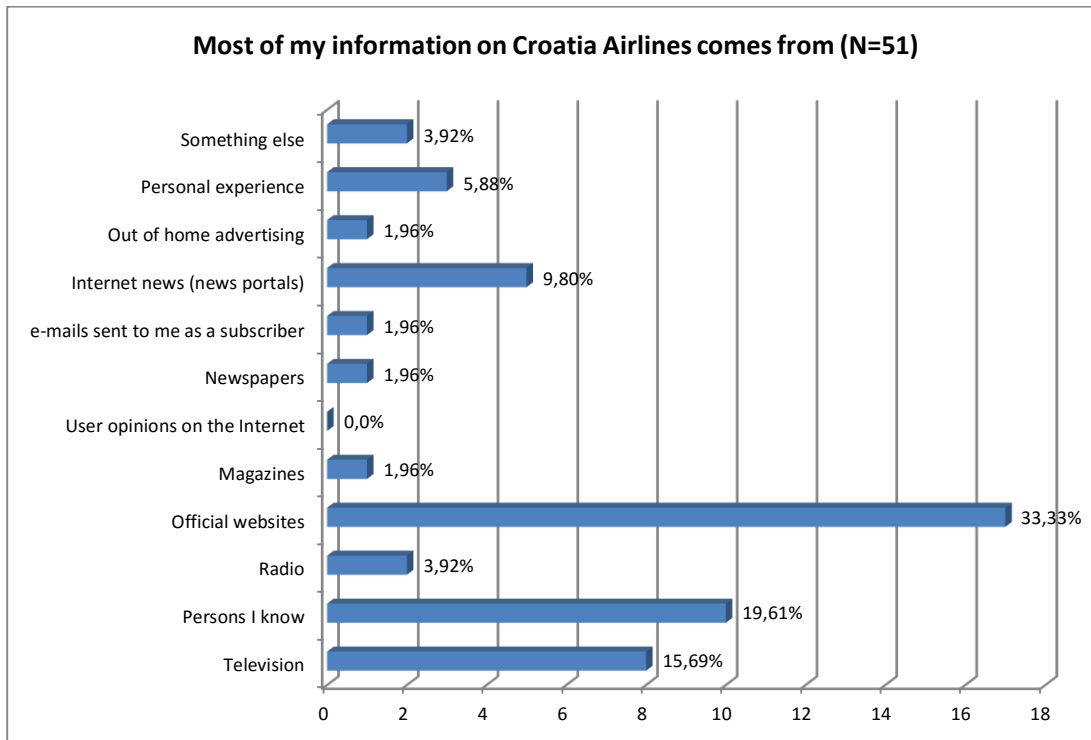
Figure 3 Seeking information on Croatia Airlines

In order to find out what information source they find the most trustworthy when seeking information on products and services, the respondents were requested to rank the sources of information by their trustworthiness and to specify which of the sources offered (Chart 1) would they rank first, second, third, fourth, fifth, sixth, seventh, eighth, ninth and tenth, respectively. According to the results, the respondents place the most amount of trust in the persons they know (49.02%). User opinions on the Internet rank second (37.25%) and official websites third (17.65%). The results show that the user opinions on the Internet are an underused type of information source with a huge potential when it comes to CA. The three highest-ranking positions are also indicative, suggesting that the Internet could be considered the most trusted source of information, next to the persons we know. As for the traditional media, it turned out the respondents put the highest level of trust to radio which, ranking fourth, is the most trusted among them (23.53%). News rank fifth (15.69%) and also ninth (19.61%), which means that some respondents put little trust in it. Confirming the expectations and perceived obsoleteness and unconvincing nature of message communication techniques, out-of-home advertising places last (43.14%).

Table following on the next page

Table 1. Level of trust of CA service users in information sources when seeking information on products and services (N=51)

	Level of trust of CA service users in information sources when seeking information on products and services									
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Television	15.69%	5.88%	13.73%	9.80%	9.80%	11.76%	5.88%	9.80%	3.92%	13.73%
Persons I know	**49.02%**	21.57%	9.80%	1.96%	5.88%	1.96%	1.96%	1.96%	1.96%	3.92%
Radio	1.96%	3.92%	13.73%	**23.53%**	13.73%	11.76%	15.69%	7.84%	7.84%	0.00%
Official websites	21.57%	19.61%	**17.65%**	7.84%	7.84%	5.88%	3.92%	7.84%	3.92%	3.92%
Magazines	0.00%	0.00%	5.88%	9.80%	13.73%	13.73%	**23.53%**	11.76%	11.76%	9.80%
User opinions on Internet	3.92%	**37.25%**	11.76%	5.88%	7.84%	3.92%	5.88%	7.84%	9.80%	5.88%
Newspapers	0.00%	7.84%	1.96%	13.73%	13.73%	**21.57%**	19.61%	11.76%	9.80%	0.00%
e-mails sent to me as a subscriber	1.96%	1.96%	9.80%	9.80%	5.88%	9.80%	7.84%	**21.57%**	15.69%	15.69%
Internet news	1.96%	1.96%	11.76%	13.73%	**15.69%**	13.73%	7.84%	9.80%	**19.61%**	3.92%
Out-of-home advertising	3.92%	0.00%	3.92%	3.92%	5.88%	5.88%	7.84%	9.80%	15.69%	**43.14%**

The opinions of the users of services of Hrvatske željeznice (Figure 4) are predominantly neutral (40%) – in other words, neither positive not negative – but also mostly negative (35%) and mostly positive (25%). All together, the respondents' opinion about Hrvatske željeznice is more favorable than about Croatia Airlines.
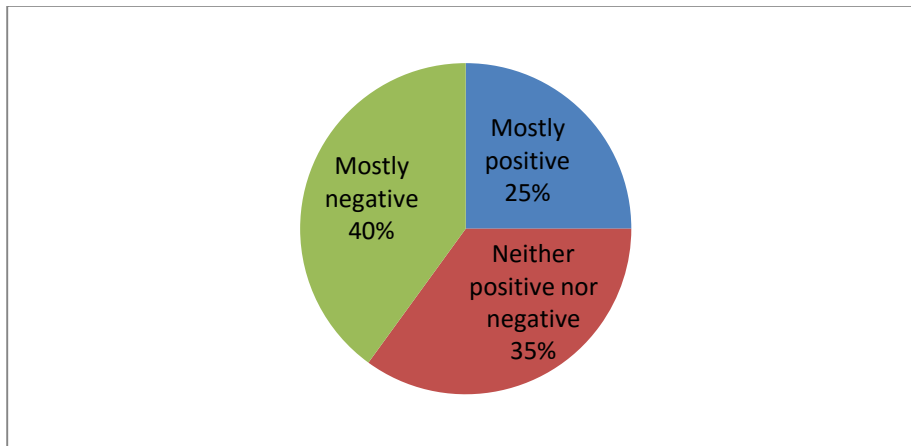
Figure 4. Service users' opinion about HŽ (N=52)

Most of their information on Hrvatske željeznice (Figure 5) the respondents obtain from the persons they know (25%), and then from the company's official website (21.15%). This is an indicator that official websites are important for both air and railway transport because they provide information on timetables and routes. Then follow the information obtained through personal experience (19.23%) and via television (19.23%). Newspapers (1.92 %), radio (1.92 %) and out-of-home advertising (1.92%) are the least consulted sources of information. E-mail, magazines and user opinions on the Internet are not consulted at all.
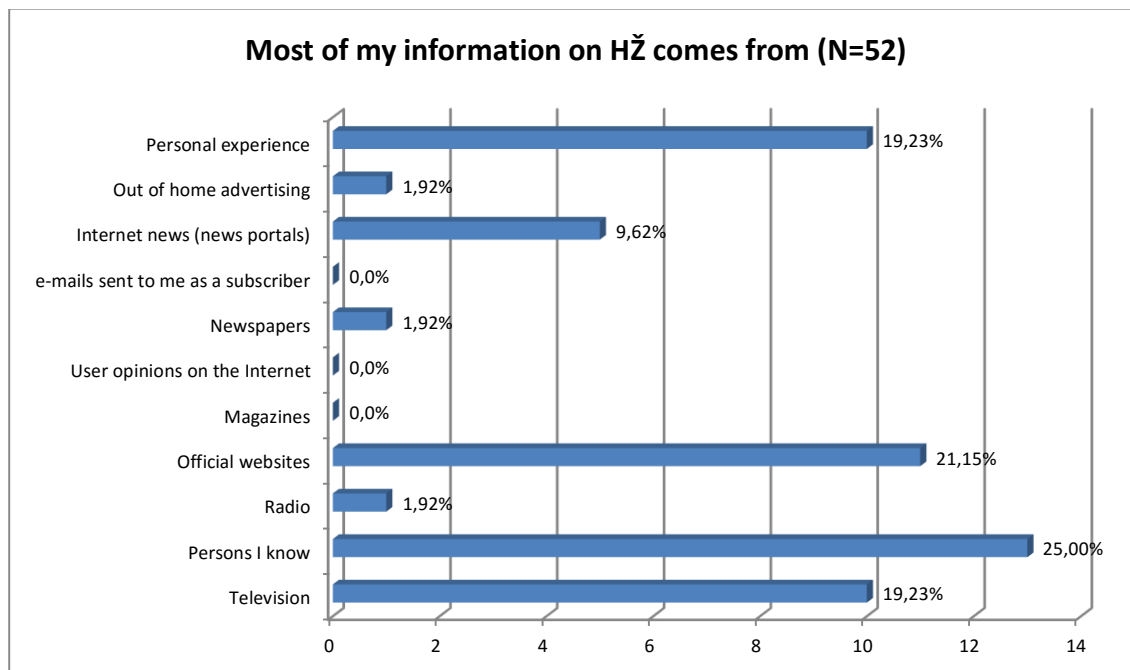
Figure 5. Seeking information on Hrvatske željeznice (N=52)

As a source of information, ranking first among most of the respondents (Table 2) are the persons they know (50%). The runner-up is the user opinions on the internet (36.54%). Ranking third are official websites (19.23%). Newspapers are on the fourth place (17.3%) and are thus the highest-ranking traditional media. The Internet news rank fifth (17.31%). The least trusted are e-mail messages (23.08%) and, ranking ninth and tenth, out-of-home advertising (38.46%). According to the results, the press (daily newspapers) are inadequately used for disseminating information about HŽ. Among the traditional media, the respondents also put the highest level of trust in newspapers. On the other hand, the respondents have obtained no information about HŽ via user opinions, although they consider them a trustworthy source.

Table following on the next page

Table 2. Level of trust of HŽ service users in information sources when seeking information on products and services (N=52)

Level of trust of HŽ service users in information sources when seeking information on products and services									
1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**
Television 11.54%	11.54%	17.31%	15.38%	15.38%	5.77%	0.00%	7.69%	9.62%	5.77%
Persons I know **50.00%**	9.62%	5.77%	5.77%	11.54%	5.77%	0.00%	3.85%	3.85%	3.85%
Radio 0.00%	11.54%	15.38%	11.54%	11.54%	**17.31%**	15.38%	5.77%	3.85%	7.69%
Official websites 19.23%	13.46%	**19.23%**	11.54%	3.85%	7.69%	13.46%	7.69%	1.92%	1.92%
Magazines 0.00%	0.00%	7.69%	5.77%	9.62%	**17.31%**	**17.31%**	**19.23%**	13.46%	9.62%
User opinions on Internet 5.77%	**36.54%**	11.54%	1.92%	7.69%	5.77%	11.54%	5.77%	3.85%	9.62%
Newspapers 0.00%	5.77%	3.85%	**17.31%**	15.38%	**17.31%**	**17.31%**	9.62%	7.69%	5.77%
e-mails sent to me as a subscriber 3.85%	1.92%	11.54%	11.54%	3.85%	3.85%	11.54%	15.38%	**23.08%**	13.46%
Internet news 3.85%	7.69%	7.69%	11.54%	**17.31%**	11.54%	9.62%	11.54%	15.38%	3.85%
Out-of-home advertising 5.77%	1.92%	0.00%	7.69%	3.85%	7.69%	3.85%	13.46%	17.31%	**38.46%**

As regards the user opinion on ZET services, the results show (Figure 6) that their opinion is mostly positive (33%), but also mostly negative (26%) and neutral (26%). The entire range of Likert scale can be found here: some respondents have a very negative opinion about ZET (10%), but also a very positive one (5%). Based on the results of a survey carried out by ZET and Faculty of Economics and Business of the University of Zagreb (2015), the citizens are most satisfied with the availability of information (77.8%), simplicity of use (75.2%), frequency of tram traffic (72.5%), comfort (71.5%) and safety (71.2%). They are not satisfied with fares (44.6%) and the level of tidiness and cleanliness of the cars (21.2%).
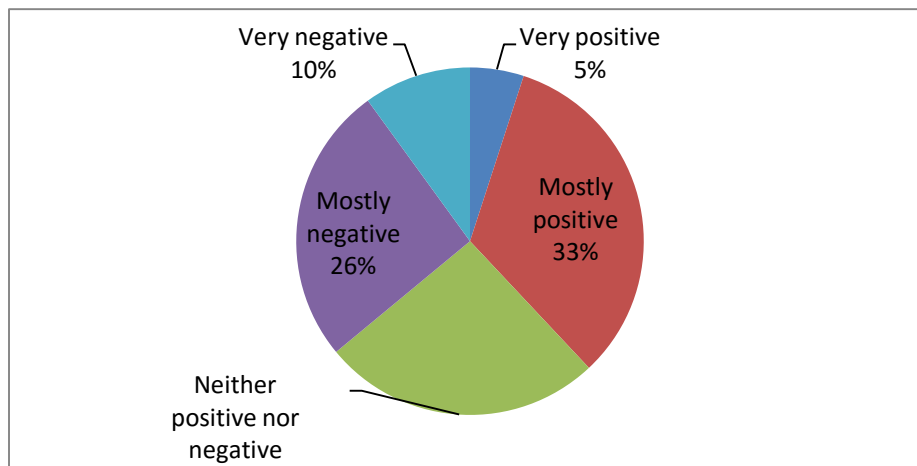
Figure 6. Service users' opinion about ZET (N=62)

Figure 7 shows that most of the information about ZET that the respondents obtain come from personal experience (29.3%), from persons they know (20.97%), official websites (14.52%) and television (12.90%). Magazines (1.61%) and out-of-home advertising (1.61%) are the least consulted sources of information about ZET. E-mail and user opinions on the Internet are not consulted at all.
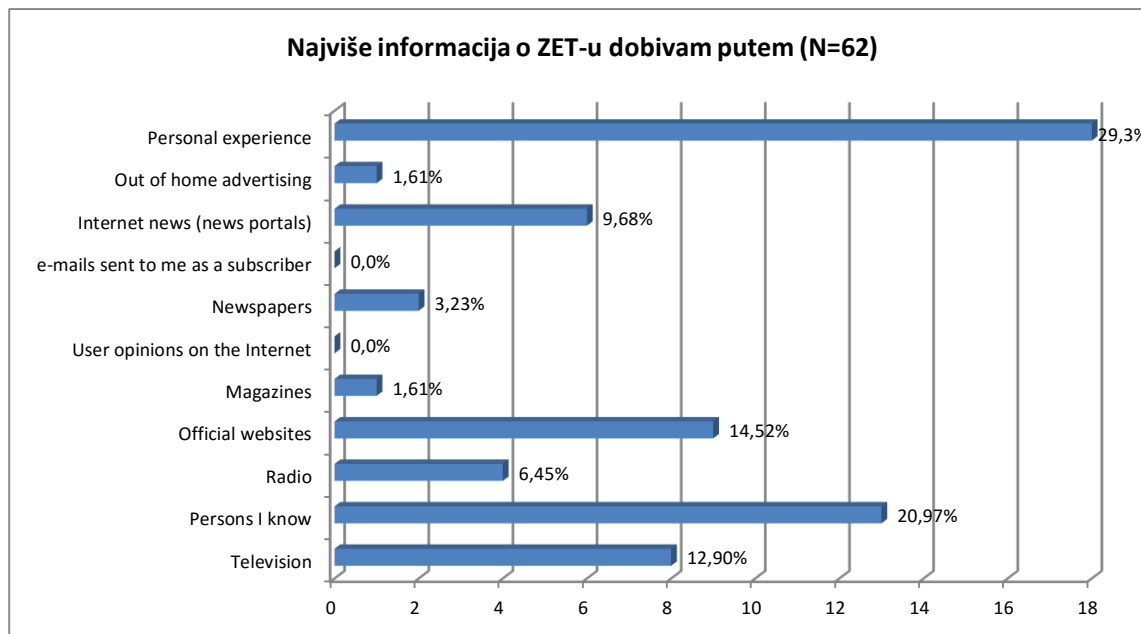
Figure 7. Seeking information on ZET (N=62)

In respect of ranking information sources by trust (Table 3), most of the respondents rank first the information from the persons they know (46.77%). It is followed by user opinions on the Internet (32.26%), Internet news (17.74%) and radio (20.97%) – the latter being ranked higher than the rest of the traditional media. The least trusted are e-mail messages, ranking ninth (29.03%), and out-of-home advertising (32.26%), ranking tenth. User opinions are highly positioned as trustworthy sources of information, but the users of ZET's services do not obtain the information about the organization's activities from this source. On the other hand, radio ranks fourth as a trustworthy source of information among both Croatia Airlines and Hrvatske željeznice users; however, the respondents have not recognized it as a relevant information source provided by these organizations. This is why we can talk about radio as a "medium of under-utilized trust" (Mučalo, 2010).

Table following on the next page

Table 3. Level of trust of ZET service users in information sources when seeking information on products and services (N=62)

Level of trust of ZET service users in information sources when seeking information on products and services									
1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**
Television 14.52%	11.29%	14.52%	11.29%	9.68%	11.29%	9.68%	4.84%	8.06%	4.84%
Persons I know **46.77%**	9.68%	8.06%	3.23%	6.45%	6.45%	3.23%	4.84%	8.06%	3.23%
Radio 3.23%	9.68%	14.52%	**20.97%**	12.90%	12.90%	9.68%	4.84%	4.84%	6.45%
Official websites 16.13%	19.35%	8.06%	9.68%	9.68%	6.45%	11.29%	12.90%	1.61%	4.84%
Magazines 0.00%	1.61%	1.61%	11.29%	9.68%	**19.35%**	**20.97%**	**25.81%**	3.23%	6.45%
User opinions on Internet 3.23%	**32.26%**	16.13%	6.45%	3.23%	4.84%	9.68%	4.84%	6.45%	12.90%
Newspapers 3.23%	4.84%	6.45%	12.90%	**17.74%**	11.29%	16.13%	14.52%	9.68%	3.23%
e-mails sent to me as a subscriber 0.00%	3.23%	11.29%	6.45%	11.29%	6.45%	1.61%	8.06%	**29.03%**	22.58%
Internet news 4.84%	4.84%	**17.74%**	11.29%	16.13%	12.90%	6.45%	14.52%	8.06%	3.23%
Out-of-home advertising 8.06%	3.23%	1.61%	6.45%	3.23%	8.06%	11.29%	4.84%	20.97%	**32.26%**

6. DISCUSSION

According to the results of the opinion survey carried out on the users of services of Croatia Airlines, Hrvatske željeznice and Zagrebački električni tramvaj, the most trusted source of information about products and services are the persons they know. These results are comparable with the study Global Trust in Advertising and Brand Messages (Nielsen, 2013), which shows that as many as 84% of respondents trust the persons they know as a source of information about products and services. The following important insights into the trust placed in information sources concern the highly ranked Internet forms as information sources: thus, user opinions and official websites usually rank second or third, while Internet news usually rank third among ZET users. These results are also comparable with Nielsen's survey (2013), in which 69% of the respondents place their trust in official websites of producers and 68% of them trust user opinions on the internet. Expectedly, by ranking out-of-home advertising tenth, the users of CA, HŽ and ZET have shown that they consider this information source the least trustworthy. E-mail messages have also proven to be unreliable as an information source, since the CA, HŽ and ZET users usually rank it ninth. The traditional media mostly rank fourth – primarily radio (CA and ZET). Only then follow newspapers (HŽ). The survey of trust in media in Croatia (Mučalo, 2010) primarily confirms the assumption that the Internet has an important role in providing information to individuals, since as many as 45% of the respondents consider it a positive or very positive source. It also confirms the results for trust in radio: 39% of the respondents consider it a positive or very positive source, which is higher than for television (35%) and daily papers (24%). When it comes to trusting media, we should also mention Pilar's Barometer (Ivo Pilar Institute, 2014), indicating that, when political issues are concerned, the most trustworthy Croatian information sources are television (19.9%), press (9.7%) and the Internet (8.2%).

The users of CA services consider the company's official website as the source that provides the most information about the organization's activities. Such importance of this type of communication could be explained by the fact that it provides information such as flight schedule, canceled flights, routes, as well as the information on fares that needs to be timely

and updated. On the other hand, personal experience does not rank as high as in the case of HŽ, because, presumably, air transport is usually chosen when traveling abroad (somewhat higher fares for domestic lines could be a reason), as is confirmed in Croatia Airlines passenger migration statistics for 2014. The users of HŽ services mostly obtain information about it from the persons they know; in the case of ZET, the source is personal experience. We should emphasize here that, while the users of CA, HŽ and ZET services do not perceive user opinions as an information source at all, they place the most trust in it, next to the persons they know. Radio, as one of the traditional media, is little used as a source of information about the organizations' activities; however, the users trust it more than they trust television, although the latter is more often used as a source of information about the organizations' activities.

If the user opinions about CA, HŽ and ZET are compared, CA is perceived as the most positive among them. The user opinion about Croatia Airlines is mostly positive in most cases. On the other hand, HŽ is perceived as the most negative among them; the share of mostly negative opinions exceeds the share of mostly positive ones. As regards ZET respondents, their answers reflect extremes, ranging from very positive to very negative opinions about ZET.

7. CONCLUSION

The results are indicative because the sample consists of volunteers and could thus reflect the trends in seeking information in public, air and railway transport in Croatia. The survey suggests there is a lack of strategic approach to developing communication via the information channels used daily by average passengers. The results of the opinion survey have shown that the users of Croatia Airlines, Hrvatske željeznice and Zagrebački električni tramvaj trust the Internet as a source of information about products and services more than they trust the more traditional sources. In this context, particularly important are official websites and user opinions on the Internet. User opinions rank high on the list of trustworthy sources of information about products and services; however, the users do not obtain the information about the transport organizations' activities from this source at all. Organizations like CA, HŽ and ZET should use such an important find for creating platforms under their own administration where their users could comment on their activities in order to establish a better mutual relationship and regulate their online image while adhering to ethical principles. This would create an opportunity for forming an online community closely related to an organization. Such a community could function as the organization's advocate.

LITERATURE

1. Block, E. (2013). A Culturalist Approach to the Concept of the Mediatization of Politics: The Age of ''Media Hegemony''. *Communication Theory,* 2013(23), 259–278.
2. Caulfield, B., O'Mahony, M. (2007). An Examination of the Public Transport Information Requirements of Users. *IEEE transactions on intelligent transportation systems*, 2007(8, no. 1), 21-30.
3. Castells, M. (2010). *The Rise of the Network Society*. New Jersey: Wiley - Blackwell.
4. Couldry, N., Hepp, A.(2013). Conceptualizing Mediatization: Contexts, Traditions, Arguments. *Communication Theory,* 2013(23), 191–202.
5. Burdette, D., Hickman, M. (2001). Investigation of Information Needs of Departing Air Passengers. *Transportation Research Record: Journal of the Transportation Research Bord*. DOI: http://dx.doi.org/10.3141/1744-09.

6. Jakopović, H., Mikelić Preradović, N. (2014). Mining Web and Social Networks for Consumer Attitudes towards Government-Owned Croatian National Airline. *International journal of computers*, 2014(8) 128-135.

7. Livingstone, S. (2009). On the Mediation of Everything: ICA Presidential Address 2008. *Journal of Communication* 2009(59), 1–18.

8. Luckerson, V. (2014). Fewer People Than Ever Are Watching TV. Retrieved 25.12.2015 from http://time.com/3615387/tv-viewership-declining-nielsen/.

9. Nielsen (2013). *Nielsen Global Survey of Trust in Advertising*. Retrieved 20.10.2015 from http://www.nielsen.com/us/en/newswire/2013/under-the-influence-consumer-trust-in-advertising.html

10. Nielsen (2015). The Nielsen Global Trust in Advertising Survey. Retrieved from 12.01.2016 http://www.nielsen.com/content/dam/nielsenglobal/apac/docs/reports/2015/nielsen-global-trust-in-advertising-report-september-2015.pdf.

11. O'Reilly, Lara (2015). Americans are watching less live TV than ever before — A nightmare scenario for TV networks Fewer People Than Ever Are Watching TV. Retrieved from 20.08.2015 http://time.com/3615387/tv-viewership-declining-nielsen/.

12. Parse.ly (2015). The Biggest Trends in Digital Media in 2015. Retrieved from 25.12.2015https://www.statista.com/chart/4154/digital-media-trends-2015/.

13. Rosenthal, R.,Rosnow, R. L. (1975). *The volunteer subject*. New York: Wiley.

14. Schulz, Winfried (2004). Reconstructing Mediatization as an Analytical Concept. *European Journal of Communication* 2004(19), 87-101.

HOW TO MEASURE DEBT SUSTAINABILITY IN DEVELOPED COUNTRIES? - A COMPARISON OF DIFFERENT APPROACHES

Ines Kersan-Skabic
Juraj Dobrila University of Pula
Faculty of Economics and Tourism "Dr. Mijo Mirkovic", Croatia
ikersan@unipu.hr

ABSTRACT
Considering there is no single methodology for measuring debt sustainability in developed countries the paper compares two approaches most commonly used in the analysis: (1) influence of public debt to GDP growth rate which indicates different findings – positive influence if the debt is low and negative impact above some particular level of public debt; and (2) the impact of public debt to interest rates (spreads) that indicates if the country is able to get money in the international financial markets at low interest rates, the level of debt is sustainable. The results of many different empirical analyses have been extracted and the conclusion points the diversity of results, methodologies, sample countries, but also the lack of systematic methodology to measure the debt sustainability. There is also area to additional research which should involve debt inter-causality with the current account as well as the connection between the debt with the amounts received from the European structural and investment funds.
Keywords: *developed countries, economic growth, interest rates, public debt*

1. INTRODUCTION

Debt problem usually appears in the literature dealing with developing countries, which are faced with the debt overhang situation (Krugman, 1988). The IMF and World Bank were developed widely used methodology of measurement the debt sustainability. The concept has been outlined as a group of indicators with specified thresholds[1]. Borrowing is a way to build some prerequisite for economic growth, but when it started to increase very fast and its level has been continuously rising (as a share of GDP) then the danger of the solvency arise.

During and after the last financial crisis the public debt became a burning problem in many developed countries and this opened the question how to measure the country's liquidity (debt sustainability) in their case. There are some high developed countries that have very high level of public debt, but they do not face a problem of over indebtedness because if their long-term government bond yields have been low and stable (Krugman and Eggertsson, 2011). On the other hand, there are countries where twice a lower level of the public debt to GDP ratio may create problems of finance it. The topic of debt analysing in the EU appeared during the late 1980s and 1990s because of the EU preparations for EMU establishment where one of the nominal convergence criteria regards the fiscal discipline (public debt below 60% of GDP and budget deficit below 3% of GDP).

The issue of debt can be observed from two sides: external debt and public debt where the first one is connected with the current account imbalances and the second regards the public sector spending. While external debt problem appears in many developing countries, the public debt is common problem of almost all EU member states and it has often been researched in the recent period.

---

[1] The World Bank has developed The Country Policy and Institutional Assessment (CPIA), and together with the IMFs Debt Sustainability Framework (DSF). The DSF is a standardized framework for conducting debt sustainability analysis (DSA) in low-income countries. It consists of the analysis of the country's projected debt burden over the next 20 years and its vulnerability to shocks and an assessment of the risk of debt distress.

Which level of public debt is (un) sustainable? What are the determinants of the debt's sustainability? How to measure the sustainability? Is there a debt threshold level above which it influences on growth become negative? Level of debt can be defined as "sustainable" if the main macroeconomic indicators of the country remain steady or show economic growth over the long-run (Rankin & Roffia, 1999). Two general approaches to debt sustainability analysis have been pursued: (1) the *first* one focuses on the financial sustainability (a borrower based approach)- it is possible to run a sustainable fiscal deficit as long as the growth rate of the economy is higher than the interest rate, which will in turn ensure the stability of debt-to-GDP ratio (Cuddington, 1996) and (2) the *second* approach evaluates if there is a present value borrowing constraint that could limit the quantities to borrow (Gupta, 1992).[2] This approach is applied in assessing the debt sustainability for developing and least developed countries. IMF provides the definition of debt sustainability: a debt "is sustainable if it satisfies the solvency condition without a major correction …given the costs of financing" (Wyplosz, 2007).

The aim of this paper is to compare and give critical overview of different approaches that economist have applied in the analysis of public debt in developed countries. We will focus the analysis on public debt due a lot of existing research in that domain while the papers about external debt are scarce. We will compare results, methodologies and point the important findings seeking for common characteristics but also differences. This will show the papers usually deal with the few important variables but also maybe it will point the uncovered issues in this area of research. In the analysis of debt sustainability, it is important to see: (1) the influence of debt on GDP growth rate and (2) interrelation between public debt and cost of borrowing (interest rates).

The rest of the paper is organized as follows: the second chapter contains the literature review about empirical findings about influence of public debt on the GDP growth, the third is focused on the public debt impact on the interest rate spreads and the last chapter is conclusion with policy implications.

The contribution of this paper is in a comprehensive synthetizing the existing literature/researches about the implications of public debt in the developed countries. It can be starting point (and opens the area) for new quantitative researches by upgrading the existing findings referring to the very topical subject of growing public debt (which is relevant at the EU level, but also at the national level).

2. PUBLIC DEBT AND GROWTH

Ricardo, Keynes, Barro had analyzed the debt problem but it became more important with the introduction of Economic and Monetary Union (Neck and Sturm, 2009) in EU when countries sacrifice their monetary sovereignty and their actions/instruments are focused on fiscal policy. The earlier approaches discussed the public debt neutrality, i.e. Ricardo pointed out the possibility of public debt neutrality, which was later called the '"Ricardian equivalence theorem" supposing deficit and tax financing of government budgets are equivalent with respect to capital accumulation. Keynes thought that debt finance was necessary to ensure an adequate level of aggregate demand because intended savings cannot be fully absorbed by private investments and that the burden of public debt is completely shouldered by the generation that issues the debt. This kind of assumptions results in a view that government budget deficits and government debt do not create particular problems: they are not harmful, even they are desirable in times of low aggregate demand and high unemployment to restore the full-employment equilibrium. Barro (1979) connect the level of debt with the taxes and warn that social planner should keep the tax rate constant. "The level of taxes is determined by the government's

intertemporal budget constraint, which says that the present value of spending, which is exogenous in the model, has to be equal to the present value of taxes" (Neck and Sturm, 2009). In the process of sustainability calculations authors research the (non) stationary of time series of public debt - whether the debt-to-GDP ratio is increasing in real terms and exceeds future discounted surpluses, the debt level is unsustainable. Big debt can became the opposite of the first idea (intention) of borrowing- it can be burden the further economic development and sacrificing growth (in the short and long run) can be very costly for every country. In the short-run governments can, through the borrowing at home at foreign market, provide funds for large investment's projects, increasing the wages in public sector, etc. which as consequence push the domestic demand and consumption. It has positive impact on domestic production and consumption, but the problems appear with the accumulation of multi-year deficits resulting in rising debt.

The conventional approach to debt sustainability analysis is a simple model, based on the standard debt accumulation equation:

$$\Delta b_t = \frac{i_t - g_t}{1 + g_t} b_{t-1} - pb_t + dda_t$$

where the change in the debt-to-GDP ratio (Δb_t) is derived from the cumulated impact of three components: the "interest-growth differential", which captures the impact of the debt ratio increasing (real) interest rate as well as the impact of the debt ratio-reducing (real) GDP growth rate; the primary balance (pb_t); and the deficit-debt adjustment (dda_t).

Various government debt sustainability assessment methodologies are considered by Aspromourgas et al. (2010), Frank and Ley (2009), Neck and Sturm (2009), Wyplosz (2007), Uctum and Wickens (2000). Aspromourgas et al. (2010) research the relationships between debt and interest rate spread as well debt and GDP growth rate. He opens the question of the possibility of sustaining permanent primary budget deficits. Uctum and Wickens (2000) provide theoretical framework for analyzing the fiscal policy sustainability. They based their research on government intertemporal budget constraint allowing for time-varying interest rates, for feedback from debt to primary deficit, for a finitive planning horizon suitable for medium-term policy making. They research the case of US and EU since 1970s and found that many countries don't have a sustainable policy. Putting the debt and deficit ceilings make the high pressure on most economies requiring a gradual rise (decline) in the tax (spending) rate that make fiscal policy a difficult political choice.

Van Riet (2010) summarize the conventional approaches in analysing debt sustainability indicating their limitation and adding the necessity to enlarge analysis on more systematic in-depth assessment of country-specific risks. It should be included a systematic monitoring of a broad set of fiscal liabilities and private sector imbalances and more emphasis should be placed on accounting for fiscal and economic behaviour in response to shocks. He also warns that the conventional approach doesn't include interrelationships between the variables: interest rates, growth rates and primary balance and he proposed the model-based approach to overcome this limitation and also stochastic-based approach accounting for uncertainty.

Contessi (2012) starts with the question: What are the main factors that contribute to making a country's debt sustainable or unsustainable? He reviewed the indicators of debt sustainability and compared situation of the peripheral European countries with five other countries (France, Germany, Japan, the UK and the US). The differences among the five peripheral countries can be reconciled under a traditional decomposition of the factor that impact government debt sustainability.

Snieska and Draksaite (2013) have given the critical overview of the criteria of assessment of public debt sustainability. They were oriented to the evaluation in the case of small country and warn about the complexity (high borrowing risk – vulnerability to the stochastic changes of global economy and international borrowing markets). Wyplosz (2007) criticizes the IMF

approach pointing that there is no model/formula that can incorporate all facts and some of them can not be predictable. He warns that it is important to see the revenue side (GDP, export, other revenues) and that there is no uniform rule to be applied on all countries. Drakšaite (2011) warns that assessment of government debt sustainability in stochastic economy requires focusing on the analysis of the contingency of economy. D'Erasmo et al. (2015) warn that traditional debt sustainability analysis is flawed and suggest three approaches in measuring the debt sustainability: empirical (based on a linear fiscal reduction function), structural (for evaluation of positive and normative effects of alternative paths of fiscal adjustment to attain debt sustainability) and domestic default approach (debt is sustainable when it is part of the equilibrium that includes the optimal debt issuance and default choices of the government).

In the numerous papers that research the influence of debt on GDP growth rate we can differ two groups of researches: (1) papers that estimates the sign and intensity of debt impact and (2) papers that are focused to determine the threshold above which the debt has negative impact or become unsustainable.

Barro, (1990); Reinhart and Rogoff (2010b); Kumar and Woo (2010); Checherita and Rother (2010), Cecchetti, Mohanty and Zampolli (2011); Checherita and Rother (2010) found that debt reduces long-run economic growth. Lo and Rogoff (2015) show that governments react to a rising public debt by increasing the primary surplus or running smaller deficits. The important issue is also to establish whether the long-run relationship studied is broadly the same in each country, or whether there are significant differences in the debt–growth nexus across countries. Eberhardt and Presbitero (2015) on the sample of 118 countries found the negative relationship between public debt and long-run growth across countries. Afonso and Jalles (2015) apply panel unit root and cointegration analysis in assessing the sustainability of public finances in OECD countries. They found no cointegration (no sustainability) between revenues and expenditures, improvement of the primary balances after worsening debt ratios and causality from government debt to primary balances. Berrittella and Zhang (2015) used a dynamic computable general equilibrium models to analyse fiscal sustainability of public debt on the sample of 18 EU member states. They found the constant tax rate that stabilize public debt converges to 50% of GDP for all countries and tax revenues are the main driving forces for fiscal sustainability. The contribution in terms of GDP growth rate differs among the countries with low debt-to-GDP ratio- where debt is relevant in the long term and countries with high debt-to-GDP ratio- where debt is relevant in the short-run.

Baum et al. (2013) used a dynamic threshold panel methodology to find out the non-linear impact of public debt on GDP growth for 12 euroarea for the period 1990-2010. They found positive impact of debt on GDP growth rate in the short-run, but this influence decrease to around zero and lose significance beyond public debt-to-GDP ratios of around 67%. If the country has high public debt-to-GDP ratio (above 95%), additional debt has a negative impact on economic activity. Farkasovsky et al. (2015) use non-parametric methodology in providing estimation of public debt to GDP for the Czech Republic and Slovakia until 2022 under three different projections (no change in public debt or primary balance to GDP; consolidation-primary balance to GDP to hold public debt to GDP at current level; consolidation toward the public debt to GDP ratio from pre-crisis period (2008)). They have included the variables: nominal interest rates, yields to maturity on public debt, inflation rates and average maturities of debt.

Antonini et al. (2013) research the time-series properties of debt to GDP ratio in 10 EU countries for the period 1982-2009. They found the asymmetric impact of different forms of fiscal consolidation-reduction in government spending has a more permanent effect than unanticipated increases in government revenue. The business cycle fluctuations have also long-term effects on the debt to GDP ratio. Landolfo (2008) based his analysis of fiscal policy sustainability in Euroarea and US on the government intertemporal budget constraints. He

applies a log-linearization of the public debt identity and generalizes the results by using a multivariate test. The conclusion is that both countries have a sustainable fiscal policy.

Collard et al. (2015) develop the framework for testing the maximum sustainability of public debt in advanced economies. They found the important indicators of sustainability are: primary surplus, expecting growth rate of the economy, volatility of growth, expected growth of debt in the future. They performed the research on 23 OECD countries where the public debt to GDP ratio in most countries in 2010 are below maximum sustainable debt. Countries that have debt above maximum estimated level received financial support during the financial crisis period.

Greiner (2014) analyzes the effects of public debt and its dynamics on economic growth in a basic endogenous growth assuming that the history of debt affects the primary surplus of the government. He found the economy with a balanced government budget is characterized by a unique balanced growth path while if countries have permanent public deficits there is no balanced growth path- probably there will exist two balanced growth paths.

Faraglia et al. (2013) found that higher debt leads to higher inflation and longer maturity leads to inflation that is more persistent although inflation plays a minor role in achieving fiscal sustainability. If country implement an independent monetary authority, inflation is higher, more volatile and more persistent and plays a significant role in achieving fiscal solvency.

Table 1: Influence of public debt on growth

Authors	Methodology	Countries	Period	Results
Barro (1990)	regression	98 countries	1960-1985	Negative impact of debt (non-productive government investments) to growth rate
Reinhart and Rogoff (2010a)	…	44 countries	Two hundred years	Weak influence of debt on GDP growth rate is the debt (GDP is below 90%; above 90% negative influence
Kumar and Woo (2010)	Growth regression (OLS)	Panel of advanced and emerging economies	1970-1997	Negative impact of debt on GDP growth rates
Checherita and Rother (2010)	Panel data (fixed models)	12 Euroarea countries	1970-2011	U shape impact; negative if debt/GDP is above 90-100%
Eberhardt and Presbitero (2015)	error correction model (ECM)	118 countries	1972-1990	Negative relationship between debt/GDP ratio and GDP growth rate
Berrittella and Zhang (2015)	Dynamic computable general equilibrium models	18 EU member states		Debt influences on GDP growth rate depends of its size (low debt/GDP- debt is relevant in the long-term)
Baum et al. (2013)	Dynamic threshold panel methodology	12 Euroarea countries	1990-2010	Positive impact of debt on GDP growth rate (in the short-run and with debt/GDP lower than 60%), zero influence (debt/GDP around 67%) and negative impact is the debt/GDP is above 95%
Antonini et el. (2013)	Time series	10 EU countries	1982-2009	Asymmetric impact of different forms of fiscal consolidation (reduction)
Cechetti, Mohanty and Zampolli (2011)	Growth equation, dynamic panel data (GMM)	18 OECD	1980-2010	Negative impact of debt to GDP growth (threshold is 90%)

3. PUBLIC DEBT AND INTEREST RATE SPREAD

Many authors have researched the role of the interest rates in public debt sustainability analysis where the first articles are from Domar (1944) and Pasinetti (1997) who derives three possible cases for the relationship between the rate of interest (i) and the growth rate of output (g): if $g > i$, d will tend to zero; if $g = i$, d will remain constant and, finally, if $g < i$, d keeps growing constantly. Clearly, in Pasinetti's view the rate of interest is the key variable to determine both the evolution of d and the tax that must be imposed 'in order to pay for the interests', thus keeping d constant.

The literature mainly suggests two channels through which fiscal conditions influence long-term interest rates: crowding out and default risk. Through the first channel, greater government funding leads to a smaller fund supply for private agents, which results in a higher long-term interest rate. Through the second channel, as fiscal conditions are more strained, the probability of government default is higher and investors require a larger premium to compensate for the risk, which leads to a higher interest rate (Ichiue and Shimizu, 2012).

De Grauwe and Ji (2013) find that the level of public debt is significantly correlated with long-term sovereign spreads in the Eurozone but that debt ratios have no statistically significant impact on sovereign spreads in standalone countries. Afonso et al. (2012) assess the determinants of long-term sovereign bond yields spread for the Euroarea, period 1999-2010 applying panel data methodology. Over the crisis period, macro and financial variables were good explanatory of long-term sovereigns interest rate spread. They also include credit ratings in the analysis and found them statistically significant in explaining spreads but with the limited role (in comparison with other macro- and fiscal fundamentals).

Aizenman, Jinjarak, and Park (2013) analysed the determinants of market spreads and find quite different results for pre-crisis, crisis and post-crisis years. The most important determinants of emerging market spreads in the pre-crisis periods (2004-07) were trade openness and state fragility; in the crisis period (2008-09) inflation and the external debt ratio, and in the post-crisis periods (2010-12) the main drivers of spreads were public debt and inflation. Greenlaw, Hamilton, Hooper, and Mishkin (2013) made analysis on 20 advanced economies for the period 2000-10 and find that a 10-percentage point increase in the debt-to- GDP ratio is associated with a 45 basis point increase in sovereign yields. They also found that countries with the public debt/GDP above 80% and persistent current-account deficits are vulnerable to a rapid fiscal deterioration as a result of these tipping-point dynamics.

Alper and Forni (2011), applied different samples and methodologies, find that a 10-percentage point increase in the debt-to-GDP ratio is associated with an increase in long-term yields that ranges between 10 and 70 basis points. Ichiue and Shimizu (2012) find that a 10-point increase in public debt is associate with a 13-16 basis point increase in long-term yields. They also commented the trend of interest rate movement- from the introducing the euro to beginning of European debt problem, the long term interest rates of peripheral countries converged on that of Germany (there were mispriced). Kinoshita (2006) develops a theoretical model linking government bond yields to government debt and tests its predictions using a panel of 19 advanced economies. The results suggest that a 1 percentage point increase in the government debt-to-GDP ratio raises the real long-term government bond yield by about 2-5 basis points. This impact is comparable to the 3-5 basis points effect found in Laubach (2009), Engen and Hubbard (2004) for the U.S. Poghosyan (2012) found that in the long-run government bond yields increase by about 2 basis points in response to a 1 percentage point increase in government debt-to-GDP ratio and by about 45 basis points in response to a 1 percentage point increase in potential growth rate. Attinasi et al. (2009) finds that higher expected budget deficits and/or higher government debt ratios relative to Germany contributed to higher government bond yield spreads in the euro area during the crisis years (2007-09). They did not find statistically significant effect of amount of resources committed by the governments for the

purpose of stabilizing the banking sector on sovereign bond spreads. Gerlach et al. (2010) analyse the determinants of sovereign bond spreads in the euro area where the main emphasize they give to the aggregate risk factor as well as on the size and structure of a country's banking sector but also found that government debt levels and forecasts of future fiscal deficits are significant determinants of sovereign spreads. Steinkamp and Westermann (2012) contribute to the debate about sovereign bond market including the share of senior lenders (IMF, ECB, EFSF) in total outstanding government debt. They found close relationship between senior tranche lending and recent development in the sovereign bond market.

Dell'Erba et. al. (2013) investigated the debt structure, debt level and sovereign spreads in emerging and advanced countries and found that there is a significant correlation between spreads and debt levels in emerging market countries and in advanced countries but in the latest the strength of correlation is about one fifth of that found in emerging market economies. For Eurozone countries, the correlation between spreads and debt ratios is similar to that of emerging market countries. Because they suffer from Original sin- their central banks (although they exist) do not have a function of domestic lender of last resort that can rule out self-fulfilling liquidity crises, and the results is that their government bond markets are more fragile and more susceptible to self-fulfilling liquidity crises than those of standalone countries (Corsetti (2010), De Grauwe (2011), Eichengreen and Hausmann (1999).[3]

Cizkowicz et al. (2015) applies various panel fiscal reaction functions, the analysis cover the period 1970-2013 for 12 euroarea member states. They found different results for peripheral countries in comparison with the EU core member states. Before the crisis in the peripheral countries, sovereign bond yields decreased sharply and fiscal stance ceased correspond to sovereign debt accumulation. It indicates to a lack of adequate adjustment in government current expenditure and direct taxes. In the core countries, the responsiveness of fiscal stance to inherited sovereign debt increased in the same period.

Additionally, some studies are oriented to calculate the debt projections (Berti, 2013; EC, 2014) using the forecasts on GDP growth rate, interest rate and the government's structural primary balance. The projections were done using VAR methodology and usually there are several versions of projections (no policy change assumptions but also sensitivity test regards some presumed changes in relevant variables).

Table following on the next page

---

[3] Original sin was first used in an economic sense in 1999 when economists Barry Eichengreen and Ricardo Hausmann described the developing world's inability to borrow abroad in their local currency the "original sin" of emerging markets. Original sin is a pernicious phenomenon. Borrowing in foreign currencies can both trigger and exacerbate financial and economic crises. When a country's debts are denominated in foreign currencies, it often forces policy makers to keep exchange rates pegged or heavily managed.

Table 2: Public debt and interest rates

Authors	Methodology	Countries	Period	Results
Afonso (2012)	Panel data methodology	Euroarea	1999-2010	Macro and financial variables are good explanatory of long-term sovereign interest rate spread
Greenlaw, Hamilton, Hooper and Mishkin (2013)	Panel data analysis	20 advanced countries	2000-2010	10 p.p increase in debt/GDP results in 45 basis points increase in sovereign yields
Alper and Forni (2011)	Panel data: OLS and IV regressions	53 economies: 28 advanced and 25 emerging economies	2002-2010	1 p.p increase in debt/GDP results in 2.5-4 points increase in yields for emerging countries and 1-7 points for advanced countries
Ichiue and Shimizu (2012)	Panel data analysis	10 developed countries	1990-2010	10 p.p. increase in debt/GDP results in 13-16 points increase in long-term yields
Kinoshita (2006)	dynamic general equilibrium model; panel data analysis	19 advanced economies	1971-2004	1 p.p increase in debt/GDP results in 2-5 asis points increase in long-term government bond yields
Poghosyan (2012)	Panel cointegration methodology	22 advanced countries	1980-2010	1 p.p increase in debt/GDP increase bond yields for 2 basis points in long-run
Laubach (2009)	regression	US	1976-2003	1 p.p. increase in the projected deficit/GDP is estimated to raise long-term interest rates by roughly 25 basis
Azenman, Jinjarak and Park (2013)	Principle component analysis; OLS, panel data (GMM)	Emerging markets	2004-07 (1) 2008-09 (2) 2010-12 (3)	Determinants of int.rate spread are: openness and state fragility (1); inflation and external debt (2) ratio; public debt and inflation (3).
Engen and Hubbard (2004)	Vector autoregression analysis	US	1953-2003	1 p.p. increase in debt/GDP increase the real interest rate by about 2-3 basis points

4. CONCLUSION - WHAT IS MISSING IN THE EXISTING RESEARCH?

The featured comparison of many researches that cover topic of public debt sustainability emphasized two approaches most commonly used in the analysis. One important aspect is influence of public debt to GDP growth rate which indicates different findings – positive influence if the debt is low; determine the threshold level of public debt and negative impact above some particular level of public debt. The second broad area of research regard the impact of public debt to interest rates (spreads) that points if the country is able to get money in the international financial markets at low interest rates, the level of debt is sustainable. The problem arises with the increasing of borrowing costs that are result of worsening the macroeconomic stability (internal and external imbalances).

In a variety of different papers the very few of them connect and research the interrelationship between public debt and current account. It is an interesting domain because the export revenues are important source for repayment of debt. Further, in the EU circumstances it is not negligible (especially in new member states and peripheral countries) the interrelation between public debt and structural and investment funds from the EU, as countries can finance some large (expensive) project from that source and in this way unburden the national budget and potentially reduce the level of deficit and public debt.

There is also a room for further and more detailed analysis taking into account annually repayment obligations (instead of public debt) with the growth perspectives (and revenues) of particular countries or group of countries.

The topic of public debt sustainability in developed countries has started to be in the focus of economists, but it will certainly be long considering the implications for the overall economy and the debt service burden for future generations. Economists in studying these topics do not deal with implementation of the IMF methodology, which is designed for developing countries, because the area of public debt is more complex, sensitive and should be considered its long-term repercussions.

LITERATURE

1. Afonso, A., Arghyrou, M.G. and Kontonikas, A. (2012). The determinants of sovereign bond yield spreads in the EMU, *Working Papers Department of Economics*, 36. ISEG - School of Economics and Management, Department of Economics, University of Lisbon.
2. Afonso, A., Jalles, J.T. (2015). Fiscal sustainability: a panel assessment for advanced economies , *Applied economics letters,* 22(11): 925-929.
3. Aizenman, J, Jinjarak, Y and Park D. (2013). Fundamentals and Sovereign Risk of Emerging Markets, *NBER Working paper,* 18963.
4. Alper, E. and Forni, L. (2011). Public Debt in Advanced Economies and its Spillover Effects on Long-term Yields, *IMF Working Papers*, 210.
5. Antonini, M.; Lee, K.; Pires, J. (2013). Public Sector Debt Dynamics: The Persistence and Sources of Shocks to Debt in 10 EU Countries, *Journal of money credit and banking,* 45(2-3): 277-298.
6. Aspromourgos, T., Rees, D, and White, G. (2010). Public debt sustainability and alternative theories of interest, *Cambridge Journal of economics*, 34(3): 433-447.
7. Attinasi, M.-G., Checcherita, C. and Nickel C. (2009). What explains the surge in euro area sovereign spreads during the financial crisis of 2007-09?. *European Central Bank Working Paper Series*, 1131.
8. Barro, R. J. (1990). Government spending in a simple model of endogenous growth, *Journal of Political Economy,* 98 (5 pt 2):103–S125.
9. Barro, R. J. (1979). On the determination of the public debt. *Journal of Political Economy*, 87:940–971.
10. Baum, A., Checcherita-Westphal, C.; Rother, P. (2013). Debt and growth: New evidence for the euro area, *Journal of international money and finance,* 32: 809-821.
11. Berrittella, M., Zhang, J. (2015). Fiscal sustainability in the EU: From the short-term risk to the long-term challenge, *Journal of policy modelling*, 37(2): 261-280.
12. Berti, K. (2013). Stochastic public debt projections using the historical variance-covariance matrix approach for EU countries, *European Economy, Economic Papers*, 480. Retrived 28.2.2016 from
http://ec.europa.eu/economy_finance/publications/economic_paper/2013/pdf/ecp480_en.pdf
13. Checcherita, C. and Rother, P. (2010). The impact of high and growing government debt on

economic growth: an empirical investigation for the euro area. *ECB Working Paper Series,* 1237.

14. Cizkowicz, P., Rzonca, A., Trzeciakowski, R. (2015). Windfall of Low Interest Payments and Fiscal Sustainability in the Euro Area: Analysis through Panel Fiscal Reaction Functions, *Kyklos*, 68(4): 475-510.

15. Collard, F., Habib, M.A. and Rochet, J.C. (2015). Sovereign Debt Sustainability in Advanced Economies, *Journal of the European economic association*, 13(3): 381-420.

16. Contessi, S. (2012). An Application of Conventional Sovereign Debt Sustainability Analysis to the Current Debt Crises, *Federal reserve bank of St Louis review,* 94(3): 197-220.

17. Corsetti, G. (2010). The 'original sin' in the Eurozone, VOX EU.

18. Cuddington, J.C. (1996). Analyzing the sustainability of fiscal deficits in developing countries. *World Bank: Policy Research Working Papers*, 1784. Retrieved 15.02.2016 from http://econ.worldbank.org.

19. D'Erasmo, P., Mendoza E.G. and Zhang, J. (2015). What is a Sustainable Public Debt?, *Handook of Macroeconommics*, 2. Retrieved 15.02.2016 from https://bfi.uchicago.edu/events/conference-handbook-macroeconomics-volume-2.

20. De Grauwe, P. (2011). The governance of a fragile Eurozone, *Economic policy, CEPS working documents.*

21. Dell'Erba, S., R. Hausmann and U. Panizza (2013). Debt Levels, Debt Composition, and Sovereign Spreads in Emerging and Advanced Economies, *CID Working Paper*, 263.

22. Dias, J. (2012). Sovereign debt crisis in the European Union: A minimum spanning tree approach, *Physica A*, 2046–2055.

23. Domar, E. (1944). The burden of the debt and the national income, *American Economic Review*, 34(4): 798–827.

24. Drakšaite, A. (2011). Assessment of the sustainability of government debt in a stochastic economy, *Intellectual Economics*, 5,(3): 401–415.

25. Eberhardt, M. and. Presbitero, A. F. (2015). Public debt and growth: Heterogeneity and non-linearity, *Journal of International Economics* 97: 45–58.

26. Eichengreen, B. and Hausmann, R. (1999). Exchange Rates and Financial Fragility. Paper presented at the symposium New Challenges for Monetary Policy, August 26–28, Jackson Hole, WY.

27. European Commission (2014). Assessing Public Debt Sustainability in EU Member States: A Guide, *European Economy, Occasional Papers*, 200.

28. Faraglia, E., Marcet, A., and Oikonomou, R. (2013). The Impact of Debt Levels and Debt Maturity on Inflation. *Economic Journal*, 123(566): 164-192.

29. Farkasovsky, V., Lawson, C. W., Zimkova, E. (2015). A debt sustainability analysis of the Czech republic and the Slovak republic: a non parametric approach, *E & M ekonomie a management,* 18(3): 18-29.

30. Frank, N. and Ley, E. (2009). On the Probabilistic Approach to Fiscal Sustainability: Structural Breaks and Non Normality. *IMF Staff Papers*, 56(4): 742-757.

31. Genberg, H. and Sulatarova, A. (2008). Macroeconomic volatility, debt dynamics, and sovereign interest rate spreads. *Journal or International Money and Finance*, 27(1): 26-39.

32. Greenlaw, D., Hamilton, J.D., Hooper, P. and Mishkin, F.S. (2013). Crunch Time: Fiscal Crises and the Role of Monetary Policy, paper written for "U.S. Monetary Policy Forum", New York, February 22.

33. Greiner, A (2014),. Public Debt and the Dynamics of Economic Growth, *Annals of economics and finance*, 15(1): 185-204.

34. Gros, D. and Alcidi, C. (2011). Adjustment Difficulties and Debt Overhangs in the Eurozone Periphery, *CEPS Working Documents*, Brussels.
35. Gupta, Khanaya L. (1992). *Budget deficits and economic activity in Asia, USA and Canada*: Ed. Routdledge
36. Ichiue, H. and Shimizu, Y. (2012). Determinants of Long-term Yields: A Panel Data Analysis of Major Countries. *Working paper*, Bank of Japan.
37. Kinoshita, N. (2006). Government Debt and Long-Term Interest Rates, *IMF Working Paper,* WP/06/63. Retrived 18.02.2016 from
https://www.imf.org/external/pubs/ft/wp/2006/wp0663.pdf.
38. Krugman P. and Eggertsson, G. (2011). *Debt, Deleveraging and the Liquidity Trap*, No 1166, 2011 Meeting Papers from Society for Economic Dynamics.
39. Krugman, P. (1988). Financing vs. Forgiving a Debt Overhang. *Journal of Development Economics*, 29: 253-268.
40. Kumar, M. S. and Woo, J. (2010). Public Debt and Growth. *IMF Working Papers* 174.
41. Landolfo, L. (2008). Assessing the sustainability of fiscal policies: empirical evidence from the Euro area and the United States, *Journal of applied economics*, 11(2): 305-326.
42. Laubach, T. (2009). New Evidence on the Interest Rate Effects of Budget Deficits and Debt, *Journal of European Economic Association*, 7: 858–85.
43. Lo, S. and Rogoff, K. S. (2015). Secular stagnation, debt overhang and other rationales for sluggish growth, six years on. *BIS Working Papers* 482. Bank for International Settlements.
44. Neck, R. and Sturm, J.-E. (2009). Sustainability of public debt. *Journal of Economics*, 97(1): 95-96.
45. Pasinetti, L. (1997). The social burden of high interest rates, in Arestis, P., Palma, G. and Sawyer, M. (eds), *Capital Controversy in Honour of Geoff Harcourt*, vol. I, London, Routledge.
46. Poghosyan, T. (2012). Long-Run and Short-Run Determinants of Sovereign Bond Yields in Advanced Economies, *IMF Working paper*, 271.
47. Rankin, N., and Roffia, B. (1999). Maximum Sustainable Government Debt in the Overlapping Generations Model. *CEPR Discussion Papers,* 2076.
48. Reinhart, C. M. and Rogoff, K. S. (2010). Growth in a Time of Debt. American Economic Review,100(2): 573–78.
49. Snieska, V. and Draksaite, A. (2013). Evaluation of Sustainability of the General Government Debt in a Small Open Economy, *Mediterranean Journal of Social Sciences* MCSER Publishing Rome-Italy, 4(9): 610-618.
50. Steinkamp, S. and Wetermann, F. (2012). On Creditor Seniority and Sovereign Bond Prices in Europe. *CESifo Working Paper*, 3944.
51. Wyplosz, Ch. (2007). Debt Sustainability Assessment: The IMF Approach and Alternatives. *HEI Working Paper*, 3.

THE DEVELOPMENT ASSISTANCE OF THE UNITED KINGDOM TO INDIA IN THE YEARS 1991 - 2014

Grzegorz Grabowski
WSB University in Poznan, Poland
grzegorz.grabowski@wsb.poznan.pl

ABSTRACT

Nowadays international economic cooperation in the form of development assistance might need to be revised. Everyone is aware of significant economic growth of some developing countries as Brazil, China, Mexico, to mention a few, which causes the world to change dramatically. Then, donors of the aid need to adjust to the new condition. A good example of this process is relation between the UK and India. The British policy on development assistance has played a meaningful role in their international relations in recent years. On the other side, India is widely recognized as one of the world's fastest-growing economies. Nevertheless, it could still be considered as a developing country - where poverty is falling fast but it remained the serious issue.

The paper is an attempt to present the bilateral development assistance from the UK to India over almost the twenty-five years, since Indian government started liberal reforms in 1991, to examine the argument that the British are one of the leaders in development assistance and to raise the problem of future perspectives of development cooperation. This article briefly explains the evolution of the British assistance, especially in relation to Indian economy which was the main recipient of their aid.

Keywords: development, development assistance, India, the UK

1. INTRODUCTION

Giving international aid could be the way to overcome the economic underdevelopment (Kamerschen, McKenzie, Nardinelli, 1993, p. 975)[1]. Additionally, Jeffrey Sachs emphasised that a foreign help in shape of a development assistance from the governments fosters capital accumulation, economic growth and increases household incomes. As a result, it might be a method to break out of the poverty trap, on condition that this aid is provided long enough and that the amount is big enough (Sachs 2006, pp. 249-250). At last, foreign aid, including also official development assistance (ODA), is a tool of foreign policy, which has obtained a bigger importance after the September 11 attacks - regardless of the reasons for donating (OECD, 2011, p. 32). Consequently, development assistance is getting more important for the global economy. Simultaneously, in recent decades, the economic rise of countries like China, Brazil and India has influenced the policy on foreign aid. The sharp fall in the number of people living in poverty (absolute or dollar-a-day) and the emergence of a new middle class forced it, but poverty has not gone away.

The government of the United Kingdom (UK), after the Labour Party won election in 1997, engaged a lot in development assistance. The British were even seen as a model donor country (OECD, 2010, p. 13)[2]. Furthermore, India, historically and contemporary, belonged to the group of the main recipients of the British development assistance and at the same time, the UK was the key-donor for Indian economy.

---

[1] It is appropriate to mention that this aid might be a source of the exogenous economic underdevelopment as well.
[2] W. Easterly and T. Pfutze indicated the Great Britain as a second best donor of development assistance, after the International Development Association (IDA), a member of the World Bank Group, so it meant the best bilateral donor of development assistance (Easterly, Tobias, 2008, p. 49).

It should be underlined that the economy of India, since the beginning of 90s., was flourishing and even about 10% of growth was noted (although, the economic slowdown was observed too). In 2014, GNI (atlas method, current USD) was 2,027,963 million, which accounted for 2.6% of the world GNI and meant 9th position on the list of the biggest economies. India belonged to the group of lower middle income countries. On the contrary, at the turn of the century, 35% of the society lived on one dollar a day. In 2014, GNI per capita, Atlas method (current USD) was just 1,570 and with a population of around 1.295 billion, (www.databank.worldbank.org, 08.03.2016), it gives a glimpse of underdevelopment of the Indian economy[3].

The aim of this article is to present the British bilateral official development assistance for India in the years 1991 - 2014, since the government in Delhi started liberal reforms in 1991, which "opened" the Indian economy to the world[4]. First, briefly is presented the genesis of British ODA with the special focus on India, then we concentrate on the volume and the major indexes. Placing emphasis on its structure in terms of sectors, sources and forms of flow. Finally, by using the method of case study of the relation between the UK and India, there is an attempt to examine the argument that the British are one of the leaders in development assistance and to focus on future perspectives of development cooperation.

2. THE GENESIS OF BRITISH ODA IN INDIA

Despite the fact that official development assistance as a transfer of resources from a donor country to another country in order to help people, is a relatively new phenomenon, it should be mentioned that in the past (XVII and XVIII century), it was common to use a financial support as a diplomatic tool of foreign policy and was similar, to some extent, to present official development assistance[5].

With the development of colonialism arose a need of development assistance. Although, in the case of the UK, the beginning of this tendency was observed in 1929 but on greater scale it started not earlier than in 1945. It was a consequence of the fact that the overseas territories were considered to be a source of wealth for Europeans. Additionally, the British - in the theory - were trying to create a self-reliance of their colonies (including also a financial independence). Therefore, in XIX century, one could observed that the development of overseas territories was linked to private investments in mines or agriculture, while public investments were financed mainly by the revenues from local taxes or by borrowings at London market. So, at that time, there was no conscious government policy on supporting the colonies (according to the idea of the laisez-faire, there was no need of development assistance). The reorientation appeared at the turn of the century, when greater concern was expressed about the economy of colonies. Later, a further impetus was given by the I world war, in result of which the position of the local population was strengthened (Cliffird, Little, 1965, pp. 21-22).

---

[3] The British outlined three key faces of India - "Poorest India" with the 456 million Indians living on less than USD 1.25 per day, without access to basic services, who cannot feed their children adequately; "Developing India" - a further 372 million people who live on less than USD 2.50 per day, and whose lives are improving but they are still vulnerable to any shock; "Global India" - a country with global problems such as international trade, climate change or a country which is a donor of developing assistance (OECD, 2010, p. 116).

[4] More about Indian reforms see (Virmani, 2006, p. 20).

[5] Nowadays, it is widely accepted that foreign (overseas) aid is, in the broad sense, a transmission of resources in international scale from a donor-country to recipient-country, which does not come from a market operation; it is a transfer of resources caused mainly by governments or by international organisation acting in the name of governments and also to some extent by NGO (Samecki, 1997, p. 17). In the stricter sense - foreign economic aid (assistance) excludes military aid (assistance) and according to OECD there is official development assistance (ODA) - "Flows of official financing administered with the promotion of the economic development and welfare of developing countries as the main objective, and which are concessional in character with a grant element of at least 25% (using a fixed 10% rate of discount)." (www.oecd.org, 08.03.2016).

In 1929, for the first time, after passing the Colonial Development Act, the British started to give the non-reimbursable loans for the development of their colonies, especially for the infrastructure - the scale was not large (Cliffird, Little, 1965, pp. 30-31). Next step was taken in 1940, when financial engagement went up and the Colonial Development and Welfare Act was enacted. In following years, more and more money was spent and in 1948 Colonial Development Corporation was found (on the basis of the Overseas Resources Development Act). These actions were limited just to the British colonies. Later on, with the end of the London Empire and the process of decolonisation, arose a need to help former British employees and to create an administration in new-born countries. This resulted in starting Overseas Service Aid Scheme to indemnify or to support recruiting people. This was actually a beginning of technical co-operation of London (Cliffird, Little, 1965, pp. 36-37; www.dfid.gov.uk, 08.03.2016).

The end of the II world war and decolonisation were crucial for the development of ODA[6]. The new members of the United Nations (UN) made the multilateral economic aid more important (also in the case of the UK). The bipolar world and the rivalisation between the West and the East about the influences in the developing countries caused the growth of resources for foreign economic assistance (Samecki, 1997, pp. 51-53)[7].

The price fall of export products and the high costs of reorganisation of new economies after becoming a sovereign country, led to a boost in demand for a foreign economic aid. There was also a need to be less dependent on British loans, which forced to buy products from the UK. This was especially the case in India, where the second five-year plan started in 1955 and caused a serious danger for the economic crisis (Clifford, Little, 1965, p. 21-22).

The British government in the White Paper from 1960 indicated that the best way to combat the poverty in the world is an economic growth. It was also reported, in 1964, that there was moral obligation of the UK to support the economic development of poor countries, which, on the other side, was in the interest of the international community in the long-term. This was a next strong impetus for the issue of development assistance. As a result Overseas Development Administration was changed into Ministry of Overseas Development in 1964 - later reshaped toward the Department for International Development (DFID).
After the boom of development assistance in 1950s. and 1960s., in 1970s. and 1980s., there was still observed a growth of ODA flow. Then a doubt and a criticism dominated - about the sense and effectiveness of this activity. At the same time, bigger role of NGOs concerning development assistance rose and when the cold war passed away - the governments of rich states lost their motivation for donating the economic aid. In effect, ODA net decreased by 1/3 in 1990s. in comparison to 1980s[8]. "The Big Bang" - reorientation on the development assistance policy came with the September 11 attack of 2001.

---

[6] The American government, between April 1949 and June 1951, led reconstruction programme (called the Marshall Plan) to rebuild countries ravaged by war. Western Europe received around USD 13 billion for post-war reconstruction (equivalent of about USD 108 billion in 2006 dollars), which is commonly treated as the beginning of present development assistance. At the same time, Organisation for European Economic Co-operation was found to manage the Plan and later it turned into Organisation for the Economic Co-operation and Development (OECD) in the early 1960s (Keeley, 2012, pp. 49, 69-71).
[7] Indian economy is a good example for instrumentalisation of economic aid, as a result of competition between the West and the communist about impact on Delhi.
[8] As a response, the Millenium Development Goals were enacted in 2000 (www.economist.com, 08.03.2016).

3. AMOUNT STRUCTURE, AND DYNAMICS OF BRITISH ODA INTO INDIA

In 2014, the total net disbursement of British ODA was USD 19,306 million and it meant the second biggest donor-country, after the United States (USD 33,096 million) and before Germany (USD 16,566 million). British development assistance accounted for 14% of total value of ODA from DAC Countries, which reached the maximum volume of USD 137,222 million (www.stats.oecd.org, 29.02.2016)[9].

DAC Countries provided 63% of ODA in India in 2014, the following 36% came in the multilateral form of assistance, where the major role played IDA, the part of the World Bank (54%) and the Global Fund (12%). The UK, as a bilateral donor, was the second biggest (15% of total net ODA), just before Germany (15%), but the evident leader was Japan (24%). It is worth mentioning also France (4%) and the United States (3%). The position of Americans (the biggest donor country of ODA in the world), in this ranking, clearly indicates low involvement of Washington in development assistance for Delhi (www.oecd.org, 29.02.2016).

British net disbursements of ODA to Developing Countries was USD 2,688 million (constant prices, 2013) in 1991 and it constituted 4% of total amount USD 64,865 million from all DAC Countries. From the mentioned sum, London devoted USD 220 million for Indian economy (that is 8%), while the Indians received USD 2,437 million of ODA, which was 4% of development assistance from DAC donors. In this picture, British involvement in an official development assistance for India, in comparison to other donors and to other recipients of assistance from the UK, was appreciable and what is more, it increased in the following years.

However, during the examined time, the value of total ODA net from DAC Countries for India changed a lot. It was in decline to the level of USD 781 million until 2000 and then it was periodically increasing and decreasing - in 2004, it was just USD 14 million. In 2014, the disbursements were lower than in 1991 (USD 1,901 million). Besides, the turndown of the ODA for India, the development assistance from the UK increased up to USD 428 million (the highest level was reached in 2010 - USD 695 million). The value grew by 216% from 1991 to 2010 and by 95% to 2014. Basically, one could observe a decline of British ODA until 1993, when it had the lowest value of USD 130 million and afterwards it could be noticed that the fixed base index had increasing tendency, except 1997 and 1999. However, the biggest augment was observed from 2002 to 2010 (compare to Table 1).

It should be also emphasised that there was a growth of British ODA share in total value of development assistance for India from DAC Countries (from 9% in 1991 to 23% in 2014 and the share was even higher between years 2002-2010). It could be explained as a result of a bigger commitment of British government in development policy together with decreasing position of India as a recipient country. This tendency was in conformity with the growth of British ODA share for all developing countries in the total ODA for these countries from the states which belonged to DAC (from 1991 to 2014, the share rose almost 3 times, from 4% to 11%) (www.stats.oecd.org, 29.02.2016).

---

[9] OECD's Development Assistance Committee (DAC) member states belong to the main donor countries of development assistance, although, in recent years, a bigger role of private donors (especially Bill & Melinda Gates Foundation) and countries as Saudi Arabia, the United Arab Emirates, China or India was observed (OECD, 2011, pp. 212-215).

Table 1: ODA net disbursements to India and Developing Countries from the UK and DAC Countries in the years 1991 - 2014, USD millions, constant prices, 2013, (www.oecd.org, 24.02.2016)

Year		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
India													
United Kingdom	USD, million	220	216	130	159	214	225	209	247	177	286	253	468
	1991=100	100	98	59	72	97	102	95	112	80	130	115	213
	%	9%	13%	12%	10%	18%	19%	18%	21%	19%	37%	21%	49%
DAC Countries	USD, million	2437	1609	1121	1551	1185	1201	1172	1177	934	781	1218	960
Developing Countries													
United Kingdom	USD, million	2688	2445	2497	2799	2581	2615	2690	2823	3016	3793	3793	4776
	1991=100	100	91	93	104	96	97	100	105	112	141	141	178
	%	4%	4%	4%	5%	5%	5%	6%	5%	6%	7%	7%	8%
DAC Countries	USD, million	64856	61346	57743	58028	51690	52118	47002	51587	53783	53413	54791	61512
Year		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
India													
United Kingdom	USD, million	404	392	602	349	456	588	687	695	458	464	420	428
	1991=100	184	178	274	159	207	267	312	316	208	211	191	195
	%	141%	-	63%	49%	50%	38%	43%	32%	24%	33%	23%	23%
DAC Countries	USD, million	287	14	960	712	908	1544	1607	2178	1894	1395	1839	1901
Developing Countries													
United Kingdom	USD, million	4700	5677	8486	8730	5006	7029	8061	8572	8545	8693	10545	10475
	1991=100	175	211	316	325	186	261	300	319	318	323	392	390
	%	7%	8%	9%	10%	6%	8%	9%	9%	9%	10%	11%	11%
DAC Countries	USD, million	66427	66948	98022	89757	79856	89764	89230	94794	93498	88947	93536	94249

British position as a donor country for India, in the years 1991-2014, in comparison to other countries, was relatively stable - the UK was always at the forefront. As it was indicated before, during analysed time, London was getting involved in development assistance for Indians more and more, but the pace was weakening in the last 5 years. In 1991, the UK was the third biggest donor country of bilateral net ODA (USD 220 million, constant prices, 2013), which meant 9% of total net ODA from DAC Countries. The biggest provider of bilateral development assistance was Japan. They transferred USD 1,029 million and it accounted for 42% of ODA net from ODA donors. Then, the second biggest inflow came form Germany - USD 400 million and it constituted 16% of the total development assistance. The fourth position was held by the Netherlands (USD 213 million, 9%), (www.stats.oecd.org, 29.02.2016).

Until 2004, the inflow of ODA net from the majority of donor countries and DAC Countries in total was in decline. In spite of that, Japan has maintained the biggest bilateral donor for India. In comparison to 1991, there should be noted a reduction from USD 2,437 million to as little as USD 14 million of total ODA net value for India from DAC states. Whereas, in the case of Japan, the value was even USD -82 million. At this time, the UK was an exception and their ODA net grew from USD 220 million in 1991 to USD 404 million in 2003, since when London became the biggest bilateral donor for India up to 2008, when once again the Japanese overtook the British. Previously Great Britain got ahead Germany in the list of the biggest donors in 1995, so the British were clear leaders of assistance for India. In 2005, they gave as much as

63% of total ODA net from DAC Countries (USD 602 million), while Japan transferred USD 73 million, Germany USD -81 million. Also worth mentioning is that in years 2001-2004, we could observe a considerable fall of ODA net for Indians. It covered the inflow from all donors (by 63%), all DAC Countries (by 99%) and from individual DAC states, especially from Japan. The UK remained a bright exception and the value of ODA net grew by 55% from USD 253 million to USD 392 million. Situation has changed since 2010, when Japan and Germany played bigger role as a donor of assistance for India. And at the same time, there was a cut of 38% of the British development assistance for India, from USD 695 million in 2010 to USD 428 million in 2014 (www.stats.oecd.org, 29.02.2016).

4. THE SECTOR STRUCTURE OF BRITISH ODA IN INDIA
Likewise, the structure of total official development assistance for Indians changed during analysed period, the same was observed about British ODA in India (compare to Table 2). In 1995, the majority of assistance from the UK was transferred in the sector of economic infrastructure and service. It was USD 121 million (in constant prices, 2013), where 84% of this sum, was spent on energy, the following 16% on banking and financial services. The second biggest sector was social infrastructure and services (USD 73 million) - made up of the aid in area of health protection (USD 30 million), education, population policy, water supply and sanitation, government and civil society and other social infrastructure and services. Help in production sectors was divided into halves (agriculture, forestry, fishing and industry, mining and construction). Only USD 1 million was allotted for multi-sector assistance. Against a backdrop of total ODA net for India in 1995, one could observe convergence with a reservation in the case of the social infrastructure and services (Indian economy received USD 793 million). The bulk of this sector was covered by assistance for water supply and sanitation (USD 474 million). Apart from that there was relatively a bigger engagement in production sectors (USD 862 million), especially in agriculture, forestry and fishing (USD 775 million) and also bigger concentration on multi-sector aid (above all, on general environment protection).

Considering the sector structure in the next years, there was relatively a bigger concentration on the British assistance combined with social infrastructure and services than with social infrastructure and services, in comparison to the total ODA received by India. Both the value and the share in total value of this sector grew, by 2000, it was USD 319 million (16% and an increase of 7 percentage point), by 2005, USD 656 million (29%) and then sharply fell to USD 89 million (4%). In following years the share did not exceed 10%. The UK, in the context of the mentioned sector, mainly channeled the assistance for health and population policy (it constituted for 63% of total value in 2005) and in recent two years for education. London kept also spendings to support the development of civil society.

Presented statistics about the total and British assistance for economic infrastructure and services was in decline up to 2005, when it accounted for USD 675 million (36% less than in 1995) of which USD 53 million derived from the UK (56% less than in 1995). On the whole, later the significant growth was noted (USD 4,177 million in 2014) but it was not related to British policy and tendency. In opposition to other donors, London did not give the support in the field of transport and storage and was more active in area of energy. Nevertheless, the value of assistance connected to energy was reduced from USD 102 million to USD 12 million, while the total value grew from USD 866 million in 1995 to USD 1,648 million in 2014. The British, at the same time, were more engaged in banking and financial services. During analysed period, there was also a multi-sector assistance, especially with reference to general environment

protection, but this was not the case of the UK. The British government was not engaged much in programme or humanitarian aid.

Table 2: Sector structure of total ODA commitments (a) and British ODA commitments (b) in India, USD millions, constant prices, 2013, (www.oecd.org, 03.03.2016)

		1995	2000	2005	2010	2011	2012	2013	2014
Social Infrastructure & Services	a	793	1957	2248	2320	2010	2181	2085	2452
	b	73	319	656	89	81	32	217	163
Education	a	69	584	94	1222	294	645	233	1525
	b	2	34	..	11	12	15	83	137
Health	a	70	596	438	266	255	259	477	269
	b	30	225	289	56	13	13	49	16
Population Policy/ Reproductive Health	a	50	164	282	319	243	162	423	67
	b	1	26	179	..	24	..	69	2
Water Supply & Sanitation	a	474	172	619	305	638	841	735	460
	b	4	11	..	11	..	0	1	2
Government & Civil Society	a	10	358	319	106	305	122	57	50
	b	4	24	186	10	7	3	13	5
Other Social Infrastructure & Services	a	120	73	496	102	276	152	160	80
	b	32	0	1	1	26	1	1	2
Economic Infrastructure & Services	a	1050	379	675	2709	1629	2734	4843	4177
	b	121	96	53	161	55	90	88	101
Transport & Storage	a	156	154	200	2223	209	1354	3338	1981
	b	..	3	..	64	3	4	1	..
Communications	a	0	0	4	37	8	17	23	40
	b	..	..	..	36	7	15	8	2
Energy	a	866	179	349	217	1350	1042	885	1648
	b	102	57	27	13	28	35	17	12
Banking & Financial Services	a	28	35	113	224	61	319	595	507
	b	19	35	26	48	17	36	61	86
Business & Other Services	a	1	11	9	7	1	2	2	1
	b	..	0	..	0	0	0	0	1
Production Sectors	a	862	334	613	278	1783	822	621	831
	b	13	45	1	25	30	17	29	9
Agriculture, Forestry, Fishing	a	775	238	484	221	1444	797	460	492
	b	7	36	..	3	4	7	11	6
Industry, Mining, Construction	a	87	87	40	39	337	12	154	333
	b	6	0	..	18	26	1	13	2
Multi-Sector/ Cross-Cutting	a	378	45	334	2047	349	291	174	258
	b	1	10	26	31	5	21	21	5
General Environment Protection	a	132	16	28	575	224	201	26	154
	b	..	3	2	7	5	2	1	2
Humanitarian Aid	a	4	79	104	314	24	21	130	156
	b	0	32	12	..	..	..	0	..

5. THE STRUCTURE OF MAIN ODA FLOW

In the OECD statistics, official development assistance, considering the form of flow, could be divided into ODA loans, ODA grants and equity investment. In the case of British development assistance for India, grants dominated during almost all analysed time (except for 2010-2012). Considerably less important were equity investment and loans were not listed (www.stats.oecd.org, 29.02.2016).

In 1995, the British committed USD 158 million in the form of grants (constant prices, 2013), which accounted for 76% of their ODA. The other 24% (USD 51 million) was in the form of equity investment. With regard to the other country, London was almost the only donor of ODA as equity investment (another state was Finland, which transferred as little as USD 0.29 million). The British did not preferred ODA loans at all and they came mainly from Japan and IDA. The UK was the fourth biggest donor of grants for India, after the Netherlands (USD 209 million) and EU Institutions (USD 178 million). In the following years this structure remained.

In 2000, all the British ODA was in the form of grants (USD 531 million), in consequence, 35% of grants obtained by India were from London. This situation remained nearly unchanged 5 years later, 97% of the British ODA were grants (USD 761 million) and it meant almost half of this assistance for Indians. In this year, USD 26 million was passed as equity investment, so London was the second biggest donor, after Germany (USD 108 USD).

In the following years, the picture was similar - ODA of the UK for India was dominated by grants (in 2006 - 99%). The change was observed in 2010, when significant fall was noted, 25% accounted for grants and the rest was equity investment (USD 229 million) - in the same pattern was seen 2011. In 2014, British ODA was as grants (USD 171 million) and equity investments (USD 112 million), loans were not present (they were dominated by Germany, Japan and the World Bank).

6. MAIN SOURCES OF BRITISH OFICIAL DEVELOPMENT ASSISTANCE
The UK provided development assistance, including help for India, through different institutions. One should basically reported two periods in 1991 - 2014. The first, whilst the Conservative Party and John Major was in power and the second, since 1997, when Labour Party with Tony Blair won the election.

In 1990s, Overseas Development Administration, which was under the Foreign and Commonwealth Office, was mostly responsible for the British policy on ODA. In this time, the aim of the development assistance was mainly to support the economic reforms in order to accelerate economic growth and reduce reliance on assistance. The British were engaged in action concerning cutting down the poverty, promoting development of private sector and social development by improvement of education and health systems. The aid was especially given for the countries which declared to run programmes in coordination with the International Monetary Fund (IMF) and the World Bank. The development assistance was sent to the countries unable to finance their imports necessary to keep the economic growth (it had a form of additional financing for this import or sometimes, it was a tied aid because of the obligation to buy British products) (HMSO, 1993, pp. 1, 5). Discretely, Overseas Development Administration was responsible for humanitarian aid, which played a bigger role than after 1997 (HMSO, 1993).

The change of the party in power in 1997, was also the beginning of fundamental revision of British policy on official development assistance, that coincided with the global reorientation. Tony Blair, implementing new postulates (proclaiming a motto "New Labour"), where he resigned from several traditional leftist aspirations, raised the issue of development assistance and remained high since then on British agenda. As a result, in 1997, the Department for International Development (DFID) was set up in place of the Overseas Development Administration. This independent department soon become the main source of ODA from the

UK (Barder, 2007, p. 13). A basic goal of DFID was a world poverty reduction and it was sanctioned by the International Development Act 2002, where additionally it was said that "development assistance" meant assistance provided for the purpose of "(a) further sustainable development in one or more countries outside the United Kingdom, or (b) improving the welfare of the population of one or more such countries." (International Development Act *2002*, p. 3). This document regulated the issue of a humanitarian aid, a multilateral assistance and an assistance for British overseas territories. Besides, it banned a tied aid, which should be underlined, as a positive change.

Aside from DFID, among the other sources of ODA, one should mention the Department for Energy and Climate Change (the second biggest budget), the Foreign and Commonwealth Office, the Welsh Assembly, the Department for Culture, Media and Sport, the Department of Health, the Department for Energy, Food and Rural Affair, and Scottish Government. Apart from that, there were joint efforts of government institutions as Conflict Pool (by the Ministry of Defence and the Foreign & Commonwealth Office) and it should be also listed: Gift Aid[10], CDC PLC[11], Colonial Pensions and other multilateral ODA (by the European Union or the UN) than financed by DFID[12].

7. CONCLUSION

The bilateral development assistance of the UK to India from 1991 to 2014 should be concluded that might be divided into two parts. First, concerning the beginning of the 1990s., when the assistance was limited. Second, after the Labour Party won the election in 1997 and changed the policy on the official development assistance. In effect, it started to play the meaningful role in relation between these two countries. There was a significant quantitative and qualitative increase of ODA after 1997, which was not even much disturbed by the financial crises of the UK in 2007. In the following years, in context of Indian economic progress, the British decided that all assistance would end by 2015 (Desai, Ledlie, 2012) and this was reflected in the above figures. Concentraction of ODA flow through the DFID, after 1997, should be also considered as a positive change - it enabled better effectiveness as reported by OECD official reports (OECD, 2010).

Besides, the mentioned changes are coherent with the analysis of the share ODA/GNI ratio. London increased its development spending to 0.72% of gross national income in 2013 and it meant that the UK was the first major economy to meet the 0.7% target agreed by international donors in 1970 (the average ODA/GNI ratio among DAC members was 0.30%)[13].

The UK set a good example in the policy on the bilateral ODA. The governments from Downing Street could be followed by the others, despite the time of turbulence in the world economy accompanied by the political change in Great Britain - London retained the approach.

---

[10] Gift Aid is an income tax relief designed to benefit charities and Community Amateur Sports Clubs.

[11] CDC Group, founded in 1949, is the world's oldest development finance institution owned by the UK Government, which supported the economic growth. Their first investments were placed in India in 1987 (www.cdcgroup.com, 12.03.2016).

[12] Private organisations, financed by public fund, could also belong to the sources of British ODA (especially of humanitarian aid). Among them Oxfam (Oxford Committee for Famine Relief) should be listed. It was set up in 1942 in the UK with the aim o relieve famine in Greece caused the second by world war and then became more and more international. Oxfam has been present in India since 1951, when Bihar state was struck by famine (www.oxfam.org, 12.03.2016).

[13] In 1991, it accounted for as little as 0.32%, then was decreasing until 1999, when it reached the level of 0.24% and afterwards the index was growing, except the 2007 (www.oecd.stat.org, 12.03.2016).

Nevertheless, in the given above picture, another issue arose. Mainly, in the case when the poor country moves into the middle-income or into the lower-middle-income state group, then it influences the distribution of aid. As in the situation of India, where the British chose to stop their help. And this might be perilous decision, when relative poverty is proving stubbornly resistant and inequality is widening. In India, 21.9% of the society still lives below the poverty line, many people are vulnerable to economic shocks that may take them back into poverty. This could mean to donor countries that there might be a trap for their ODA policy.

LITERATURE

1. Barder, O. (2007). Reforming Development Assistance: Lessons from the UK Experience, in: L. Brainard, *Security by Other Means: Foreign Assistance, Global Poverty, and American Leadership* (edition). Washington: Brookings Institute Press.
2. Clifford, J. M., Little, I. M. (1965). *International Aid. A discussion of the flow of public resources from rich to poor countries with particular reference to British policy.* London: George Allen and Unwin Ltd.
3. *DAC Peer Review of The United Kingdom* - OECD (2010). Retrieved 29.02.2016 from www.oecd.org.
4. *Development Co-operation Report 2011: 50th Anniversary Edition* - OECD (2011). Retrieved 29.02.2016 from www.oecd.org.
5. Desai, R. M., Ledlie, N. (2012). *Why the End of British Aid to India Won't Matter.* Retrieved 29.02.2016 from www.brookings.edu.
6. Easterly, W., Pfutze T. (2008). Where Does the Money Go? Best and Worst Practices in Foreign Aid. *Journal of Economic Perspectives*, vol. 22, no. 8.
7. *International Development Act 2002* (2002). Retrieved 29.02.2016 from www.legislation.gov.uk.
8. Kamerschen, D. R., McKenzie, R. B., Nardinelli, C. (1993). *Ekonomia.* Gdańsk: Fundacja Gospodarcza NSZZ „Solidarność".
9. Keeley, B. (2012). *From Aid to Development. The Gobal Fight against Poverty.* Paris: OECD. Retrieved 29.02.2016 from www.oecd.org.
10. *Overseas Development Administration: Emergency Relief* - HMSO (1993). London: HMSO.
11. *Overseas Development Administration: Management of Programme Aid* - HMSO (1994). London: HMSO.
12. Samecki, P. (1997). *Zagraniczna pomoc ekonomiczna. Wybrane kwestie teorii i polityki pomocy dla krajów rozwijających się.* Warsaw: Fundacja Edukacji i Badań nad Pomocą Zagraniczną.
13. Sachs, J. (2006). *Koniec z nędzą. Zadanie dla naszego pokolenia.* Warsaw: Wydawnictwo Naukowe PWN.
14. Virmani, A. (2006). *The Dynamics of competition: phasing of domestic and external liberalisation in India*, New Delhi: Planning Commission, Working Paper No. 4/2006-PC.

THE ROAD VISUAL INSPECTION MECHANISMS OF THE FREIGHT ROAD TRANSPORTS IN THE EUROPEAN UNION FROM A LEGAL AND ECONOMIC PERSPECTIVE

George Paraskevas
University of Macedonia, Greece
mbaex1462@uom.edu.gr

Thomas Hatzigayos
University of Macedonia, Greece
chatzig@uom.gr, lyrkat@gmail.com

ABSTRACT
The free movement of goods, services, persons and capitals are the pivot and the basis of the European Union (E.U.) construction. This paper is focusing on goods. However, this free movement of goods requires a solid legal framework governing the freight road transports in the member states provide the road visual inspection mechanisms by the joint inspection teams. The objective of this paper is to present these visual inspection mechanisms for selected member countries that are the nexus of this freight traffic, analyze them from a legal point of view and recommend measures for survival, improvement and growth of this crucial sector in the European economy, specifically the E.U. regional development.
Keywords: *freight, inspection, mechanisms*

1. INTRODUCTION

Transportations in the economic and commercial area, are named in general , any passenger and cargo transport from one place to another which is carried out from a natural or legal person on a fee basis known as ticket, freight or load.

The last decade, the globalisation of markets and the rapid technological progress have developed new data on the role of transport in the national and world economy. In the contemporary environment of international competition, objectives of a primary importance for the development of businesses are considered to be the requirements for safe, reliable, timely, environmentally friendly and low cost transportation of goods and persons.

The road haulage services consist a subsystem of the transportation system. Moreover, the national transportation system is also dealt as a subsystem of the international transportation system, affected by the international developments.

In particular, domestic traffic affected by the policies adopted and followed by the European Union. These policies are mainly based on the guidelines set out in the EU White Paper[1] for transport and in the Green Paper of the EU for the energy (CEC 2006). The last few years, special emphasis has been placed on the policy followed by the EU towards the importance of services and transport infrastructure for:

- The evolution of the macroeconomic indicators, such as those of GDP [2] , public consumption and employment.

---

[1] White Paper "roadmap for a single European Transport Area - for a competitive and energy-efficient transport system" (COM (2011) 0144).
[2] Gross National Product - (or Gross National Product - GNP) is the product or income acquired the citizens of a country. That is the total value of all final goods (tangible and intangible), which the citizens of a country acquire within a period of one year. It presents differences from the Gross Domestic Product in that it includes the income, acquired by citizens of a country who reside abroad.

- The cost, the accidents, the consumption of fossil energy resources, the emissions, the impact on public health and climate change.
- The development of trade within the modern international environment of globalisation and the vertical integration of the production process.
- The regional development and economic and social cohesion between the regions and Member States.
- The productivity and competitiveness of enterprises, particularly within the framework of the liberalisation of the markets and the involvement of the private sector in infrastructure networks. [3]

This paper is structured as follows: the next chapter presents the main characteristics of land road freight transport. The follow chapter presents the setting of the inland Haulage transport. After this we examine the interaction of the European legislation with other legal texts and last we expose the CMR and ECMT conventions on the freight road transport. Finally, there is conclusion and suggestions for future research.

2. CHARACTERISTICS OF LAND ROAD FREIGHT TRANSPORT
2.1 Basic Concepts
For the understanding of road freight transport, the following definitions are briefly presented:

- National Transports: Transport operations which are carried out with public use vehicles that their gross weight exceeds 3, 5 tonnes within the Greek territory.
- International Road Transports: Transport operations are carried out with international transport vehicles to and from the rest of the world.
- Road Transport Operator: An undertaking (firm) which meets the criteria for admission to the occupation of road transport operator and performs either a motor vehicle or a combination of vehicles transporting goods for third parties. The fulfilment of three conditions, such as those defined in Regulation EU 1071/2009, are required in order to grant access to this profession, and especially: reliability, financial standing and professional competence.
- Road goods transport enterprise: The natural or legal person of commercial law, which meets the criteria for admission to the occupation of road transport operator, as mentioned above.
- Transport agent-forwarder: The person who arranges the transport of goods, which is carried out by one or more carriers. A forwarder usually undertakes, after special agreement, all ancillary operations (transhipment, save, customs clearance, insurance etc) except the diligence of transport (the choice of the appropriate carrier).
- Driver: Any person driving the vehicle, even for a short period of time, or any person who has boarded in the vehicle as part of his duties so as to be in a position to lead, if necessary;

Road transport has comparative advantages over other means of transport which tend to eliminate the possible disadvantages.

2.2 Advantages of road transport
Irrespectively of the used medium, each road transport, has greater flexibility and performs door to door transfers. Moreover, in a road transport routes and destinations are freely chosen while

---

[3] A number of studies have dealt with the connection transport and economic growth from which it is clear that the increase in GDP due to the construction of trans-European transport networks in the EU of 15 is 0,49% while Balkan countries range from 0.57% (for Albania) to 1.59% (for the Bosnia and Herzegovina) (Spiekermann and Wegener, 2006) .

intermediate stops can be made. Furthermore, there is the possibility of directly transport, from places of production to the place of consumption, without requiring transhipment. These ways respond to the needs of private companies. The fragmentation of logistical infrastructure and the changes in the industrial production, privilege the selection of road transport.

The road means of transport complements the other means of transport (maritime, air and rail). In addition, it meets the requirements of the production process for economic efficiency, reliability and speed of delivery. The possibility of moving in geographical areas gives the potential of adapting to seasonal transport. The capital which is bound and the operational costs are much smaller compared to other mediums. Road transportation is influenced to a much lesser extent by weather conditions. The speed is deemed satisfactory, while it is being increased with the improvement of the road network.

2.3 Disadvantages of road transport

The most significant drawback of road transport is the requirement for good quality roads, in order to ensure the speed and especially the security. Furthermore, within the urban fabric, some difficulties are becoming apparent, due to the low speed and the insufficient parking spaces. Road transport is an ideal solution for small and medium-sized distances. While the required fixed costs (ex. depreciation, annual circulation tax, premiums, and insurance contributions) are relatively low, the variable costs are proven to be large (fuels, tolls, maintenance costs and repairs, etc). In addition to these disadvantages, several other factors should be included: the environmental burden, the road infrastructure and the increased security issues during carriage.

The community social costs from accidents which involve commercial vehicles are significantly (despite the limited rates of the occurrence of such accidents, compared to the accidents which involve non-commercial vehicles) and affect the competitiveness of road transport.

The EU, recognizes the importance and the role transportation plays and its immediate goal is to create the Single European Transport Area, the Single European railway area, the Single European Sky and form a single marine area, the so-called "Blue Belt" for maritime transport (i.e., full cooperation, connectivity and data exchange between European ports).

2.4 The importance and the role of freight transport in the EU

The role of freight transport in the EU is significant, according to the figures provided by Eurostat:

  ➢ Transfers contribute in a significant extent to the EU economy (4.8% or 548 billion in gross value added at all 28 EU countries), provide over 11 million jobs in Europe, play an important role for the prosperity of the EU and its citizens, while at the same time constitute a "sine qua non" condition for the implementation of the free transit of goods throughout the territory of the Community.

  ➢ Road transport is the most important way to transport goods. In tonne-kilometers, they represent over the 70% of all ways inland transport, with this share to be relatively stable during the last decade. However, the recent economic crisis has had a considerable impact on road freight transport in Europe. In 2012, road freight transport in the EU measured in tonne-kilometres was approximately 12% lower than the highest rate recorded in 2007. The national transport operations from domestic carriers represent almost two thirds of the total road transport of goods.

  ➢ The national transport operations carried out by foreign carriers represent around 1.5% of the total road transport of goods and the 2.0% of the total national road haulage. The penetration rate of cabotage, which measures the share of foreign carriers in the national

transport of goods by road for third parties in the market, was 2.30% in 2012. Recently this rate increased slightly, especially after the removal of transitional restrictions imposed on carriers from the countries that joined the EU in 2004 and 2007.

➢ The share of international transport (including executing transport between third countries) increased during the last decade from 30% of the total road transport of goods in 2004 to 33% in 2012, which reflects the impact of the single market in the European Union. Approximately 78% of international transport operations carried out by carriers, registered in one of the two countries in which the goods are to be transferred. The remaining 22% is carried out by carriers from a third European country, in the context of cross-border trade, the most rapidly growing segment of the market in road transport during the last decade.

➢ In 2012, the work on behalf of third parties (transfer fee) accounted for 85% of the total road transport of goods, and the remaining 15% consists of an "on own account" work.

3. THE SETTING OF THE INLAND HAULAGE TRANSPORT

Because of the importance of inland haulage, the EU regulates access to the occupation of road transport operator, in order to determine the establishment, cabotage, working conditions and lack of personnel, as indicated below:

By the Regulation (EC) 1071/2009 [4] on access to the occupation of road transport operator several requirements were introduced, one of which is the criterion of fixed and actual location of the road transport companies. According to the reports of the EU[5], there are fictitious companies who are reportedly established in a Member State for tax purposes, but they do not manage administration or commercial activities, in breach of Article 5 of the Regulation. Cross-border cooperation, intensification of controls and a more rigorous application of the relevant provisions (e.g. for taxation) is therefore proposed by the EU.

In the above Regulation many differences in the application of certain provisions are observed and, consequently, carriers are prevented in many cases from carrying out cabotage [6]. The example of Finland is cited here, as Finland is a country that considers a transport with multiple delivery stops (i.e. the carrier delivers part of the load to many destinations) as more than a single transport, while in other countries such transfers shall be considered a single carriage. Moreover, the control mechanisms of Denmark or Finland require carriers to demonstrate evidence of cabotage (dispatch), in case of control, while in other countries it is not requested or it is given time to produce evidence, due to the fact that it is not a necessary accompanying document of the load. Although the relevance of these practices is challenged and there are concerns with regard to unlawful cabotage (overrun of three transports within seven days) there is not sufficient evidence to substantiate the deterioration of the Community acquis in transport or underestimate the benefits arising from the opening of the cross-border transport market. The implementation of the program for the efficiency of the regulatory REFIT framework (Regulatory Fitness and Performance Program) [7], which aims to clarify the European law will be reviewed, in an attempt to improve the implementation of the regulations.

The EU continues its efforts to transform the working conditions of employees in the road transport sector. The increasingly implementation of TRACE program (Transport Regulators Align Control Enforcement) for joint actions in the education of the supervisory bodies is a priority.

---

[4] http://eur-lex.europa.eu/legal-content/EL/TXT/PDF/?uri=CELEX:32009R1072&from=en
[5] Report of the European Commission COM (2014) 222
[6] The possibility of a transport company which has a Community license to provide services on a temporary basis, within the territory of another Member State.
[7] appropriateness of EU regulatory framework (COM(2012)746)

Regarding forecasts in the road haulage sector, these have to deal with the shortage of skilled drivers, but mainly with the aging of the workforce. The industry of freight transport is characterised by high levels of self-employment. As stated in the report of the European Commission (COM 222, 2014) only in Germany 250,000 hauliers will retire, during the next 10-15 years. These two parameters will negatively affect road freight transport companies. Drivers from other countries have already been recruited in Latvia. It is true that a great demand for drivers will be needed in the future. Because of the phased reduction of this number, the companies will be invited to reduce the rates of empty carriage vehicles circulation, so as the manpower to be better utilized. The introduction of new technology will play an important role in circulation, in controlling on behalf of the auditing mechanisms, in the education of young drivers, in working conditions (new generation of digital tachographs, road computers, telematics equipment, RDS, EDI, GIS etc). An ongoing dialog in this direction is taking place within the EU. Regarding the requirements of vehicles, although the most modern motor vehicles are used for international rather than national transportation, because of the lower consumption, security (the objective is the reduction of seriously injured persons to 35% by 2020) etc. new Euro standards for harmonisation of the European requirements will be adopted. Furthermore, the legislative initiative which places limits on CO_2 emissions from commercial vehicles registered for the first time with the implementation of a new test cycle in real driving conditions is imposed. Emphasis is given on the improvement of road safety with the development in the construction of new aerodynamic lorry chambers and with the installation of weighing systems on vehicles in weigh stations, when they drive on main roads. A future challenge for road transport in particular, is to find credible and alternative solutions which are less polluting. Moreover, the replacement of oil, which at the moment consists the sole fuel, is deemed to be necessary. An immediate objective due to the year 2020, is a 40% increase of secure parking spaces for trucks and the improvement of their hygiene quality.

Resolving the problem of surreptitious self-employment[8] , and of social dumping [9] , by introducing legislation within the framework of the evaluation of the White Paper of 2011 for transport, the objective of which was the transformation of a transport system and the creation of a single European transport area.

4. EUROPEAN LEGISLATION AND INTERACTIONS WITH OTHER CONCEPTS, TREATIES AND CONVENTIONS

The international treaties

4.1 ADR (Agreement concerning the International Carriage of Dangerous Goods by Road)

The Agreement concerning the International Carriage of Dangerous Goods by Road for the safety on the International Carriage of Dangerous Goods by Road. It is signed in Geneva on 30 September 1957, under the auspices of the United Nations Economic Commission for Europe (United Nations Economic Commission for Europe). This particular agreement contains all of the essential requirements for safety during carriage of dangerous goods and forms the basis for the development of all international regulations for all modes of transport: marine, aviation, road, rail and inland waterway transport.This agreement is referred to drivers (who should possess an ADR vocational training certificate of driving), companies (companies that their main or secondary activity is the transport of dangerous goods or the loading and unloading, associated with the above transports) and vehicles which must have an approved

---

[8] It is about a stealth operation of a firm with many subcontractors in order to avoid the validity of social laws relating to large companies.

[9] The exploitation of lower labour costs in a country (because reduced social security contributions), with the aim of attracting in this business to the detriment of other countries.

certificate for transporting dangerous goods (ADR). Dangerous goods are divided into two main categories, depending to their transfer: (a) goods which may be transported by road, under certain terms and conditions. The conditions are referred in the ADR Articles and Annexes. (b) Goods which are exempted from the international road transport. Dangerous goods are divided into 9 classes and 4 subclasses. They are classified according to their physico-chemical properties and the primary danger which they present. The legislation imposes the insurance (attaching and detent) of the load above or inside the vehicle, irrespectively of the route or the distance. This principle applies to all types of vehicles, cargoes and routes. The purpose for the insurance of the cargo is to protect the load itself, the vehicle, the environment, the people involved in the loading or unloading of the cargo, the driver, the other road users, and the pedestrians.

4.2 ATP (Agreement on the international carriage of perishable foodstuffs and on the special equipment to be used for such carriage)

It is an agreement which signed in Geneva on September 1st, 1970, under the auspices of the United Nations Economic Commission for Europe (United Nations Economic Commission for Europe) and affects the international carriage of perishable foodstuffs and the special equipment intended to be used for these, in order to improve the preservation conditions of the quality of susceptible foods, during their transport, especially in international commerce. In accordance with the principle of the cold chain, the highest temperature of goods in any place inside the load during transport must not exceed the one that is stated by the regulatory provisions. The products which are categorized as perishable foodstuffs are: butter, raw and pasteurized milk, industrial milk, milk products, fish, poultry and rabbits, meat and meat products etc. ATP certificates are issued for insulating equipment adequacy and refrigerant machine performance (six years duration), for insulating equipment adequacy of the chamber only (three years duration) or for refrigerant machine performance only (three years duration).

4.3 AETR (European Agreement Concerning the Work of Crews of Vehicles Engaged in International Road Transport)

It is a European Agreement, which deals with the working hours of the vehicle crew, engaged in international road transport, and was signed in Geneva on July 1st, 1970. AETR is valid for road transports by vehicles which are registered in a Member State or a country which is an AETR contracting party and applies to the total route, provided that the transport operations are carried out between the Community and a third country, or through a third country. The Agreement applies in correspondence with the EU Regulation 561/06 (which has amended the basic EU Regulation 3820/85) in transports which are carried out by a driver partly outside the EU, the EEA and Switzerland. In order to identify the applicable rules in a single transport (Regulation 561/2006 or AETR), the control bodies request the demonstration of the load accompanying documents (waybill, dispatch etc) or the relevant documents for passenger transport (waybill). In the case of transport operations by vehicles which are registered in a third country that is not an AETR contracting [10] part, the regulation applies to the part of the journey within the territory of the Community. The almost complete alignment of the AETR with the EC 561/06 took place on 26 September 2010.

---

[10]Contracting Parties of the AETR Agreement: all the EU Member States and all Contracting Parties to the EEA Agreement (*with the exception of Iceland*) and extra: Albania (AL), Andorra (AD), Armenia (AM), Azerbaijan (AZ), Belarus (BY), Bosnia and Herzegovina (BA), Croatia (HR), Agriculture (GE), Kazakhstan (KZ), F.Y.R.OM., Monaco (MC), Moldova (MD), Russia (SU), San Marino (SM), Serbia (SRB), Montenegro (ПE), Tajikistan (TJ), Turkey (TR), Turkmenistan (TM), Ukraine (UA), Uzbekistan (UZ) and Switzerland (CH).

4.4 The community transport

The international road transports of goods for third countries within the territory of the Community are carried out, according to the EU Regulation 1072/09, which replaced Regulations (EEC) No 881/92, (EEC) No 3118/93 and Directive 2006/94/EC. This particular Regulation shall apply in the context of the establishment of common rules for road freight transport in the European Union, in order to contribute to the regular functioning of the European internal market.

Figure 1 types of freight transport

The Regulation applies to vehicles with a maximum gross mass exceeding 3, 5 tonnes:
- in transports with a Member State as point of departure and another Member State as point of arrival, or vice versa, with or without crossing by a Member State (e.g. Greece - Austria through Italy).
- in transports with a Member State as point of departure and a third country as point of arrival, or vice versa. (e.g. Greece - Russia through Bulgaria and Romania)
- in transports from a third country to another third country through Community territory (e.g. a German, i.e. Community lorry, which carries out a transport from Turkey to Albania via Greece, is required to posses the community or ECMT licence for crossing the Greek territory, or bilateral or triangular transit for the remaining journey).

4.5 Application conditions:
4.5.1 The Community license
    4.5.1.1 Rule

A Community authorization is essential for the Community transport and issued by the competent authorities in each Member State in any road haulage operator, who has the right to make international freight transports for third parties. The special features of the authorization are the following: it is issued under the name of the carrier and is valid for five years; it cannot be transferred, it is kept in each vehicle and the original copy shall be presented in case of

control.[11] In the event that a road haulier employs a driver who is not a national of a Member State (e.g. Albanian, Turkish) the authorities of the Member State are required to issue a driver's attestation (in accordance with Regulation (EC) No 484/2002 of the European Parliament and of the Council of 1 March 2002 amending Regulations (EEC) No 881/92 and (EEC) No 3118/93 of the Council with a view to establishing a driver attestation), so that the control mechanisms of the EU member states to be able to verify whether drivers-nationals of third countries are legally employed or placed at the disposal of the carrier who is responsible for this transfer. This certificate must be kept on the vehicle during the transport and must be presented to the supervisory authorities.

4.5.1.2 Exception (excepted from the Community license):
In accordance with Article 1 paragraph 5 of EC 1072/09 the following "do not require a Community license and shall be exempt from any transport license":
(a) Postmail freight, carried out under the universal service
- Carriage of vehicles which have suffered damage or breakdown.
- Carriage of goods in motor vehicles the permissible laden weight of which, including that of trailers does not exceed 3,5 tonnes.
- Carriage of goods in motor vehicles provided the following conditions are fulfilled: (i) the goods carried must be the property of the undertaking or must have been sold, bought, let out on hire or hired, produced, extracted, processed or repaired by the undertaking; (ii) the purpose of the journey must be to carry the goods to or from the undertaking or to move them, either inside the undertaking or outside for its own requirements (iii) motor vehicles used for such carriage must be driven by employees of the undertaking (iv) the vehicles carrying the goods must be owned by the undertaking or have been bought by it on deferred terms or hired provided that in the latter case they meet the conditions of Directive 2006/1/EC of the European Parliament and of the Council of 18 January 2006 on the use of vehicles hired without drivers for the carriage of goods by road and v) carriage must be no more than ancillary to the overall activities of the undertaking
- Carriage of medicinal products, appliances, equipment and other articles required for medical care in emergency relief, in particular for natural disasters.

The first indent of point (d) (iv) shall not apply to the use of a replacement vehicle during a short breakdown of a vehicle which is used normally".

4.5.1.3.Carrier obligations:
The carriers who are licensed, should keep in the truck and demonstrate them to the competent bodies control, the following documents for the review of the legality of Community transport:
- The vehicle registration document (for vehicles over 3.5 tonnes - Article 1, paragraph 5, EC 1072/09).
- The authenticated copy (Blue Card) of Community authorization of the carrier.
- Driver Attestation, if the driver of the vehicle is not a national of a Member State of the Communities (pink form).
- Bulletin of Vehicle Roadworthiness Test into force originated from the relevant authority of the country of permanent establishment.
- An International Consignment Note (CMR) for the incoming international carriage.

---

[11]The Member State of establishment shall issue to the holder with the original of the Community license, which shall be kept by the carrier, and the number of certified true copies corresponding to the number of vehicles at the disposal of the holder of the Community license .

- Driver's documents.
- Tachograph cards (on analogue or printing in digital).
- Lease (in case of leae-the Community license belongs to the lessee)
- ECMT license for Community carrier who conducts bilateral, transit or triangular transfer to a third country.

4.5.2 Cabotage
4.5.2.1 Scope:

Regulation (EEC) No 881/92 of 26 March 1992 merged the existing legislation on cross-border transport between Member States and introduced the system of Community licenses granted to hauliers. These regulations concern transports, which have as its point of departure or destination the territory of a Member State or pass across the territory of one or more Member States. For the routes that link a Member State and a third country, the arrangements shall also apply where there is an agreement between the EU and the third country. And even if transfers between two Member States were possible until then only under bilateral agreements and were subjected to further restrictions, the said Regulation abolished all quantitative restrictions (quotas) and bilateral authorisations from 1 January 1993. Since then, the international transport of goods within the Union is almost free because the access to the market is no longer subject only to quality requirements for the issue of a Community authorization, granted to transport companies from the Member State of establishment and must be recognized by all other Member States (host countries). (Factsheets of the European Union 11/2015 - 2016).

Notion

Regulation (EEC) No 3118/93 [12] of the Council of 25 October 1993, as referred in the factsheet of the EU with number 11/2015 for the cabotage: "introduced to cover the land transportation (cabotage), i.e. the provision of transport services within a Member State from transport undertaking established in another Member State. In practice, this is about the services provided to a Member State by non-resident carriers who, in the context of an international transport, are located in host country and prefer to carry out a further transfer to this country prior to arriving at the border, rather than to return without load.

Regulation (EEC) No 3118/93 gave the possibility to firms which had Community license issued by a Member State of origin to provide services for road freight transport in another Member State provided that these services are provided on a temporary basis. By 30 June 1998, however, the full liberalisation of the activity of cabotage has remained far provisional in nature, as it allows Member States to ask the Commission to adopt safeguard clause in the event of serious disturbance of the market as a result of cabotage.

After the effort of the Commission to clarify the provisional character of cabotage through interpretative communication (26 January 2005), the EU regulation 1072/2009 (replaced 881/92 of 26 March 1992) of 21 October 2009 (Article 8 §2) is no longer referred to general cabotage, but introduces more restrictive setting of consecutive cabotage (according to which up to three cabotage within seven days after an international transport to the host Member State of cabotage is allowed). The provisions concerning the cabotage operations implemented from 14 May 2010.

According to the EU Regulation 1072/2009 carriers who are established in another EU country and are holding a Community license of regulation can be engaged in national road haulage services on behalf of others in Greece (or in another Member State) [13] under the following

---

[12]   Official Journal of the European Communities No L 279/1 of 12-11-1993

[13] For the monitoring of Community vehicles carrying cabotage, a book of record sheets for cabotage operations was introduced. A "tax representative" had to be defined on behalf of a transport firm established in one of the EU countries, in order for the cabotage to be implemented.

conditions: The vehicle must enter in Greece with load, conducting an international transfer from another Member State or third country to Greece. After delivering the load of the international transport, the carrier have the right to make up to three cabotage within seven days.

The period of seven days is calculated in a calendar basis, starting at 00:00′ of the first day, after the unloading of international transport and ending at midnight on the seventh day. If the incoming international carriage transports cargoes to more recipients, cabotage operations can begin only after delivering all loads at their destinations in Greece.

The Regulation allows the Community carrier to perform some or all of the cabotage he is entitled to, after the international transfer, not (only) in the host country of the incoming international transport, but also in other Community countries, in which he should enter without load. In this particular case, only one cabotage operation is allowed per transit Member State within three days. The period of three days is calculated in a calendar basis, starting from the day of entry without load in the transit Member State. In addition to that, the total period of seven days remains valid.

4.5.2.2 Exception:

The following shall be exempted from cabotage:

- Postal transfers
- Carriage of vehicles which have suffered damage or breakdown.
- Carriage of goods in motor vehicles the permissible laden weight of which, including that of trailers does not exceed 3,5 tonnes.
- Carriage of goods in motor vehicles provided the following conditions are fulfilled: (i) the goods carried must be the property of the undertaking or must have been sold, bought, let out on hire or hired, produced, extracted, processed or repaired by the undertaking; (ii) the purpose of the journey must be to carry the goods to or from the undertaking or to move them, either inside the undertaking or outside for its own requirements (iii) motor vehicles used for such carriage must be driven by employees of the undertaking (iv) the vehicles carrying the goods must be owned by the undertaking or have been bought by it on deferred terms or hired provided that in the latter case they meet the conditions of Directive 2006/1/EC of the European Parliament and of the Council of January 18th, 2006 on the use of vehicles hired without drivers for the carriage of goods by road and v) carriage must be no more than ancillary to the overall activities of the undertaking.
- Carriage of medicinal products, appliances, equipment and other articles required for medical care in emergency relief, in particular for natural disasters.
- Transport of freights or unaccompanied trailers from ports and railway stations toward the interior of the country by Community vehicles is not considered as cabotage, in the case when this carriage is a final road leg of combined transport operations. [14]

---

[14] Cases of combined transport which are not considered cabotage :(a) interim maritime route exceeding 100 km. Initial or final road haulage up to 150 km in a straight line towards the port of loading or unloading and (b) interim rail route exceeding 100 km and initial or final road haulage to and from the nearest suitable railway station .

4.5.2.3 Carrier obligations:

Requirements

For monitoring the legality of cabotage, carriers must keep in their vehicle and demonstrate to the relevant control bodies the following documents:

- The vehicle registration document (for vehicles over 3.5 tonnes - Article 1, paragraph 5, EC 1072/09).
- The authenticated copy (Blue Card) of Community authorization of the carrier.
- Driver Attestation, if the driver of the vehicle is not a national of a Member State of the Communities (pink form).
- Bulletin of Vehicle Roadworthiness Test into force originated from the relevant authority of the country of permanent establishment.
- An International Consignment Note (CMR) for the incoming international carriage.
- Driver's documents.
- Tachograph cards (on analogue or printing in digital).
- Lease (in case of leae-the Community license belongs to the lessee)
- ECMT license for Community carrier who conducts bilateral, transit or triangular transfer to a third country.
- Documents accompanying the freight carriage for each cabotage which took place after the incoming international transport. Control Bodies can use other evidence provided for by the legislation of road transport for the control of the legality of a cabotage operation, such as the recordings of digital or analogue tachograph, the consignment note issued by the consignor etc.

4.5.3 Empirical study of the EU on Cabotage. Data of cabotage within the EU

The success of the opening up of the market across the EU is demonstrated by the increase in the volume of road transport between cabotage and third countries, within the framework of which road transfer operators are also authorized to provide their services to perform cabotage operations in other Member States.

The national transport operations performed by vehicles registered in another Member State (i.e. cabotage) amounted to only 1, 2% of the transfers as a whole, despite the successful opening up of the market throughout the EU. This happens because legal restrictions are still valid.

Graph following on the next page
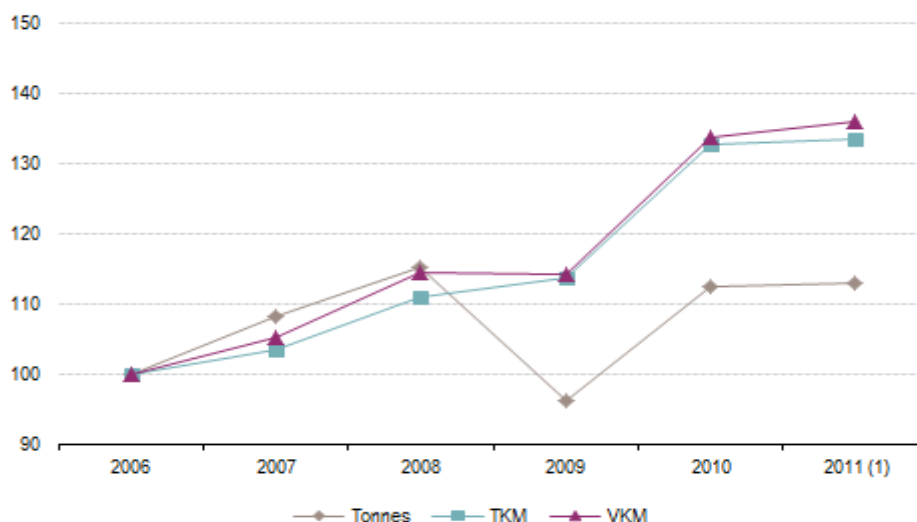
(1) UK: 2010 instead of 2011.

Source: Eurostat 2015
Graph 1 Development of EU-27 road freight transport- Cabotage
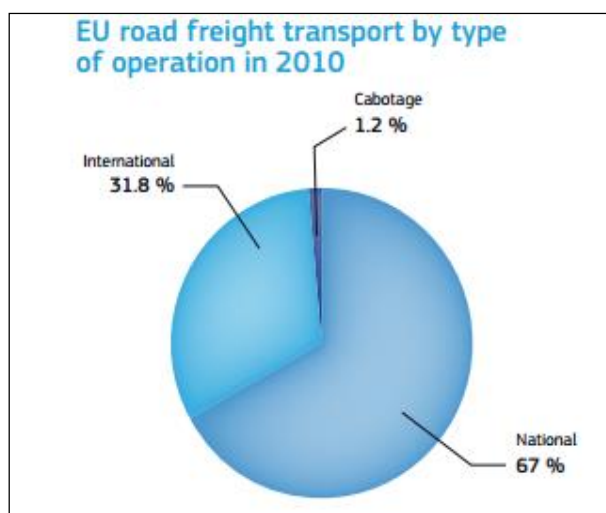
Source: Eurostat,2015
Graph 2 cabotage quota in the EU

The share of international transport has increased during the last decade from 30% of the total number of road freight transport in 2004 to 33% in 2011. This is an indication of the increasing integration of the single market within the EU.

Table following on the next page

Table 2. Cabotage, incurred by carriers from 2004 until 2011 within the EU

	2004	2005	2006	2007	2008	2009	2010	2011	Change 2006-2011	Average annual growth rate 2006-2001
EU-27	:	:	15 450	15 983	17 160	17 589	20 489	20 607	33%	6%
BE	1 816	1 597	1 552	1 529	1 546	1 458	1 363	1 099	-29%	-7%
BG	:	:	204	89	137	655	867	764	275%	30%
CZ	5	33	86	248	293	364	545	937	990%	61%
DK	254	129	239	293	254	257	310	371	55%	9%
DE	1 944	2 257	2 273	2 546	2 781	1 785	1 975	2 028	-11%	-2%
EE	57	138	102	163	216	207	268	273	168%	22%
IE	505	462	434	418	573	310	348	318	-27%	-6%
EL	17	5	89	65	18	2	2	13	-85%	-32%
ES	1 031	1 059	854	825	1 085	1 534	1 685	1 832	115%	16%
FR	624	421	523	569	429	333	347	313	-40%	-10%
IT	847	1 098	1 022	939	1 049	675	538	414	-59%	-17%
LV	10	36	30	39	50	158	217	259	763%	54%
LT	28	50	66	69	75	70	74	82	24%	4%
LU	2 262	2 141	2 133	2 248	2 182	2 341	2 072	1 845	-14%	-3%
HU	92	100	80	126	168	285	421	550	588%	47%
NL	2 871	2 733	2 172	1 999	2 563	2 266	2 674	2 489	15%	3%
AT	390	573	717	686	642	643	609	498	-31%	-7%
PL	506	653	1 273	1 098	954	2 601	3 920	3 797	198%	24%
PT	708	747	714	927	886	494	653	824	15%	3%
RO	:	:	14	61	97	93	66	207	1379%	71%
SI	132	149	264	250	389	360	407	503	91%	14%
SK	89	87	125	216	264	350	528	646	417%	39%
FI (1)	70	54	89	147	44	49	138	118	33%	6%
SE	170	186	164	152	222	156	179	144	-12%	-3%
UK	191	195	231	281	243	143	283	:	:	:

Source: Eurostat,2015
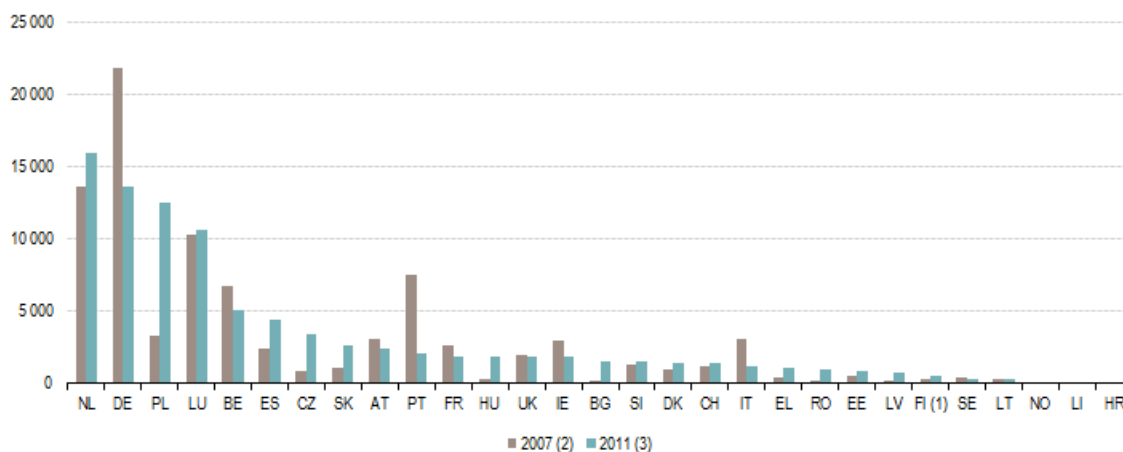
Source: Eurostat,2015,

Graph 3 Cabotage, incurred by carriers from 2007 until 2011 within the EU

As shown in Table 2, in absolute figures, the EU carriers continue to execute the largest part of cabotage (51%), mainly in Member States neighbouring with the one in which the vehicle has been registered. The most important cabotage markets are the large central transport markets (Germany, France).

Table following on the next page

Table 3 The largest cabotage markets in the EU

Rank	Reporting country	Million Tkm	Top 3 countries in which cabotage takes place	Share (%)
1	Poland	3 797	Germany	56
			France	18
			United Kingdom	5
2	Netherlands	2 489	Germany	49
			Belgium	17
			Sweden	11
3	Germany	2 028	France	27
			Italy	19
			Denmark	11
4	Luxembourg	1 845	France	53
			Germany	22
			Belgium	20
5	Spain	1 832	France	91
			Germany	5
			Italy	2
6	Belgium	1 099	France	71
			Germany	12
			Netherlands	11

Source: Eurostat,2015, page

5.1 CMR
(Convention on the Contract for the International Carriage of Goods by Road) [15]

In the field of international road transport, the International Convention of the Geneva Convention of 19.5.1956 plays the most important role. It is implemented in every contract for the carriage of goods, which is carried out by road vehicles on a fee basis, provided that the place of picking up the goods and the specified delivery place are situated in two different countries, of which at least one is a contracting partie, irrespectively of the place of residence and nationality of the parties. Among the documents accompanying the freight carriage for each international road transport is the delivery note, which has been issued under the provisions of Article 4 of the CMR International Treaty. The above statement is not a transport document, nor does it demonstrate competence of the existence and content of the International Convention road transport (Article 4 par. 2 International Treaty CMR). According to the Article 6 of the International Treaty CMR the content of the delivery note constitutes a prima facie evidence and a rebuttable presumption for the conclusion and the content of the relevant convention. It is issued in triplicate. The signatures must be handwritten and cannot be replaced with stamps. Road transferees who carry out international transport should, according to the provisions of the CMR Convention, complete this special delivery note, which in other words is called Consignment Note of the CMR Convention.

5.2 ECMT: European Conference of Ministers of Transport

The ECMT is an international intergovernmental organization for transport matters which was founded in 1953. The ECMT was renamed "International Transport Forum", based on Declaration, which was adopted by the ECMT Council of Ministers in the ministerial conference, which was held on the 17th and 18th May 2006 in Dublin.

---

[15] Participation of 55 members (founder members: Austria, Belgium, France, Germany, Luxembourg, the Netherlands, Poland, Sweden and Switzerland).

The multilateral system of quotas permits, introduced on January 1st, 1974, was considered by the Council of Ministers a practical step toward the gradual liberalization of road transport of goods, which could only be achieved with the joint efforts of the Member States for the harmonization of competition conditions between the road hauliers of the various countries and the different modes of transport as well. The multilateral character of licenses serves the rational use of vehicles by reducing the number of vacant routes. In addition, specifications regarding noise and exhaust emissions and safety requirements (EURO III safe, EURO IV safe and EURO V safe) were introduced, enhancing the use of vehicles that are safe and environmentally friendly.

5.2.1. The ECMT License

In order to facilitate the international traffic in the ECMT Member States[16] and to achieve an improved use of vehicles, the following categories of transport are excluded from the requirements of multilateral and bilateral transport permits (cf. TRANS/SC. 1/2002/4/Rev.4, p.16):

- Transport of goods by trucks up to 3, 5 tonnes (including the trailer).
- The occasional transport of goods to and from airports, in case of diversion of services.
- The carriage of vehicles which have suffered damage and the carriage of vehicles intended to repair.
- Unladen route of a vehicle in order to to replace another, which is damaged and the return of this that was damaged after the reconditioning.
- The transport of live animals with vehicles designed to transporting live animals or appropriately modified ones, in accordance with the requirements of the Member granting the license.
- The transfers of parts for ocean liners and aircrafts.
- Transfer of medical supplies and equipment to meet urgent needs (natural disasters etc).
- Transfer of works of art for exhibitions for non-commercial purposes.
- Transfer of animals and equipment for non-commercial purposes, for theatrical performances, musical, sports, cinematographic etc.
- Transport on own-account.
- Transfer of deceased people.

Conducting international road freight transport with an ECMT license[17], prerequisites the existence of the following concerning a public use vehicle during the journey: ECMT form of license and the book of journeys which have been granted in the same carrier so that they can be demonstrated, when requested by the relevant control authorities, under the condition that they have been supplemented accordingly by the transporter. ECMT licenses provide the right to carry out road transport of goods or the operation of vehicle without load:

   o From one ECMT Member State to another ECMT Member States and vice versa.
   o Through ECMT member-states (transit)
   o From any ECMT Member State to any other state and vice versa.

---

[16]   The following membership countries participate in the quota system on the January 1st, 2009: Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, FYROM, Georgia, Germany, Greece, Hungary, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine and the United Kingdom.   (Http://www.internationaltransportforum.org/)

[17] ECMT license is issued by the relevant authorities of transportation of member-states.

In the event that certain ECMT licenses are not valid in specific Member States, restrictions are listed on these licenses (with red imprint stamp).

5.2.1.1 Characteristics of the ECMT licenses:

(a) They do not entitle the right to carry out cabotage transport operations within the territory of the ECMT Member-States (i.e. transports for which the loading and unloading points are located in the same Member State).

(b) They are personal (shall be issued in the name of the beneficiary carrier) and are provided on a non-transferable basis, while they can be used by all vehicles of the transport undertaking in sequential mode.

(c) They may accompany any lorry of the company, under the condition that it is for the entire transport and is conducted with a freight wagon or a trainset (tractor and trailer or articulated vehicle).

(d) They do not give the right to carry out transport between ECMT Member-states and a third country (which is not a member-state) as country of destination (even if another authorization is valid in this country, e.g. bilateral). Passing through a third country with Corresponding license is nevertheless permitted.

From the year 2006 a certain provision of the ECMT is in place, according to which the number of journeys that can take place per trip outside the country of registration for each vehicle is limited to three (3). Thus, an Albanian lorry for instance, can carry out up to 3 laden routes with loading and delivery point between third countries, in addition to the routes of exit and return to Albania. This means that after the carry out of 3 laden routes, the vehicle must return to Albania. Empty lorry routes outside the country of registration are not calculated.

5.2.1.2 Characteristics form ECMT:

The ECMT authorisation paper is green and has a single form (issued by the Secretariat of the ECMT) for all ECMT Member States[18]. The ECMT license[19] is accompanied by a book of routes of 50 sheets with the respective copies, which remain in the book even after the end of the journey. The accompanying records of the ECMT licenses are issued by each Member State and for this reason they do not have exactly the same format. Beyond the ECMT licenses, which are valid for one year, ECMT licenses of a shorter duration, yellow in colour, are also issued by the Secretariat

All routes from the point of loading to the point of unloading of the carried goods are chronologically marked on the accompanying ECMT sheets, as well as the unladen routes, which include crossing borders (the topping up of crossing points transit is optional).

5.3 Transit Authorization (triangular-bilateral- transit)

The General Agreement of the Geneva Convention in 1954, which affects the Financial Regulation for international road transport, was ratified by the Law Decree No 3588/1956. This Regulation introduced at first the concept of international and border transport, gave the definition of the term "goods" and "vehicle", defined the organization of transport undertakings, the suitability and the security of cargo, the ability of drivers, freight documents. In addition to

[18] The 43 Countries-States are listed in the user guide of the ECMT licenses and in the authorization ECMT form.

[19] ECMT licenses are accompanied by: (a) Certificate of compliance with the technical requirements for noise and emissions "EURO III" and "EURO IV" for the motor vehicle (green paper), (b) certificate of compliance with the technical requirements for the trailer or semi-trailer (yellow form) and (c) roadworthiness certificate for the motor and towed vehicle (white form by TÜV).

these, with the Article 5 the procedure for issuing license to perform international road transport was foreseen.

A triangular transport is the transfer which is carried out between two countries by vehicle which is registered in a third country. For example, a Greek lorry loads in Ukraine destined for Russia. This transfer can be performed either using license issued by third countries or with ECMT permission[20]. The transit authorization (transit) is the passage of a vehicle (laden or unladen) from state in which loading or unloading of goods is not executed. The transit authorization is personal (shall be issued in the name of the transport undertaking) and is not transferred to third parties. It applies for a complete round trip, which means that the period of validity of the authorization will be valid for the necessary period of time, in order to carry out a transfer.

5.3.1. TIR ("Transports Internationaux Routiers' - International Road Transport)

The relevant process for the TIR transit system started immediately after the World War II, under the auspices of the United Nations Economic Commission for Europe (UNECE). The first TIR agreement was concluded in 1949 among a small numbers of European countries. This success led to the negotiation of the TIR Convention by UNECE in 1959.

In November 1975, under the auspices of the United Nations Economic Commission for Europe (UNECE) a Review Conference was convened and the TIR Convention, which entered into force in 1978, was signed. Since then, the TIR Convention has proven to be one of the most successful specimen agreements for international transport. Until now, the convention has 68 contracting parties, including the European Union. It covers the entire European continent and is extended to North Africa, Near and Middle East.

It is applied in the carriage of goods by road vehicles, combination of vehicles or containers which cross one or more (customs) frontiers, between an office of departure of signatory country and the office of destination another or the same signatory country, without transhipment, with the exclusive condition that a part of the journey between the beginning and the end of the TIR transport operation is carried out by road.

The TIR procedure is carried out by the "TIR carnet", which is used both as a customs declaration and a guarantee (the amount of the guarantee for a TIR carnet is 50,000 USD and 60,000 Euros for the EU countries). The TIR Carnet minimizes the administrative and financial burdens, duties and taxes. It is printed and distributed by the International Road Transport Union (IRU) and granted to end-users by the national guaranteeing association, which have been authorised for that purpose by the competent authorities (usually customs) of each Contracting Party.

The TIR carnet is a customs document and a guarantee title. It relieves the carrier from seeking guarantor in each country he passes through.

The amount of the guarantee is fixed and the cost of the TIR carnet is specific. It does not vary depending on the goods transported. Having only one carnet, the carrier is given the possibility to pass borders, load and unload at more than one office, without further formalities.

---

[20] Triangular transport is absolutely free within the EU and are carried out only with the Community license i.e. the so-called "Blue Card" of the Regulation (EU)1072/2009.

5.3.2 Combined transport

The term combined transport is referred to when the following criteria are met: (a) for each transport an important part of the overall journey is executed, while intermediate transhipments storages etc. of goods are not required. (b) the means of transport are combined so that eventually the best possible result from the point of view of security, speed and economy is provided. This modern category of road transport is considered to be the present and the future of combined transport[21]. The last few years, a great mobility of combined transport has been observed within the European Union, due to the fact that the member-states realized the important role of such transport in the international transport of goods, because of the immense pace of international trade, and the easing of road transport, in particular across the Alpine region and the deterrence from the ecological disaster (see Report of the European Agreement on main international combined transport routes and related installations AGTC)[22] . The preferential regime of combined transport the carrier is entitled to according to the above EU directive is exclusively applied between Community countries, because the Community road haulier has no right to install lorries, with Community registration in non-EU countries nor he is permitted of receiving other privileges the directive provides (e.g. reduced registration fees, etc.). During the legislative definition of "combined transport", the lorry, trailer, semi-trailer, with or without tractor unit, swap body or container of 20 feet or more uses the road on the initial or final leg of the journey. For the rest of the journey it uses a rail network or the inland waterways or a sea journey, when this route exceeds 100 km as the crow flies and is going through the initial or final road [23] :

• either between the point where the goods are loaded and the nearest suitable rail unloading station and the point where the goods are unloaded for the final leg,

• either within a radius not exceeding 150 km as the crow flies from the inland waterway port or seaport of loading or unloading.

•

5.3.3. The policy of European countries towards road controls.

The framework of controls and the policy which is applied in other European countries are dictated by two common elements, which are: the emphasis on driving time and the overloading of the vehicle. Enforcement measures are characterized by gradual approach according to the type and seriousness of the infringement. The fine imposed is proportionate to the seriousness of the contravention.

Some indicative policies of selected countries in the following paragraphs.

---

[21] Transfer which is performed in the same or in a different geographical area with at least two homogeneous or heterogeneous means of transport. The sequential, the combined and the joint or nested transfer are considered to be categories of a composite (national or international) transport of goods. The aforementioned transfers despite the similarities they present, they have distinguishable characteristics and constitute separate forms of compound transports. A multimodal transport is conducted for transportation of goods by two or more means. An intermodal transport is the transfer of goods with a vehicle (or conveyor unit), by consecutively using two or more modes of transport, without loading and unloading the goods during the interchange of means.

[22] European Agreement on important international combined transport lines and related installations.
[23] The initial and the final part of a combined transport are always conducted with a freight wagon. Without a freight wagon no combined transport can be carried out.

5.3.3.1 The case of Austria

In Austria, the issue of authorized weights of transit concerning trucks is regulated by the Article 4 of the Law on motor vehicles and road traffic [24] and in particular by paragraph 7 (a) of the same law. According to the latter, the permissible total weight for vehicles transporting products should not exceed 40 tonnes. In the event of overrun, special permission from the State of the Austrian Republic, through which the transit of vehicle will take place, should be requested and granted[25] .

Control bodies or the authorised proper authorities can immobilize the truck in the cases referred in Article 102(12) of the law on motor vehicles (including the case where the transportable weight exceeds 2 % of the total permissible weight).

In the event that the transportable weight exceeds 2% of 40 tonnes, the lorry burdened with a fine up to 5,000 Euros.

5.3.3.2 The case of Spain

In Spain, authorized weights of transit for vehicles, working hours infringement, and the fines for infringements in the international commercial transport are formed as follows:

Fines for very serious infringements (Sanctions: on a scale of 3.301 to 4,600 €)

Fines for serious infringements (Sanctions: on a scale of 1.501 to 2.000 €)

Fines for misdemeanors (Sanctions: on a scale of 301 to 400 €)

5.3.3.3 The case of France

In France**,** according to the authorised Directorate-General for Infrastructure and Transport, the Transport Service, the Sub-address of Road Transport of the Ministry of ecology, Sustainable Development and Energy of France, the rules regarding the violations and sanctions in the event of infringement are defined by the French Law Decree No 2010-855 of July 23rd, 2010, which describes the obligations and penalties relating to road transport. For the control of road transport there is a special body of 500 auditors.

The Law Decree No. 2010-855 incorporates in the French law the provisions of the Directive 2009/5/EC, concerning the classification gradation of infringements and the respective penalties as follow:

Gradation:

➢ **Minor infringements** are burdened with fines of 3rd or 4th rank
(contraventions de 3e ou de 4e classe)

➢ **Serious offenses** are burdened with fines of 4th or 5th rank
(contraventions de 4e ou de 5e classe)

➢ E**xtremely serious infringements** are burdened with fines of 5th rank
(contraventions de 5e classe)

5.3.3.4 The case of Belgium

The indicative penalties relating to infringements of commercial vehicles in Belgium are presented in Table 4:

---

[24]   (Kraftfahrgesetz,
        http://www.bmvit.gv.at/bmvit/verkehr/strasse/recht/kfgesetz/downloads/kfg_BGBLI572006_zsf.pdf)
[25] available at : Http://www.sondertransporte.gv.at/

Table 4: Infringements and fines for road freight transport imposed by the Belgian legislation

TYPE OF INFRINGEMENT	FINE
Movement of non-registered truck	990 €
Infringement of (EC) 1072/09	990€
CEMT Infringements (ECMT)	1980€
Illegal cabotage	1980€
Fake Community License (EC) 1072/09	1980€
Deprivation of attestation to a third country driver	990€
Lack of Roadworthiness Test Bulletin (TÜV)	990€
Counterfeit of TÜV bulletin	1980€
Braking impairments	660-1100€
Different dimensions of tires	330€
Frame number falsification	1100€
Control refusal	6600€
Speed limiter impairment	1320€
Speed limiter intervention	2640€
Digital or analogue tachograph infringements	1320-2640€
AETR infringements	40-2640€
3821/85 infringements	55-2640€
Infringements relating to the volume of goods carried (5%-40%)	66-1875€

Source MOBILITE ET TRANSPORTS (edited by the authors)

6. CONCLUSION

This paper presented all the major legal provisions and procedures for freight road international transportation in the EU. In general, we have observed that there are many infringements but not the same in the selected countries we presented, and in the other members, in order to protect the safe transportation of the goods and their availability on time at their destination points. Our recommendation would be the following: The international markets based on this type of transportation of goods would be more efficient and effective if all the members states adopted the same types of infringements.

LITERATURE:

1. http://www.statista.com/statistics
2. http://ec.europa.eu/eurostat
3. http://www.statistics.gr/home
4. http://www.imet.gr/#&slider1=6
5. http://www.traceproject.eu/
6. http://www.unece.org/mission.html

(Contact Author for Literature Details and/or Schemes Description below)

A. FUSION

1. Fusion par absorption

SocieteAbsorbée   SocieteAbsorbante

SocieteAbsorbée   SocieteAbsorbante
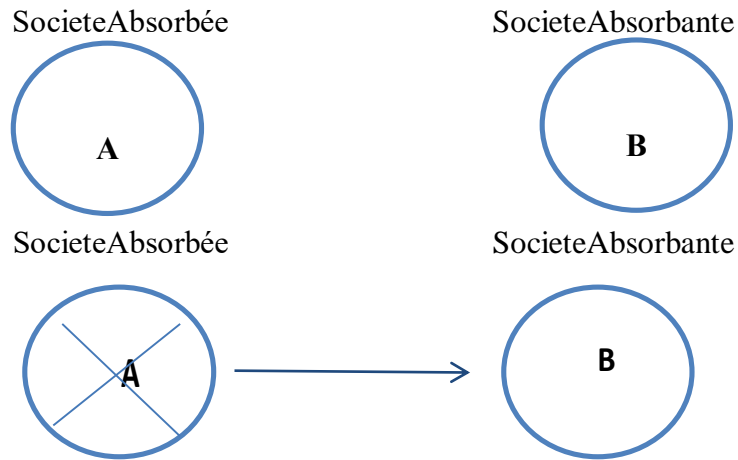
2. Fusion par creation d' uneSociete Nouvelle

S. A.   S. A.
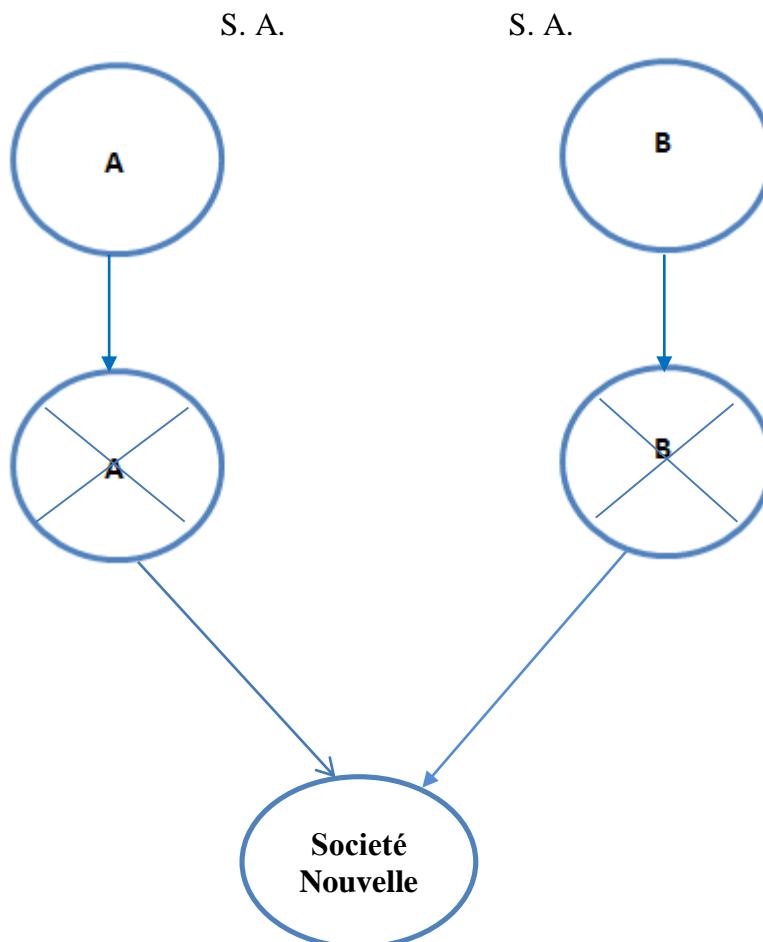
B Scission

1. Scission per creátion de nouvelles sociétiés
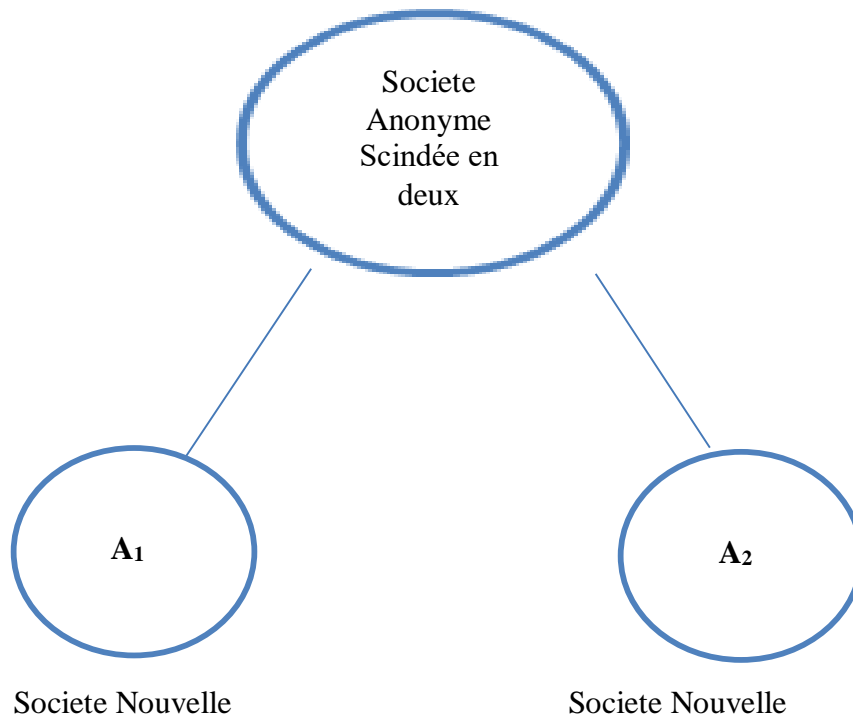
2. Scission per absorption
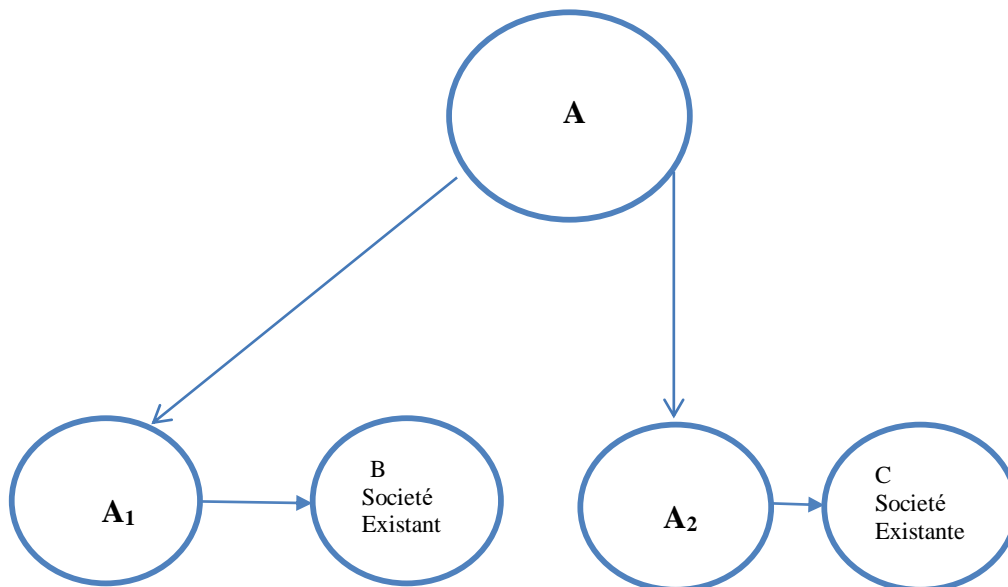
C. Approzt partiel d'actif

Societe Anonyme

Une

A une autre société existante

on

A une société nouvelle
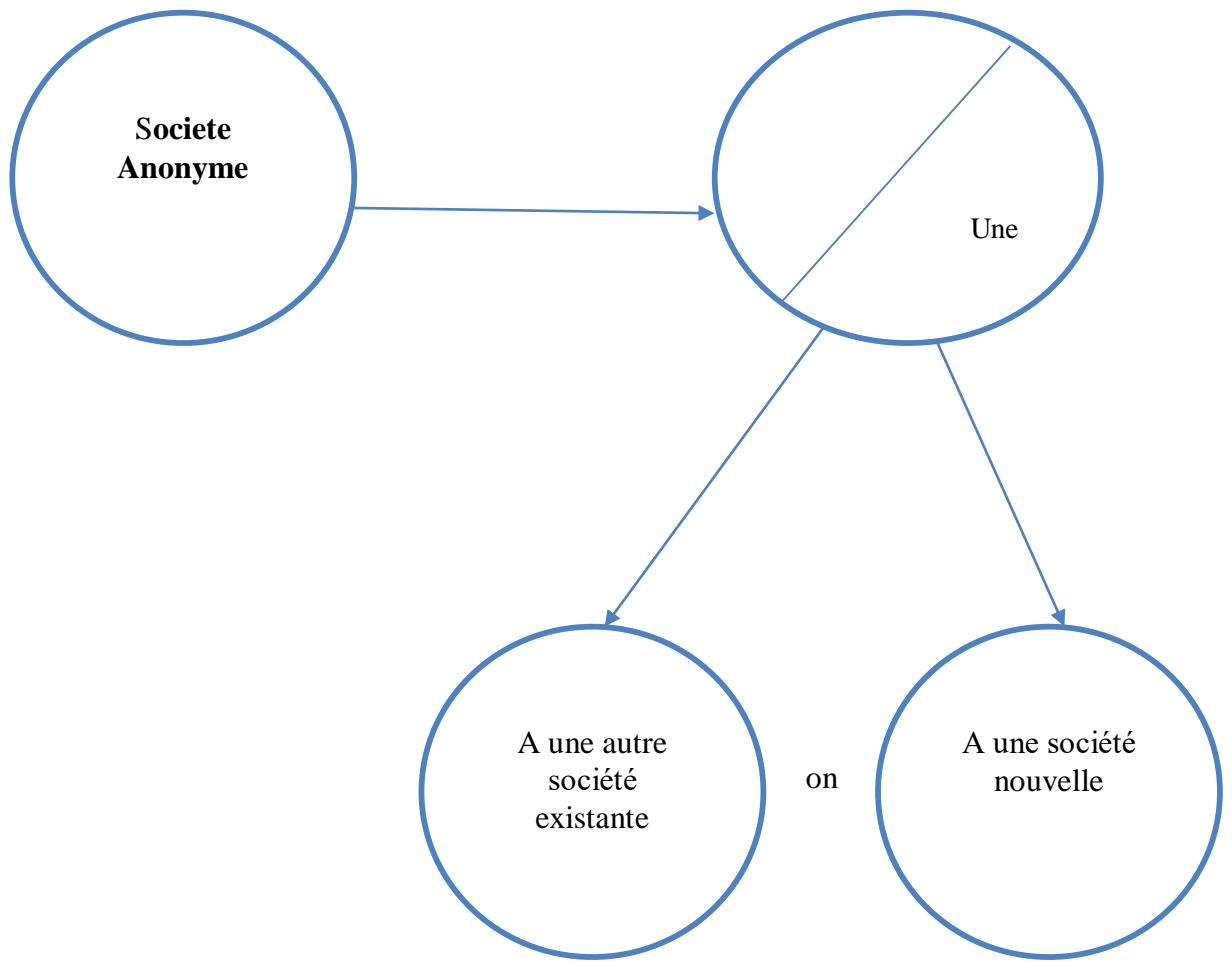
ASSESSING THE IMPACT OF NON-PERFORMING LOANS ON ECONOMIC GROWTH IN TURKEY

Aylin Erdogdu
Istanbul Arel University, Turkey
aylinerdogdu@arel.edu.tr

ABSTRACT

The purpose of this study is to determine the effects of non-performing loans (NPL) in the Turkish banking sector on the economic growth. An econometric model regarding the factors affecting the economic growth was created.

The present study has used the quarterly data between the years 1998Q1 and 2015Q3. Databases are provided by the Central Bank of the Republic of Turkey and Turkish Statistical Institute. Data analysis was performed with software package Eviews 8. The data analysis including the unit root test was conducted in the Augmented Dickey – Fuller (ADF) and Phillips – Perron (PP) methods and Granger causality test. In this study, unit root tests were carried out primarily in order to examine the stability of the series, and simple regression model was estimated as a result of the unit root tests. In the present study, the relationships were between variables in the determination of the model were estimated with ordinary least squares (OLS).

In accordance with the results of the empirical analyses in Turkey, there is a causality relationship between non-performing loans and domestic credit volume of the Turkish banking sector. Granger causality tests show that these relationships are bivious. Non-Performing Loans, gross domestic product (GDP) at constant prices, public sector expenditure at constant prices (PS) and private sector expenditure at constant prices (PSE), domestic credit volume (CV), total loan interest income (I) are the most significant sub-items of the economic growth. In another respect, it is expected to have the causality relationships between NLP, GDP, PE, PSE, CV and I which are the sub-items of the economic growth.

Keywords: *Bank Loans, Economic Growth, Multivariate Regression Analysis, Non- Performing Loans.*

1. INTRODUCTION

Banks collect funds from units with surplus funds and they are obliged to transfer these funds to the unit that needs funding. They carry out this task within the framework of activity, efficiency, and the opportunity cost principles. For these reasons, they are the most critical institutions of economy in terms of authority and responsibility (Erdoğdu 2015).

Non -performing loans can be defined as defaulted loans, from which banks are unable to profit. Loans usually fall due if no interest is paid in 90 days, but this may vary depending on countries and actors. Defaulted loans force banks to take certain measures in order to recover and securitize them in the best way. Loans become non-performing when they cannot be recovered within a certain stipulated time period that is governed by some respective laws so non-performing loan is defined from an institutional view point.

Growing non-performing loans negatively affect not only the banking sector, but also the national economy. If the least harmful effects of these problems cannot be overcome, they drag on new crises. Thus it causes a chaos in the country. Non-performing loans raise interest rates for bank loans that adversely affect the profitability of banks, and in this case leads to an increase in cost inflation.

Non-performing loans also adversely affect businesses. Types of loans used by businesses cause direct and indirect costs. Accrued expenses cause company bankruptcy, induces lost sales, rising credit costs and falling profitability.

To resolve these economic problems in the real sector is as important as keeping non-performing loans under control in banking sector. This paper seeks to determine which economic activity and variables affect non-performing loans in Turkey. The paper also includes a feedback response from non-performing loans to economic growth, using an econometric framework.

2. LITERATURE REVIEW

Jayaratne ve Strahan (1996) examined the panel data set issued by 50 USA States between 1972 and 1992. It was found that there is a relationship between increasing bank's loan quality with economic growth.

Demirgüç-Kunt ve Detragiache (1998) have examined pre- and post-crisis macro-economic variables in 36 countries. They found an increase in production over the banking crisis that caused a 4 % decrease.

Keeton (1999) analyzed the increase in loan volume and the effects of debt repayment by using the vector auto regression model and the data between 1982 and 1996. In the study conducted in the United States, repayment of debts was defined as the failure to repay in the 90-day payment period. As a result, expansion of credit value has a strong correlation with declining assets.

Domaç and Peria (2000) explored the links between exchange rate regimes and financial stability and used logit analysis to calculate the probability of a banking crisis. They stated that a decrease in trade volume can negatively affect the borrowers' debt repayment and it would increase the probability of banking crisis.

In their study aiming to determine the factors affecting the non-performing loans in Spanish Banking Sector, Salas and Saurina (2002) concluded that real growth in GDP, bank size, market power and loan expansion affected non-performing loans.

Using panel data models in several sub-Saharan countries, Fofack (2005) revealed the existence of a relationship between the variables such as the economic growth, the real exchange rate increases, real interest rates, net interest earnings, and the debt that cannot be repaid in cash.

Podpiera and Weill (2008) examined the relationship between cost-effectiveness and NPL of the banking sector in the Czech Republic for the period of 1994-2005. They provided strong supporting evidence for mismanagement hypothesis and have claimed the need for the regulatory authorities in developing countries to focus on managerial performance in order to increase the stability of the financial system by reducing NPLs.

A. Çifter, Yilmazer, and E. Çifter (2009) conducted a study for June 2001-November 2007 period using the neural network method based on decomposition and stated that the industrial production has identified a delayed effect on the amount of NPL in the Turkish financial system.

Gilchrist and Zakrajsek (2011) have investigated the relationship between credit supply and bank lending conditions in the US economy in the data period of January 1952-April 2010 using VAR analysis data. The variables of the study are unemployment rate, industrial production index, inflation, bond premiums, consumer loans, business loans, a ten-year nominal treasury income, and nominal federal interest rate. Disruptions in the financial markets are measured by the increase in bond premium. It was found that the first reaction of banks to the financial problems in the financial markets is the rejection of loan applications and the reduction of credit amount in their balance sheets. Cyclical decline in business loans after a certain delay emerges as a key feature of the fluctuation.

In their study on the banks operating in the Central, Eastern and Southeast European countries,

Jakubik and Reininger (2013) found that the leading economic variable that affects non-performing ratios of banks was economic growth and that there was a negative correlation between non-performing loan ratios and economic growth.

Mimir (2013) examined the 1987-2010 period for the US banking sector, bank loans, deposits, financial variables, such as the conjuncture of the net value of properties. One of the main findings obtained through the theoretical models is that financial shocks affect not only financial variables but also the macro variables.

Erdogdu (2015) carried out a survey to determine the relationship between the non-performing loans and bank's balance sheets effects and revealed that in most cases banking profitability advanced or emerged in parallel with public debt crisis. Banks have to continue their operations under the pressure of credit risk and the ratio of non-performing loans shows an increasing trend.

Studies on NPL in Turkey focus rather on macroeconomic activities. They handle the issue from the perspective of financial sophistication.

3. METHODOLOGY AND FINDINGS

The present study examined the correlation between the non-performing loans and macroeconomic variables between 1998Q1-2015Q3. The study examines whether there is a correlation between the growth in macroeconomic variables and change in non-performing loans ratio of Turkish Banking Sector. The selected variables for the start of the period to the first quarter of 1998 and current database have been updated to work with the last version of 2015Q3. Thus 1998-2015 period is selected. Time series databases are obtained from Turkey Statistical Institute (TSI), Turkey's Central Bank of the Republic of Turkey (CBRT) Electronic Data Delivery System and the Banks Association of Turkey (BAT).

In this study, E-Views 8 econometrics software package has been used to determine the time-series properties of the data related to the variables.

Liquidated receivables quarterly real growth rates (NPL) have been used as an indicator of non-performing loans while the expenditure method to the Gross Domestic Product the real growth rate (GDP) has been used as an indicator of macroeconomic variables. To refer to the total public sector expenditure real growth rate (at constant prices) (PE) has been used and (PSE) refers to total private sector spending real growth rate (at constant prices). The banking sector in domestic credit volume real growth rate has been indicated by (CV), and (I) has been used to refer to Deposits, Development and Investment Banks and Participation Banks' total loan interest income, accruals and rediscount.

Multiple regression model has been estimated by LSM (Least Squares Method):

NPL: β_0+ β_1GDP+ β_2PE+ β_3PSE+ β_4CV+ β_5I+ ε

'ε' represents the error term of the model.

The model used in the present study is estimated by simple regression analysis.

Regression of a nonstationary time series on other nonstationary time series may produce a spurious regression. To avoid the spurious regression problem that may arise from the regression of a nonstationary time series on one or more nonstationary time series, we have to transform nonstationary time series to make them stationary. If we subject our time series data individually to unit root analysis and find that they are all I(1); i.e., they contain a unit root,

there is a possibility of that our regression can still be meaningful (i.e., not spurious) provided that the variables are cointegrated. In order to find out whether they are cointegrated or not, we simply carry out our original regression and subject our error term to unit root analysis. If it is stationary; i.e., I(0), it means that our variables are cointegrated and have a long-term relationship between them. In short, provided that the residuals from our regression are I(0) or stationary, the conventional regression methodology is applicable to data involving nonstationary time series (Gujarati,2004).

Therefore, in order to apply ADF and PP unit root tests, all series are required to have stationary structure.

This study determined the stability of the extended series by using Augmented Dickey-Fuller (ADF TEST) unit root test and Phillips-Perron (PP) test.

The established standard procedure for cointegration analysis starts with the analysis of the unit root tests on the time series data. The Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests are used to test for the presence of unit roots and establish the order of integration of the variables in the model.

ADF Test Model is mentioned below: (Fuller, 1976, p.308)

$$\Delta y_t = \alpha + \beta t + \gamma y_{t-1} + \delta_1 \Delta y_{t-1} + \cdots + \delta_{p-1} \Delta y_{t-p+1} + \varepsilon_t,$$

PP Test Model is mentioned below: (Phillips ve Perron, 1988)

$$\Delta Y_t = a_0 + a_1 \left(t - \frac{T}{2} \right) + a_2 Y_{t-1} \sum_{i=1}^{m} \Delta Y_{t-1} + \varepsilon_t$$

$\nabla = 0$ (Means that; 1. Differences)

$\nabla y_t = \nabla y_{t-1} + u_t$

Regression analysis is used when two or more variables are thought to be systematically connected by a linear relationship. In simple regression, we have only two – let us designate them x and y – and we suppose that they are related by an expression of the form.

Simple Linear Regression Model   .Multiple Linear Regression Model

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon \qquad\qquad Y_i = \beta_0 + \beta_i X_i + \varepsilon_i$$

We will leave aside for a moment the nature of the variable e and focus on the x – y relationship, which is the equation of a straight line; b0 is the intercept (or constant) and b1 is the x coefficient, which represents the slope of the straight line the equation describes (Gujarati, 2004, p. 154).

Table following on the next page

Table 1: Unit Root Augmented –Dickey Fuller (ADF) Test Results

Variables	T Statistics ADF	T Statistics %1	T Statistics %5	T Statistics %10	Prob*
NPL	-4.141922	-4.098741	-3.477275	-3.166190	0.0089
GDP	-3.900194	-4.105534	-3.480463	-3.168039	0.0175
PE	-5.535893	-4.110440	-3.482763	-3.169372	0.0001
PSE	-3.895250	-4.105534	-3.480463	-3.168039	0.0177
CV	-4.442173	-4.096614	-3.476275	-3.165610	0.0036
I	-9.243736	-4.096614	-3476275	-3.165610	0.0000

*MacKinnon (1996) one-sided p-values.

All series has taken first differences.

Table 2: Unit Root Phillips Perron (PP)Test Results

Variables	Adj. T Statistics PP	Adj. T Statistics %1	Adj. T Statistics %5	Adj. T Statistics %10	Prob*
NPL	-8.181842	-4.096614	-3.476275	-3.165610	0.0000
GDP	-12.81108	-4.096614	-3.476275	-3.165610	0.0001
PE	-30.30689	-4.096614	-3.476275	-3.165610	0.0001
PSE	-8.127395	-4.096614	-3.476275	-3.165610	0.0000
CV	-4.254857	-4.096614	-3.476275	-3.165610	0.0064
I	-10.13043	-4.096614	-3.476275	-3.165610	0.0000

*MacKinnon (1996) one-sided p-values.

All series has taken first differences.

Table 3: Simple Linear Regression Model Results

Dependent Variable: NPL
Method: Least Squares
Sample: 1998Q1 2015Q3
Included observations: 71

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP	0.070202	0.036071	1.946223	0.0560
PE	-0.286389	0.282848	-1.012520	0.3150
PSE	-0.819125	0.090878	-9.013458	0.0000
CV	0.013546	0.000739	18.32398	0.0000
I	0.066438	0.015888	4.181698	0.0001
C	2035076.	413807.7	4.917925	0.0000

R-squared	0.973210			
F-statistic	472.2481	Durbin-Watson stat		0.890452
Prob(F-statistic)	0.000000			

Table 4: Engle Granger Causality Test Results

Exogenous	Augmented Dickey Fuller Unit Root Test Prob*	Phillips Perron Unit Root Test Prob*
None	0.0000	0.0000
Constant	0.0006	0.0005
Constant Linear Trend	0.0041	0.0035

*MacKinnon (1996) one-sided p-values.

Table 5: Autocorrelation Test Results

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	0.559	0.559	23.159	0.000
		2	0.316	0.005	30.658	0.000
		3	0.266	0.127	36.049	0.000
		4	0.388	0.281	47.712	0.000
		5	0.186	-0.243	50.436	0.000
		6	0.114	0.074	51.471	0.000
		7	0.093	-0.010	52.177	0.000
		8	0.245	0.174	57.124	0.000
		9	0.052	-0.230	57.351	0.000
		10	0.080	0.203	57.902	0.000
		11	0.074	-0.068	58.372	0.000
		12	0.244	0.204	63.592	0.000
		13	0.080	-0.175	64.157	0.000
		14	0.026	0.000	64.221	0.000
		15	0.018	0.029	64.250	0.000
		16	0.148	-0.008	66.312	0.000

Table 6: Jarque Bera Test Of Normality Results

Series: Residuals	
Sample 1998Q1 2015Q3	
Observations 71	
Mean	1.60e-15
Median	-0.025916
Maximum	0.883714
Minimum	-0.740750
Std. Dev.	0.327674
Skewness	0.121794
Kurtosis	2.857599
Jarque-Bera	0.235522
Probability	0.888908
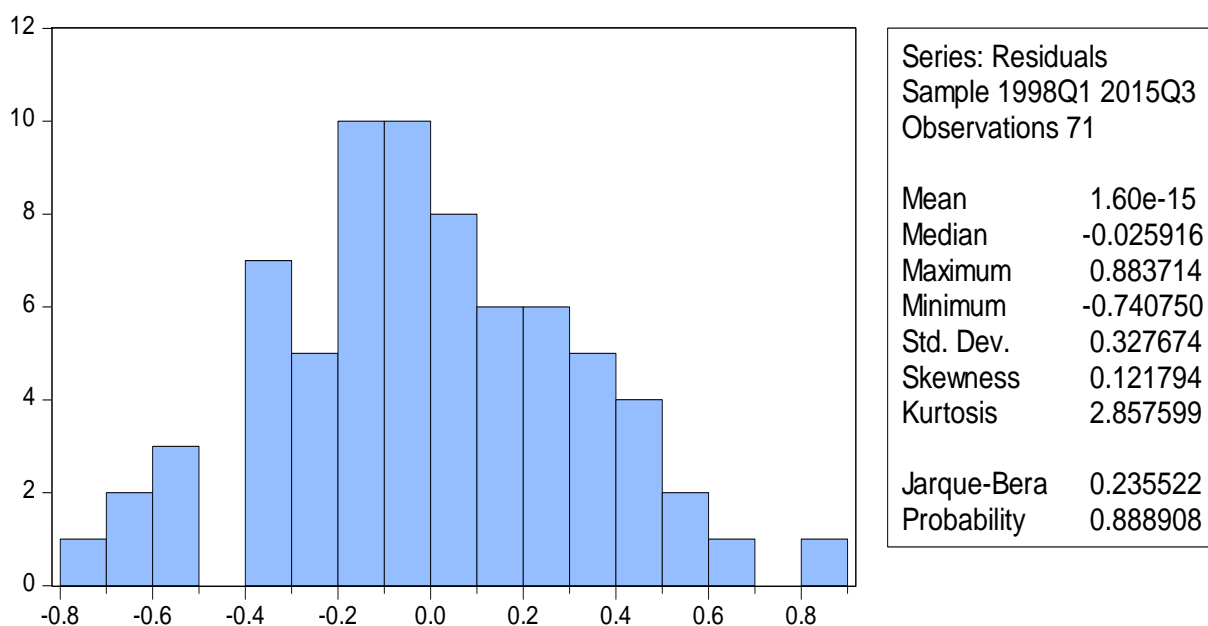
Table 7: Contant Variation Test Results

Heteroskedasticity Test: White

F-statistic	1.339430	Prob. F(20,50)	0.1994
Obs*R-squared	24.76918	Prob. Chi-Square(20)	0.2104
Scaledexplained SS	19.28163	Prob. Chi-Square(20)	0.5036

Table 8: Multiple Linear Regression Model Results

Dependent Variable: NPL
Method: Variance Inflation Factors
Sample: 1998Q1 2015Q3
Included observations: 71

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
GDP	0.001301	249.5083	12.42112
PE	0.080003	25.26423	2.542351
PSE	0.008259	59.54169	5.853109
CV	5.46E-07	11.37865	6.827936
I	0.000252	29.00773	7.197199
C	1.71E+11	55.52178	NA

4. CONCLUSION

Non-performing loans cause and result in harmful effects which are very much embedded in current economic structure. Non-performing loans and banks will lead to costs for the banking sector. These costs are not only limited to the banks, they may apply to the general economy. For this purpose, the impact of non-performing loans on macro economic variables in Turkey's economy in the 1998Q1-2015Q3 period were examined. Empirical determinants of NPL's presented in the present paper suggest that real GDP growth was the locomotive of non-performing loans. Therefore, reducing economic activity sustains the most important risk for bank asset quality. According to the analysis of the results, the regression model confirms the analogous findings reported by other authors, growth in economic activity tends to lead to a decrease in non-performing loans; however, there is also a feedback effect from non-performing loans to real gross domestic product. The impact of the non-performing loans on banking sector statistically and significantly affects provided credit in a negative way. Therefore, the increase in non-performing loans in Turkey will reduce growth, the banks credit policy, management issues and the great significance of effective execution. It can be concluded that the loans trading in banking sector, which is the major lending activity of the institution, is most exposed to credit risk. It is therefore expected that management will adopt very effective risk decreasing measures to improve the overall wealth status of the loan portfolio.

LITERATURE
1. Banking Regulations and Supervision Agency Web Page. www.bdkk.org.tr
2. Brooks, C., (2008), *Introductory Econometrics for Finance*, New York: Cambridge University Press.

3.   Çifter, A., Yılmazer, S. & Çifter E. (2009), *Analysis of Sectoral Credit Default Cycle Dependency with Wavelet Networks: Evidence from Turkey*, Economic Modelling 26, p. 1382-1388.

4.   Domaç, G. & Peria S. M. (2000), *Banking Crises and Exchange Rate Regimes: Is There a Link?* World Bank.

5.   Erdoğdu A, (2015), *Non-performing Loans in Turkish Banking Sector and Balance Sheets Effects,* Journal of Modern Accounting and Auditing, Vol. 11, No. 12, 677-686 .

6.   Fuller, Wayne A.; (1976), *Introduction to Statistical Time Series,* John Wiley and Sons, ISBN 0-471-28715-6, New York.

7.   Gilchrist, S., Zakrajsek, E. (2011), *Bank Lending and Credit Supply Shocks*, NBER Working Paper, No: 14863.

8.   Gujarati, D.N.(2004) *Basic Econometrics*, Fourth edition, The McGraw−Hill, New York, p.154.

9.   Jakubík Petr, Reininger Thomas,(2013,Q3) *Determinants of Nonperforming Loans in Central, Eastern and Southeastern Europe*, Focus On European Economıc Integration.

10.   Jayaratne, J and Strahan, P.E. (1996) *The Finance –Growth Nexus: Evidence from Bank Branch Deregulation*, The Quarterly Journal of Economics (1996) 111 (3): 639-670.

11.   Mimir, Y. (2013)*, Financial Intermediaries, Credit Shocks and Business Cycles.* TCMB Working Paper, No:13/13, 1-77.

12.   Nkusu, M. (2011) ,*Non-performing Loans and Macrofinancial Vulnerabilities in Advanced Economies Strategy*, Policy and Review Department, *IMF Working Paper*, WP/11/161, Jully 2011.

13.   Paul, K., R, Gurung, B., and Paul, A., K.,(Ed.) (2013), *Recent Advances in Statistical Modelling Techniques*, New Delhi, p. 281-288.

14.   Phillips, C.B. Peter and Pierre Perron; (1988), *Testing For A Unit Root in Time Series*, Biometrika, 75(2), pp. 335-346.

15.   Podpiera, J. & Weill L., (2008), *Bad Luck or Bad Management, Emerging Banking Market Experience*, Journal of Financial Stability 4, p.135-148.

16.   Salas, V. And Saurina, J., (2002), *Credit Risk in Two Institutional Regimes "Spanish Commercial and Saving Banks" Journal of Financial Services Research*, p.203-224.

17.   Walsh, Carl E. ve James A. Wilcox (1995), *How Is Bank Lending Related to Output ? , Federal Reserve Bank of Boston, Conference Series No:39, p.83-113.*

18.   Wojnilower, Albert. *Not a Blown Fuse*, Federal Reserve Bank of New York Quarterly Review, Spring 1993.

DETERMINANTS OF IMPAIRED LOANS AND DOUBTFUL LOANS IN ITALY

Candida Bussoli
University LUM Jean Monnet, SS 100 Km 18,Casamassima (Bari), Italy
bussoli@lum.it

Lavinia Conca
University LUM Jean Monnet, SS 100 Km 18,Casamassima (Bari), Italy
lavinia_conca@libero.it

Marisa Gigante
University LUM Jean Monnet, SS 100 Km 18,Casamassima (Bari), Italy
ma.gigante@lum.it

Giuseppe Madaro
University LUM Jean Monnet, SS 100 Km 18,Casamassima (Bari), Italy
giuseppemadaro@yahoo.it

ABSTRACT
The work aims to investigate the incidence of banks' size and financial and macroeconomic indicators on the ratio of impaired loans to gross loans and on the ratio of doubtful loans to total asset. The financial indicators are return on average assets and cost income ratio, as indicators of profitability and efficiency of the bank, while macroeconomic indicators are the inflation rate and the unemployment rate. The study focuses on Italian banks over the period 2008-2014, these are crisis years in which the incidence of impaired loans has grown considerably. The analysis is conducted on a sample composed of 60 Italian banks, divided into 20 joint stock banks, 20 cooperative banks and 20 popular banks. The analysis method is based on multivariate panel regressions models. The empirical analysis shows that the ratio of impaired loans to gross loans and the ratio of doubtful loans to total asset are negatively related to return on average assets and to banks' size. Therefore, these two variables exert a positive influence on loan quality. The ratio of impaired loans to gross loans is also negatively related to the cost income ratio. Regarding the macroeconomic determinants, results point out that there is a positive relationship between the unemployment rate and both dependent variables. The unemployment rate exerts a negative influence on loan quality.
Keywords*: bank, doubtful loans, impaired loans, non-performing loans*

LITERATURE

1. ABI, Cerved. (2016). New bad loans are falling in Italy. *Bancaria*. n. 1 (pp. 53-60).
2. Babouček, I., Jančar, M., (2005). Effect of macroeconomic shocks to the quality of the aggregate loan portfolio, Working Paper. (pp. 14-22).
3. Bank of Italy. (2015). *Report on Financial Stability*. Rome. n. 1 (pp. 1-47).
4. Bofondi, M., Ropele, T. (2011), Macroeconomic determinants of bad loans: Evidence from Italian banks. Banca d'Italia, Occasional Papers. n. 89 (pp. 14-17).
5. Carpinelli, L. (2009). Effetti reali delle crisi bancarie, una rassegna alla letteratura. Banca d'Italia, Occasional Paper. n. 55. (pp. 5-29).
6. D'Amico, E., Biscotti A.M. (2013). Credit risk, the case of Italian cooperative banks. *Bancaria*. n. 1 (pp. 28-39).
7. Gambera, M., (2000). Simple Forecast of bank loan quality in the Business cycle. (pp. 6-9).

8. Hess K., Grimes A., Holmes M. (2009). Credit Losses in Australasian Banking. *The Economic Record*, n. 85 (270) (pp. 331-343).
9. Hoggarth, G., Sorensen, S., Zicchino, L. (2005). Stress Tests of UK Banks Using a VAR Approach. Bank of England, Working Paper. n. 282 (pp. 1-44).
10. Kalirai, H., Scheicher, M. (2002). *Macroeconomic Stress Testing: Preliminary Evidence for Austria*. Austrian National Bank Financial Stability Report. n. 3 (pp. 58-74).
11. Lossani, M. (2015). *Monetary Observatory*. Università Cattolica del Sacro Cuore. Milan. n. 2 (pp. 1-93).
12. Marcucci, J., Quagliariello, M. (2008). Is Bank Portfolio Risk Procyclical? Evidence from Italy Using a Vector Autoregression. *Journal of International Financial Markets, Institutions and Money,* vol. 18 (pp. 46-63).
13. Pittaluga, G.B., Morelli P., (1998). Le sofferenze bancarie: Tendenze e Previsioni, Roma. Bancaria Editrice. (pp. 40-42).
14. Quagliariello, M. (2007). Banks' Riskiness Over the Business Cycle: A Panel Analysis on Italian Intermediaries. *Applied Financial Economics*, vol. 17, issue 2 (pp. 119-138).
15. Rinaldi, L., Sanchis-Arellano A., (2006). Household debt Sustainability: What explains Household Non-performing Loans? An empirical Analysis ECB Working paper(pp.18-21).
16. Salas, V., Saurina, J. (2002). Credit Risk in Two Institutional Regimes: Spanish Commercial and Savings Banks. *Journal of Financial Services Research*, vol. 22, issue 3 (pp. 203-224).

Full paper is not published at the Author's request

FORMULATION AND TESTING OF A LOCAL ECONOMIC DEVELOPMENT POTENTIAL ASSESSMENT TOOL

Daniel Francois Meyer
Faculty of Economic Sciences and IT, North-West University (NWU), Vaal Triangle Campus, Vanderbijlpark, Gauteng, South Africa.
Daniel.meyer@nwu.ac.za

ABSTRACT
Local economic development (LED) is globally recognized as a tool to accelerate economic development in local regions. The aim of this research was to formulate and test a tool to assess the economic development potential of a local region, as such as tool does not exist. Various regions could be assessed and compared using the tool. The development potential of a region has been formulated as the total of local resources (r) multiplied by the local capacity (c). Various factors have been identified which contributes to the extent of the local resources and capacity. The tool was tested in the "Vaal-Triangle" region which includes municipal areas of Emfuleni and Metsimaholo in South Africa. In testing the tool in the study region, it was found that both areas had low economic development potential indexes of below 30. The tool identified which factors are allowing for this low index and those factors needs to be addressed in the local LED strategy. The tool, if applied in local regions, will allow local LED practitioners to assess potential and to formulate strategies to improve the potential.
Keywords: Local economic development, development potential, assessment tool, case study.

1. INTRODUCTION

Local Economic Development (LED) has the purpose to optimally utilise local resources and capacity to improve economic conditions such as availability of job opportunities and the improvement of quality of life (USAID, 2006, p. 2). According to Romer (1986, p. 15), economic development occurs when people utilize and arrange resources in such a way that they are more valuable to local communities. The optimal use of local resources is a major challenge for local economic decision-makers (World Health Organization (WHO), 2014). The aggregate of local region's economies are the building blocks of national economies. Towns, cities, metropolitan areas, and all local regions on a global scale, need to, within the overall national economic policy, take responsibility of their economic future. In an effort to create economic development, local role players must take on the challenge and opportunities through assessment of the local economy and formulation of local development strategies for implementation (Leigh & Blakely, 2013, p. 10). A region's economic development success is dependent on its ability to use its resources and capacity effectively and to adapt to local, national and global changes to stay competitive (USAID, 2006, p. 2). Within this challenging environment, the coordination and cooperation of all role players including business, local government and communities, regarding all initiatives, are vital for success. Also of importance is the role of local government in the creation of an enabling environment for local business and communities to prosper (Meyer, 2014, p. 26). Globally a gap exists for a practical and easy to use development assessment tool. This article has the aim to formulate and test a local development assessment tool to determine the development potential of a local region. It has the intention to bring theory to practice with an applied assessment tool. As indicated by Carroll and Blair (2012, p. 51), LED is an applied research field with the distinction of theory and practice in most cases untenable. Local developmental practitioners find it difficult to assess local economies and this tool will assist in this process. The tool will also assist in the comparison of various local regions regarding their economic development potential.

2. CONCEPTUAL ANALYSIS

In this section, concepts, definitions and approaches concerning the development of an economic development assessment tool will be analysed. Concepts such as local economic development (LED), development potential regarding resources and capacity, and the local enabling environment will be analysed. Many definitions of LED exist globally. USAID (2006, p. 5) dissects the concept of LED in three sections namely *"Local"* referring to the already existing capacity and the potential of the endogenous knowledge and processes; *"Economic"* with a focus on the identification of investment opportunities, entrepreneurship development and development of local markets*; and "Development"* which is a process of improving quality of life and the creation of job and work opportunities. Trousdale (2005, p. 2) defines LED as all the economic actions and initiatives, attempted and implemented by members of a local community in order to achieve improved quality of life and to create sustainable economic opportunities for all including the poor. Ruecker and Trah (2007, p. 15), stated that LED is an ongoing process by which all local stakeholders from public and private sectors work together to create unique location advantages, to ensure the specific locality is superior to other localities with different resources and capacity. Finally, Leigh and Blakely (2013, p. 72) lists objectives of LED namely the increase of standard of living over time, reduction of local inequality, achievement of economic stability with a diverse economic base and lastly the sustainable use of resources and extension of capacity. From the definitions of LED it is clear that the economic development potential of a region could be determined through the existing and potential resources and capacity of the region (Pillay, 2013, p. 29). Leigh and Blakley (2013, p. 74) state that for a local economy to develop, the region's resources need to be developed and the capacity needs to be increased. Lawson (2012, p. 73) also indicates that organisational and institutional capacity and local resources are important for the successful facilitation of the LED process. The International Labour Organization (ILO)(2006, p. 2) links LED and resources by stating that LED is a tool to find solutions to the threat of globalization for local regions and to maximize the effective utilization of local resources. Rogerson (2009, p. 35) agreed by adding that the challenge for LED processes is to find ways to optimize local resources including local knowledge. In terms of local economic development **resources**, the following factors are listed namely availability of natural resources, land and buildings, strategic locality, availability of labour (skills levels, and potential labour workforce), capital investment, infrastructure development, entrepreneurship, transport, communication, industrial sector composition, technology, size of economy and local market, export market, finance and funding, government spending. In most cases, especially in developing regions, resources are underutilized and with high levels of developmental capacity, such a region can experience revitalization in development (Leigh & Blakely, 2013, p. 78). The United Nations Development Programme (UNDP) (2008, p. 4), defines capacity development as "*the process through which individuals, organizations and societies obtain, strengthen, and maintain the capabilities to set and achieve their own development objectives over time*". The UNDP (2010:3) states that capacity of local people and institutions need to be strengthened in order for them to effectively achieve their developmental objectives. It is specifically important to note the lack of human and capital capacity within Local Government in South Africa, leading to poor local economic development success (Nel, 2001, p. 1004). Local economic development **capacity** factors according to Leigh and Blakely (2013, p. 75) include economic, social, technological and political aspects of capacity. Capacity factors also include local management structures of all three groups of role players (government, business and communities), capacity for research and development, government support for business and community development. Other factors of capacity include governance, business, infrastructure, social services, technology, innovation, education, politics, entrepreneurship, size of the economy, community and partnerships.

Table 1 is a summary of the development potential factors for resources and capacity as identified through the literature review process.

Table 1: Economic development potential factors for resources and capacity

Local Economic Development Resource Factors (r)	Local Economic Development Capacity Factors (c)
- **Natural resources** such as minerals, land and natural beauty of nature (quantitative and or qualitative).	- **Governance**, capacity of governance in the region, research and development (institutional capacity) (mostly qualitative).
- **Strategy locality** close to economic activity corridors and nodes (quantitative and or qualitative).	- **Business,** capacity of business sector in the region (mostly qualitative with some quantitative data analysis).
- **Availability of labour** taking into account the size of the labour force and skills levels (employment and unemployment levels) (mostly quantitative, with an element of qualitative analysis).	- **Infrastructure** regarding hard and soft infrastructure (qualitative and quantitative).
- **Investment in capital** (mostly quantitative, with an element of qualitative analysis).	- **Social services** including all social-welfare and community facilities (mostly qualitative and some quantitative analysis).
- **Transport** systems including roads, rail, shipping, air (quantitative and qualitative).	- **Technology and innovation** availability, including research and development (mostly qualitative)
- **Communication** systems (quantitative and qualitative).	- **Education** capacity from primary to higher education (mostly qualitative and some quantitative analysis).
- **Industrial/manufacturing** composition and size (mostly quantitative with a qualitative perception).	- **Politics and local leadership** (mostly qualitative).
- **Export** focus (quantitative and qualitative)	- **Entrepreneurship** capacity and small business development (mostly qualitative).
- **Government spending** (quantitative and qualitative)	- Size of the **local economy** (mostly quantitative).
- **Market** size and composition (quantitative and qualitative)	- **Community** development (mostly qualitative).
- **Finance and credit** (both quantitative and qualitative)	- **Partnership** formation capacity between government, communities and business (mostly qualitative).

Source: Own compilation from Leigh and Blakely, (2013, p. 74) and USAID, (2006).

According to Leigh and Blakely (2013, p. 267), a region can only achieve high levels of economic development when a positive business climate exists with the involvement of local government structure. For this research, the concept of an "*enabling environment*" is used to analyse the local governance and business climate. Local government needs to play the following roles within the local economy, *inter alia* provide leadership, direction and policy guidelines, create an enabling economic environment, facilitate the implementation of local economic development (LED) projects, support small, medium and micro enterprises (SMMEs), formulate creative innovation and solutions for local challenges, maximise local resources and potential, and develop local skills (DPLG, 2006, p. 22; Department of Cooperative Governance, 2014, p. 8). In order for local government to attempt to create an enabling environment, a number of challenges exist. Some of these challenges include the skewed spatial settlement patterns, an unequal distribution of economic and social activities, financial instability and poor capacity (South Africa 1998a, p. 16; South Africa 2014, p. 13). Christy *et al.* (2009) define an enabling developmental environment as "*a set of policies, institutions, support services and other conditions that collectively improve or create a general business setting where enterprises and business activities can start, develop and thrive.*" Such an enabling environment boosts the competitiveness of a specific region or area (Konig *et al.*

2013, p. 5). According to the South African National Development Plan (NDP) as compiled by the National Planning Commission (NPC) (2012, p. 24), government's role in development is to remove barriers for development and show strong leadership and co-ordination with effective service delivery. Government also needs to step in if market forces fail, for example through skills training, and land and infrastructure development. For government to be successful in development, it needs to have capacity and skills. The improvement of capacity for local government is one of the goals of the National Development Plan (NDP) in South Africa. Increased capacity and skills lead to increased service delivery. According to Leigh and Blakely (2013, p. 56-65), local government can create an enabling developmental environment by limiting local bureaucracy, upgrading infrastructure, the provision of training and skills programmes and information, as well as to ensure law and order. Government can also assist in supporting existing businesses, attracting new businesses and finding export markets. According to the National Research Institute (NRI, 2006, p. 15), LED initiatives need to encourage local participation and consensus-building, in order to determine economic and social welfare initiatives for the area and the local community, and to promote local ownership and partnership formation. LED can only achieve success if an enabling environment to stimulate new opportunities for economic growth exists in the local area. According to Trousdale (2005, p. 20), in order to establish an enabling developmental environment, good governance is needed. Good governance relates to institutional capacity in management and administration and includes formal and informal structures within government institutions. It encompasses the ability to co-ordinate and assists with implementation of policies, projects and action plans, and includes public involvement, institutional development, transparency in decision-making processes and accountability. Good governance underpins LED, and the main link between the two concepts is to provide a local business-enabling environment. Table 2 is a list of the factors that are needed for local government to create an enabling environment for local business to prosper.

Table following on the next page

Table 2: "Tick-off" list for the factors in the creation of an enabling developmental environment

Primary factor	Secondary aspects	Primary factor	Secondary aspects
Partnership formation	Partnerships with business and communities, high levels of participation, cooperation, integration, allocation of functions and roles, involvement, empowerment, engagement, institutional relations (vertical and horizontal).	**Local government structures, policies and actions**	Good governance (accountable and transparent), legislation, policies (aligned with national and provincial policies), institutional structures, marketing and investment, information provision and support, capacity and skills development, budgeting and spending, regulations, procurement, coordination, fast decision making, research and innovation, stop corruption, political stability
Local leadership	Local champions and drivers (politicians, officials, business leaders, NGOs, religious leaders, traditional leaders), clear policy directions, political stability, appropriate policy development, efficient decision-making structures.	**Poverty alleviation and social development (including arts, culture, sports and recreation)**	Quality of life, redistribution, people centred approach, pro-poor focus, community development, basic needs (services and facilities), social cohesion, safety nets (grants/subsidies), grow asset base of poor.
Economic development actions including LED	Market interventions, job creation initiatives, research analysis with surveys, policies and strategies, funding, skills development, comparative advantages, project implementation, SMME support, diversification, value-added product support, export support, labour based job drivers (NGP), attract and retain, incubators and mentors.	**Environment management and spatial development**	Integration of SDF, IDP and LED, rural-urban linkages, mixed use development, corridor development, nodal development, compact and dense development, land use management, clean quality environment, environmental management.
Infrastructure development	Hard infrastructure, soft infrastructure, budget and funding, capacity extension, maintenance.	**Human resource development**	Skills development, SMME development, mentorship, incubators and job training centres, labour force development.
Entrepreneurship development	Training and support, ease of doing business, tax incentives, regulations, access to finance, policies.	**Access opportunities including transport**	Access to economic opportunities, transport, ownership and assets, markets, community facilities, ICT, housing development.
Agricultural development actions (rural areas)	Access to land, finance, funding and grants, infrastructure, market access, research, project development, training and support.	**Safety and security**	Law and order, crime prevention.

Source: Meyer, (2014, p. 28).

The factors for the creation of an enabling environment as listed in Table 2 were also taken into account in the development of the factors of resources and capacity for local development as listed in Table 1. It should be noted that some overlapping has occurred between the two sets of factors. That is possible because both sets of factors have as its aim local economic development. The factors as listed in Table 1 will be used for the formulation and testing of the local economic development assessment tool. The next section explains the formulation and the functionality of the LED potential assessment tool.

3. THE DEVELOPMENT OF A LOCAL ECONOMIC DEVELOPMENT (LED) POTENTIAL ASSESSMENT TOOL

Although the author has made an effort to list all the major economic capacity and resources factors in Table 1, the list is not exhausted and more factors could have been added. The assessment of the potential of a local region could be based on quantitative data or qualitative perceptions, or a combination of both depending on the availability of information (WHO, 2014). The assessment tool as proposed includes factors that are both quantitative and qualitative in nature (see table 1 for classification of factors). A developmental practitioner can therefore do both qualitative and quantitative assessments or one of the two processes as selected or a combination.

In terms of economic development potential, Leigh and Blakely (2013, p. 74) listed a formula for the calculation of the potential for a region. The formula as proposed is stated as, local economic development potential (LEDP) = c x r, where c equals local capacity and r equals local resources. In Table 1, the factors for both the capacity and resources are listed. The process as proposed for the calculation of the local economic development potential is formulated as follows. Through a qualitative or quantitative process, scores will be allocated to all of the factors of capacity and resources. Scores per factor will be out of a maximum of 10 for full compliance or 0 for total failure regarding the factor. In more detail, the qualitative allocation of scores (0 to 10) are guided by the following guidelines as listed in Table 4. All the various scores would then be added and an average score would be calculated for capacity and resources. This average score would be equal to an average score out of 10. The average score for capacity would then be multiplied with the average score for resources. In terms of this calculation, it is possible to calculate an index of economic development potential with a maximum score of 100 and a minimum score of 0. The index classification is listed in table 3.

Table 3: Index classification

Index classification	Index scores
High development potential	70 to 100
Medium development potential	40 to 69
Low development potential	0 to 39

For example, a region that is strong regarding capacity factors, scores an average of 9 for capacity(c) out of 10, but are struggling regarding local resources with a score of 3 for resources(r) out of 10. If the formula is applied, the region would score an index of 27 (LEDP = c x r), resulting in low economic development index. Both sets of factors therefore need to be strong to have a high development potential index. A region with a capacity score of 7 and a resource score of 9 would have an index of 63, resulting in a medium economic development index. With this assessment tool, regions could be compared and factors which have a negative impact on local development, could be identified and addressed. A total index of below 39 could then be regarding as low and all the factors with low scores need to be addressed if possible.

Table following on the next page

Table 4: Qualitative score allocation guidelines for capacity and resources

0 - No capacity/resources and having a major negative impact on development.	1 – Very limited levels with a negative impact on development.
2 – Limited levels with a negative impact on development.	3 – Below acceptable levels with a negative impact on development.
4 – Below average levels with negative support for development.	5 – Average levels in support of development.
6 – Above average levels in support of development.	7 – Good acceptable levels in support of development.
8 – Very High levels in full support of development.	9 – Close to maximum levels, in full support of development.
10 - Full and abundance of capacity/resources at maximum possible levels.	

Source: Own compilation.

4. APPLICATION OF ASSESSMENT TOOL: CASE STUDY

The Local Economic Development Potential Index compares local resources and local capacity, with a formula, development potential = resources(r) x capacity(c). The case study focus area is known as the "Vaal-Triangle" region consisting of Emfuleni Local Municipal area (Southern Gauteng Province) and the Metsimaholo Municipal area (located in the Northern Free State region). The study area includes the cities and towns of Vanderbijlpark, Sebokeng, Sharpville, Vereeniging, Sasolburg and Zamdela. Figure 1 provides a locality plan for the study region. The two of the region which will be compared are located north (Emfuleni) and south (Metsimaholo) of the Vaal River. The two areas form part of a larger regional initiative known as the "Vaal 21" tourism development project (see Figure 1). The study region is known as an important industrial hub in South Africa. Major industries such as Sasol Industries and Arcelor Mittal South Africa (AMSA) dominates the local business environment. Figure 1 presents the locality of the region and surrounding areas.

Table 5 provides a summary of the main socio-economic indicators in the study region. The two areas form a functional economic region, with the Vaal River dividing the two areas. The Vaal River is a major water body and is mostly underutilized for transport and tourism purposes, allowing for huge economic development potential. The combined population of the study region is 888 000. The two areas have similar characteristics in terms of type of industries with manufacturing the dominating but declining sector, but the Metsimaholo region has shown higher growth rates than Emfuleni area. The Metsimaholo area has a much higher regional GDP per capita if compared to Emfuleni area. Unemployment rates in both areas are high at more than 30% and households without formal income are 17.7% and 13.2% respectively. Youth unemployment is extremely high at more than 40% for the region.

Figure following on the next page

Figure 1: The study region

Source: Sedibeng, 2013.

Table 5: Summary of key socio-economic indicators for the study region

Indicator	Emfuleni area	Metsimaholo area
Total population – 2014	731 000	157 000
Population growth 1996 to 2014 per annum	1.0%	1.8%
Number of people in poverty (% of people living in poverty)	298 263 (41%)	57 804 (37%)
Regional GDP (R 1 000 000)	R 32 700	R 38 580
Regional GDP growth 1996 to 2014 per annum	1.2%	4.9%
Regional GDP growth in 2014	- 0.5%	2.2%
Number of unemployed people 2014 (unemployment rate in brackets)	106 000 (36.4%)	21 800 (31.0%)
Number of employed people 2014	180 050	47 700
Regional GDP per capita 2014	R 44 733	R 245 732
Average Household size 2014	3.14	3.11
HDI 2014	0.66	0.64
Gini-coefficient 2014	0.60	0.60
Population density (people per square km) 2014	756	91
Household infrastructure index 2014	0.87	0.84
Composite crime index 2011	112.68	173.79
Location quotient for manufacturing sector 2014	2.61	2.86
Annual average income per capita 2014	R 131 628	R 158 119
Number of households with no formal income 2014	17.7%	13.2%
Total exports 2014 (R 1 000 000)	R6 591	R3 403
Total tourism trips to region 2014	480 625	182 385
Dependency ratio 2014	43.80	44.30
Youth unemployment rate 2014	45.0	41.6

Source: Meyer, (2015) and Global Insight (2014).

In the assessment of the development potential for the region, a qualitative assessment method was utilized. A qualitative workshop was held on 12 February 2015 where approximately 75 business people and local government officials completed an assessment score for the two areas in the study region. Surveys were also completed in both areas (70 businesses in the Emfuleni area and 48 businesses in the Metsimaholo area) during June 2015 where local businesses were interviewed and the assessment scores were completed.

Table 6 is a presentation of the qualitative development assessment for the study region with a comparison between the two areas in the study region.

Table 6: Qualitative development capacity and resources assessment comparison: Emfuleni and Metsimaholo areas

Resource	Emfuleni Score (between 0 and 10)	Metsimaholo Score (between 0 and 10)	Capacity	Emfuleni Score (between 0 and 10)	Metsimaholo Score (between 0 and 10)
Natural	(4) Limited minerals in the region, but the Vaal River exists.	(6) Minerals such as coal are found and the Vaal River.	**Government**	(4) Lack of acceptable good governance.	(3) Lack of acceptable good governance.
Strategic locality	(8) Within the Gauteng Province.	(6) Located outside of Gauteng.	**Business**	(8) Strong business sector and leaders.	(7) Strong business sector but less leadership.
Labour	(8) Large labour force available.	(6) Smaller but still large labour force available.	**Infrastructure**	(2) Large backlogs.	(2) Large backlogs.
Investment	(4) Lack of capital investment	(6) Capital investment by Sasol industries.	**Social services**	(5) Average community facilities.	(5) Average community facilities.
Transport	(3) Limited public transport available.	(3) Limited transport available.	**Technology**	(6) Above average with universities.	(6) Above average with Sasol industry.
Communications	(5) Average levels, but strong mobile systems	(4) Just below average levels, but strong mobile systems.	**Innovation**	(7) Above average with universities.	(8) High level with Sasol Industry.
Industrial composition	(7) Strong sector, dominating	(7) Strong sector, dominating	**Education**	(8) High levels with many institutions	(6) Above average access.
Export	(4) Diminishing over the last years.	(7) Strong export sector dominated by Sasol.	**Political**	(4) Some division.	(3) High levels of political division.
Government spending	(3) Below average, lack of budget.	(3) Below average, lack of budget.	**Entrepreneurship**	(6) Above average with support.	(6) Above average with support.
Markets	(5) Large local market	(4) Smaller local market	**Size of economy**	(7) Large economy and specialized	(7) Large economy, and specialized.
Finance	(3) Limited access to finance.	(3) Limited access to finance.	**Community**	(6) Good involvement	(6) Good involvement
			Partnerships	(8) Strong between and within public and private sector.	(5) Average partnership formation.
Average Total score	4.90 (or 49.0%)	5.00 (or 50.0%)	**Average total score**	5.92 (or 59.2%)	5.33 (or 53.3%)

Development potential scores (0 is minimum and 100 is maximum):
- **Emfuleni area: 4.90 x 5.92 = 29.00 index**
- **Metsimaholo area: 5.00 x 5.33 = 26.65 index**

The development potential indexes for both areas are relatively low, below 30. Both areas could be classified as areas with low economic development potential index.

5. DISCUSSION
The assessment tools assist local development practitioners to assess the current level of development and the future potential of a region. The process could be qualitative by means of interviews of key role players in the region, providing subjective scoring. Or the process could

include both qualitative and quantitative scoring, depending on the availability of data. The assessment is easy to use and could be done in a relatively short time. Various local regions could be assessed and compared in both developing and develop countries. The assessment also allows for critical analysis of the local resources and capacity, especially if this is combined with the factors for the creation of an enabling environment (table 2) which is the responsibility by local government with partnership by the local private sector.

For the specific study region, the assessment in Table 6 has clearly indicated the problem areas. Areas of concern regarding resources and capacity are mostly the limited availability of natural resources, limited capital investment, poor public transport especially taking into account the long distances poor people must travel due to spatial inequality, diminishing exports, relative limited markets, limited access to finance, lack of infrastructure capacity and maintenance, poor governance and political instability. Areas of positive development factors for both resources and capacity are strategic locality, availability of labour although low skills levels exist, strong industrial composition, many quality education facilities, strong business organizations and leaders, high levels of concentrated innovation and the formation partnerships. The improved use of resources and development of capacity should form the basis of a LED strategy for the region.

Local economic development as a localized strategy has the aim of attempting to ensure the optimal use of local resources and capacity which will lead to economic development (Romer, 1986, p. 1002). In addition to the optimal use of resources and capacity, local coordination of all economic activities is also of vital importance (Rosenstein-Roden, 1943, p. 202).

6. RECOMMENDATIONS AND CONCLUSIONS

The economic development potential index as formulated will assist local economic development practitioners to identify problematic issues much easier and to compile a development strategy from the index. It will also allow them to compare areas. The study focused on the Vaal-Triangle and found that the region could be classified as a region with a low economic development potential index.

Local Economic Development is an applied science and therefore practical in nature (Carroll and Blair, 2012, p. 51). The development and formulation of this assessment tool had the overall aim to be very practical and simple to apply in practice. The tool could be applied qualitatively and/or quantitatively depending on the specific research design selected at the local level and the availability of data and information.

A key factor in successful local economic development is institutional capacity (Lawson, 2012, p. 65). Institutional capacity in this sense could include capacity of the local government in general but also the LED unit, local business organizations, community organizations, NGO's, etc. The coordination and partnerships allows for a multiplier effect in terms of local capacity and dynamic development as proven by the "Big Push Theory". This increased capacity also leads to improved service delivery at the local level. In support of the above statements, Trousdale (2005) also prioritises good governance as a key factor in the developmental process. Therefore, and in conclusion, good governance will lead to an enabling environment for LED to be successful.

LITERATURE:

1. Carroll, M.C., and Blair, J.P. (2012). Local Economic Development and the Academy. *Applied Geography*. 32, 51-53.
2. Christy, R., Mabaya, E., Wilson, N., Mutambatsere, E. and Mhlanga. N. (2009). *Enabling Environments for Competitive Agro-industries.* Wallingford, UK.

3. Department of Provincial and Local Government (DPLG). (2006). *Stimulating and Developing Sustainable Local Economies, National Framework for LED in South Africa, 2006-2011*. Pretoria: Government Printer.

4. Department of Cooperative Governance. (2014). *Draft National Framework for Local Economic Development, 2014-2019.* Pretoria: Government Printer.

5. International Labour Organization (ILO). (2006). *A local economic development manual for China.* ILO, Geneva.

6. Konig, G., Da Silva, C.A. and Mhlanga. N. (2013). *Enabling Environments for Agri-business and Agro-industries Development*. Food and agriculture organization of the United Nations. Rome.

7. Lawson, J.D. (2012). Rapid assessment of municipal local economic development. *Skills@Work: Theory and Practice*. 5, 65-80.

8. Leigh, N.G., & Blakely, E.J. (2013). *Planning Local Economic Development: Theory and Practice.* London. Sage Publications.

9. Meyer, D.F. (2014). Local government's role in the creation of an enabling developmental environment. *Administratio Publica*. 22(1), 24-26.

10. Meyer, D.F. (2015). *Emfuleni Local Municipality, 2015 Local Economic Development (LED) Strategy.* Vanderbijlpark, North-West University. AppLED.

11. Nel, E. (2001). Local economic development: A review and assessment of its current status in South Africa. *Urban Studies*, 38, 1003-1024.

12. Pillay, S. (2013). Conceptualizing developmental local government: A framework for effective local economic development strategy formulation in South Africa. *The Journal of African and Asian Local Government Studies.* 2(3), 17-33.

13. Rogerson, C.M. (2009). *Strategic overview of LED in South Africa.* Final report to Minister S Shiceka of DPLG. Retrieved 22 September 2015 from: www.gtz.de.

14. The Presidency. (2012). *National Development Plan (NDP) - 2030.* The National Planning Commission. Pretoria: Government Printer.

15. National Resources Institute (NRI). (2006). *Addressing Poverty Through Local Economic and Territorial Development.* Retrieved 2 April 2015 from http://www.nri.org.

16. Reucker, A., & Trah, G. (2007). *Local and regional economic development: Towards a common framework for GTZ's intervention in South Africa.* Eschborn.GTZ. Retrieved 11 September 2015 from: www.gtz.de.

17. Romer, P. (1986). Increasing returns and long run growth. *Journal of Political Economy.* 94(5), 1002-1037.

18. Rosenstein-Roden, P. (1943). Problems of industrialization of Eastern and South-eastern Europe. *Economic Journal*, 53, 202-211.

19. Sedibeng District Municipality. (2013). *The Vaal 21 region.* Retrieved 2 October 2015 from http://www.sedibeng.gov.za/index_vaal21.html.

20. South Africa (Republic). (1998a). *White paper on Local Government.* Constitutional Development. Pretoria: Government Printer.

21. South Africa (Republic). (2014). *Public Administration Management Act (Act 11 of 2014).* Pretoria: Government Printer.

22. Trousdale, W. (2005). *Promoting local economic development through strategic planning: The local economic development series*, Volumes 1 to 5. Nairobi: UN-Habitat.

23. United Nations Development Programme (UNDP). (2010). *Building Bridges between the state and the people: An overview of trends and developments in Public Administration and Local Governance.* UNDP. New York.

24. United Nations Development Programme (UNDP). (2008). *Capacity Assessment methodology: User's Guide.* UNDP. New York.

25. USAID, (2006). *Making Cities work, assessment and implementation toolkit for Local Economic Development.* Washington, USAID.

26. World Health Organization (WHO). (2014). *Economic Assessment.* Retrieved 17 September 2015 from: www.who.int/heli/economics/en/.

THE ROLE OF REAL ESTATE DERIVATIVES IN HEDGING REAL ESTATE: AN EMPIRICAL ANALYSIS OF THE U.S. COMMERCIAL MARKET

Cem Berk
Istanbul Arel University, Turkey
TurkobaMahallesi, ErguvanSokak 26/K, 34537 Tepekent/Büyükçekmece, İstanbul, Turkey
cemberk@arel.edu.tr

ABSTRACT

Today, real estate today is used as an important investment vehicle owing to its many benefits, including diversification and ability to yield real returns. Real estate prices can be volatile in the short run, and therefore, investors need to hedge themselves to avoid negative returns. This problem is due to the systematic and unsystematic components of real estate risk. Systematic risk refers to risk that applies to all similar properties, while unsystematic risk refers to risk that applies only to the property that needs to be hedged. The systematic component of real estate risk can be mitigated by proper use of real estate derivatives, such as forwards, futures, options and swaps. These are instruments whose underlying asset is the index, which is composed of real estate in the region with a similar purpose as the property being hedged. This study examines some of the major benefits and difficulties of using real estate derivatives for hedging real estate, using data from the U.S. commercial real estate market, such as those from Ishares U.S. Real Estate Exchange Traded Fund, General Growth Properties Inc., Simon Property Group Inc., The Macerich Company, and Vornado Realty Trust. The daily data are from the period June 19, 2000 and August 24, 2015, with 3,820 pieces of information for each variable. The study aims to investigate the statistical integration in the U.S. commercial real estate market, using Johansen's cointegration test. The research helps provide a better understanding of the real estate derivatives market and has important implications for academicians, practitioners, and policy makers.
Keywords: Cointegration, Derivative Contracts, Indexing, Real Estate, Risk Management

1. INTRODUCTION

Real estate is an important investment vehicle and is known to achieve real returns above inflation. Successful investment in real estate, however, requires adopting appropriate measures against the risks of holding real estate. Price risk occurs in real estate because the value of a property may change according to both national and regional trends. Risks also come with finalizing a good leasing contract, as well as with property management. The risk of receiving non-favorable financing also exists when the investment is highly leveraged.

Both commercial and residential real estate can be subject to price volatility. This risk can be categorized into either systematic risk or unsystematic. Systematic risk, assuming that the investor hedges herself/himself with real estate derivatives whose value is based on the local real estate market index, is the risk that can be applied to price changes in the area in which the real estate is located. This risk can be controlled by the proper use of real estate derivatives. On the other hand, idiosyncratic risk is the change in the price of real estate independent from the area and that has to be controlled by the investor.

Derivatives have been used for precious metals, energy, agricultural, and financial products. Using derivatives for the real estate industry is rather new, starting only in the last few decades. A derivative is an instrument whose value changes according to a change in the underlying property. Using derivatives is often more practical than trading real estate with high transaction costs because real estate exposure can increase/decrease with the use of real estate derivatives.

Real estate is a very unique investment vehicle, and its return is affected by factors that do not necessarily have a high correlation with macroeconomic variables or the real estate industry. If the risks regarding the real estate exposure need to be hedged, indexing is one of the most important factors that need to be considered. In the context of real estate derivatives, an index is the pool of real estate that serves as a benchmark for the underlying real estate. This pool is often specialized further according to property type and location.

The real estate derivatives market is led by the United States and the United Kingdom but is still unavailable in many developed countries. The derivatives are available for taking or hedging exposure in real estate. The major instruments in this field are forwards, futures, options, and swaps, which are obligations, rights, or changes of cash flows for real estate.

Basis risk, a well-known phenomenon in international finance, is the risk of a difference in the value change between the asset to be hedged and the derivative itself. This risk occurs when the asset to be hedged and the derivative are not exactly the same. In the case of real estate, there is a considerable probability that the values of the real estate to be hedged and the underlying real estate index change differently. There is also the risk of liquidity, given that in certain situations, investors may have trouble finding a counterparty to take a position for the same index, time, and amount.

The remainder of this paper is organized as follows. Section 2 covers some of the important works in the real estate derivatives and indexing literature, while Section 3 presents the research methodology. Section 4 describes the data and presents some of the important results of the analysis. Section 5 presents some of the study's major implications, while Section 6 provides the final remarks.

2. LITERATURE REVIEW

Many investors are heavily exposed in real estate, and standard financial instruments offer a poor hedge. Most of the property derivatives available have been tailored to meet the needs of institutional investors. Based on Swiss property derivatives, Syz et al. propose index-linked mortgages tailored to retail consumers, focusing on how to stabilize net wealth and quantify the risk of mortgage default.

The accuracy of the index is related to the quality, credibility, and transparency of the underlying price index. An index-linked mortgage reduces the systematic risks of real estate in portfolios. Institutional investors can face real estate exposure without actually holding real estate. Mortgage providers may balance their position by providing property derivatives to institutional investors. Therefore, reliable indices for residential property are required. Reasonable structures of index-linked mortgages involve linkage of principal while interest payments are fixed or linkage of interest payments and principal is fixed (Syz et al., 2007).

Valente argues that there have been some recent efforts to develop indices that provide a basis for derivative products. These indices include Moody's/Real CPPI, a transaction-based approach to repeat sales technology. Other indices are S&P and GRA/Charles Schwab, which use a weighted average methodology to create a transaction-based index, and REXX by Cushman & Wakefield, Newmark Knight Frank, which developed an econometric model based on macroeconomic data and rents.

It is very probable that these indices can be biased because of changing credit patterns, especially for those who include small transactions, transactions that have a value of less than US$15 million. Furthermore, the composition of the index, particularly the type of property and the location, determines the accuracy. Thus, any major index such as the NCREIF can be biased compared with a custom index that is adjusted for property type and location (Valente, 2008).

Chegut et al. examine the commercial real estate derivatives market in London by studying a new transaction-based quarterly real estate index for the period 1997 to 2011. London is the most developed real estate derivatives market outside the United States. The market seems to be affected from the crisis earlier than New York, and the correlation between the two markets is low. The value of real estate has a direct impact on national wealth; in particular, its role as collateral is very important for economic growth. The primary uses of a transaction-based index are valuation, performance evaluation, and risk management. Transaction-based indices are used in only a few countries and often only for residential property. The success of implementing such an index relies on the liquidity of the market, without which a random error will signal higher volatility for the market (Chegut et al., 2013). Baroni et al. study the transaction-based and valuation-based indices and test whether they are suitable for the derivatives market. The robustness of the price level, mean, and volatility is tested for two real estate price indices, using the database for the Paris residential market for the period 1982 and 2005. The impact of the index revision is non-negligible in estimating the index price level for both indices. Revision is required when a change in method takes place or new data integration to past series. It is widely practiced for residential real estate indices such as S&P/Case-Shiller. Various methodologies can be used for the measurement of volatility for the indices, which is a concern for investors for the derivatives for which underlying determinant is the indices (Baroni et al., 2008). Lecomte studies the risks in commercial real estate markets and the validity of real estate derivatives. Real estate is well-known for its idiosyncratic risk structure owing to heterogeneous assets traded in illiquid markets with asymmetric information. Some researchers argue that effective hedges for commercial real estate are unfeasible because of the lack of reliable indices, while others claim that markets for cash-settled derivatives should be established based on alternative indices such as hedonic price indices. Therefore, one might argue that no existing model of derivatives can satisfactorily address real estate investors' hedging needs. In theory, property derivatives should be based on multi-factor models depending on real estate's fundamental risk structure. In practice, one can only consider hedging at an aggregate level, whereas real estate might require a molecular approach. Therefore, an improvement might be hedonic index-based derivatives or highly specific composite sub-index derivatives (Lecomte, 2007).

3. RESEARCH MODEL

The data are first tested to see whether they are stationary. The first unit root test that is conducted is the augmented Dickey-Fuller (ADF) test:

$$\Delta R_t = b_0 + b_1 + \prod_0 + R_{t-1} + \sum \prod_i \Delta R_{it-1} + e_t$$

Where Rt is the closing price at time t and ΔRt is the change in the price of the real estate stock or fund traded (Dsouza & Mallikarjunappa, 2015).

To test whether a long-run relationship exists between variables, a Johansen cointegration test is conducted. The number of cointegrating vectors can be tested with trace and maximum eigenvalue tests (Beag & Singla, 2014):

$$J_{trace} = -T \sum \ln (1-\lambda_i)$$
$$J_{max} = -T \sum \ln (1-\lambda_r+1)$$

4. DATA ANALYSIS

The data used in this study are from participants in the U.S. commercial real estate market, namely the Ishares U.S. Real Estate Exchange Traded Fund (shortened to "ISHARES" for the study), which has exposure to U.S. real estate companies and REITs; General Growth Properties, Inc. (shortened to "GG"); Simon Property Group, Inc. (shortened to "SIMON" for the study); The Macerich Company (shortened to "MR"); and Vornado Realty Trust (shortened to "VORNADO"). The daily (workday) data are for the period June 19, 2000 and August 24, 2015. There are 3,820 pieces of information for each variable. The goal of the study is to investigate the statistical integration in the U.S. commercial real estate market.

Figure 1 provides graphical presentations of the data.

Figure 1: Graphical presentations of the data
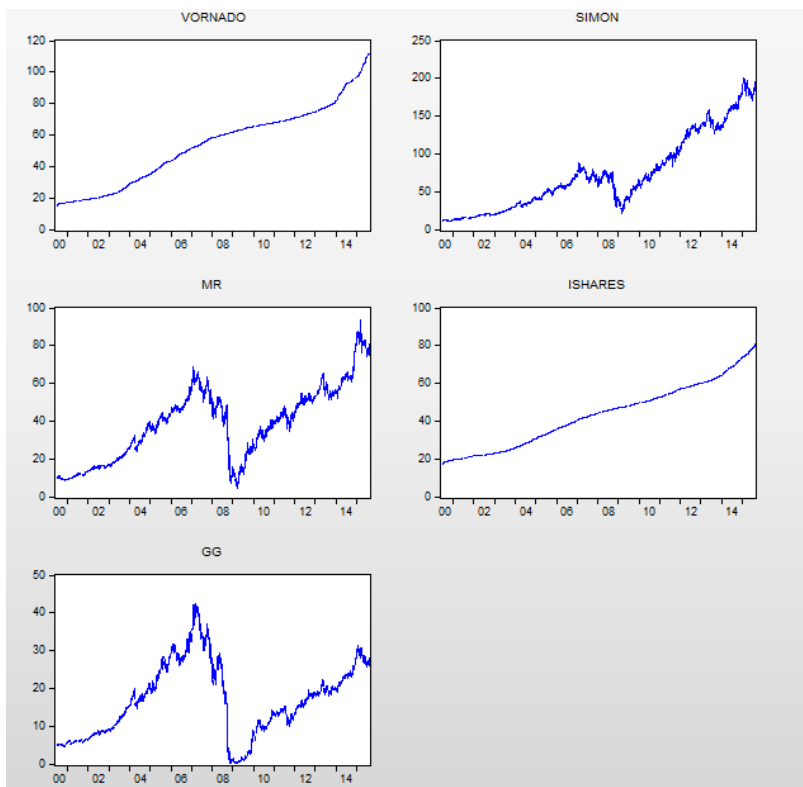
The variables are checked for whether they are stationary under a 5% level of significance with the ADF methodology. The results are given in Table 1.

Table following on the next page

Table 1: ADF Test Results

	ADF TEST STATISTIC	**CRITICAL VALUE**
GG	-1,9409	0,0780
ISHARES	-3,4110	15,3670
MR	-1,9409	0,7966
SIMON	-1,9409	2,1935
VORNADO	-3,4110	12,5282
D(GG)	-3,4110	-62,6406
D(MR)	-3,4110	-61,4262
D(SIMON)	-2,8621	-71,1496
D(VORNADO)	-3,4110	-48,9961
D(ISHARES)	-3,4110	-52,0573

To test for the long-run relationship of the data, a VAR(1) model is developed. The model's stability is checked by examining unit roots. The results are given in Table 2.

Table 2: Results of Model Stability Check

Roots of CharacteristicPolynomial
Endogenousvariables: D(ISHARES) D(GG)
D(MR) D(SIMON) D(VORNADO)
Exogenousvariables: C
Lagspecification: 1 1
Date: 09/01/15   Time: 09:40

Root	Modulus
0.343302	0.343302
-0.163772	0.163772
0.100371	0.100371
0.050365	0.050365
-0.048224	0.048224

No rootliesoutsidetheunitcircle.
VAR satisfiesthestabilitycondition.

The VAR(1) model with the inserted coefficients is given below (*next page*).

D(ISHARES) = 0.198273038711*D(ISHARES(-1)) + 0.00075893572727*D(GG(-1)) - 0.00187802914105*D(MR(-1)) + 0.000843364351144*D(SIMON(-1)) + 0.0692474919561*D(VORNADO(-1)) + 0.0117469344946

D(GG) = 0.00894614207389*D(ISHARES(-1)) - 0.0404023946633*D(GG(-1)) + 0.0385983845165*D(MR(-1)) - 0.01050890356*D(SIMON(-1)) - 0.21628353859*D(VORNADO(-1)) + 0.0108764619329

D(MR) = - 0.601293964552*D(ISHARES(-1)) + 0.0262737302223*D(GG(-1)) + 0.0643119469645*D(MR(-1)) - 0.0548561729436*D(SIMON(-1)) - 0.0413850275657*D(VORNADO(-1)) + 0.0292837552293

D(SIMON) = - 0.841706295607*D(ISHARES(-1)) + 0.0404408208979*D(GG(-1)) + 0.0738881751706*D(MR(-1)) - 0.182353861645*D(SIMON(-1)) - 0.619311275371*D(VORNADO(-1)) + 0.0814734153252

D(VORNADO) = 0.212883479752*D(ISHARES(-1)) + 0.00066016224624*D(GG(-1)) - 0.00251349178862*D(MR(-1)) + 0.000578680531534*D(SIMON(-1)) + 0.242212499878*D(VORNADO(-1)) + 0.0157273078348

The long-run relationship between the variables is tested with the Johansen's cointegration methodology. The results are given in Table 3.

Table following on the next page

Table 3: Cointegration Results

Date: 09/01/15   Time: 09:41
Sample (adjusted): 6/22/2000 8/24/2015
Includedobservations: 3816 afteradjustments
Trend assumption: Lineardeterministictrend
Series: D(ISHARES) D(GG) D(MR) D(SIMON)
D(VORNADO)
Lagsinterval (in firstdifferences): 1 to 1

UnrestrictedCointegrationRank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.368094	6549.090	69.81889	1.0000
At most 1 *	0.339556	4797.490	47.85613	1.0000
At most 2 *	0.312124	3214.452	29.79707	1.0000
At most 3 *	0.269253	1786.708	15.49471	1.0000
At most 4 *	0.143179	589.6729	3.841466	0.0000

Trace test indicates 5 cointegratingeqn(s) at the 0.05 level
* denotesrejection of thehypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

UnrestrictedCointegrationRank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.368094	1751.600	33.87687	1.0000
At most 1 *	0.339556	1583.038	27.58434	0.0000
At most 2 *	0.312124	1427.744	21.13162	1.0000
At most 3 *	0.269253	1197.035	14.26460	1.0000
At most 4 *	0.143179	589.6729	3.841466	0.0000

Max-eigenvalue test indicates 5 cointegratingeqn(s) at the 0.05 level
* denotesrejection of thehypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

5. DISCUSSION

The variables are first checked for whether they are stationary with the ADF test. The results show that the critical values fail to exceed test statistics in level. However, they exceed the level when they are first differenced, showing that all of the data are I(1).
A VAR(1) model is developed to check for the long-term relationship between the variables. The model is also tested for unit roots; the results show that no roots lie outside the unit circle, which means that the model is reliable. Finally, the variables are tested with the Johansen's cointegration methodology. Both the trace and max-eigenvalue suggest five cointegrating vectors, which indicates a long-run relationship between variables.

The results of the study show that U.S. commercial real estate market is statistically integrated, which suggests a potential to use real estate derivatives for hedging. In addition to its commercial and residential purposes, real estate is an important vehicle for investment. It generates real returns in the long run, albeit it can generate negative returns in the short run. Therefore, exposure to real estate needs to be hedged. This study gives a comprehensive overview of the real estate derivatives market and helps improve the understanding of market dynamics. The findings of the study have important implications for academicians, practitioners, and policy makers.

6. CONCLUSION

In addition to its commercial and residential purposes, real estate has been shown to be a reliable investment vehicle. It can yield real returns above the rate of inflation.

There are two types of real estate risk—systematic and unsystematic. Real estate is subject to price risk in the short term, and the volatility real estate prices can lead to negative returns. To control for the price volatility, real estate can be hedged with real estate derivatives.

Using real estate derivatives requires indexing based on property type and location. Since the value of real estate changes according to the changes in the index, systematic real estate risk, which is risk that applies to all similar properties, can be hedged. There is always unsystematic real estate risk, which comes from individual price changes of the property that remains unhedged owing to the idiosyncratic nature of real estate investment.

There are difficulties in using real estate derivatives for hedging real estate. One of the difficulties is basis risk, which is the possibility of asymmetrical change in the real estate index when compared with the property that is being hedged. This difficulty is due to the unsystematic risk in real estate. Another difficulty is creating an active secondary market for real estate derivatives. Without such a market, investors would have difficulty taking a position for the index they want at the amount and duration they want.

On the other hand, institutional investors may find it more practical to trade real estate derivatives than real estate itself because of the high transaction costs embedded in real estate. The exposure to real estate can be increased/decreased by taking a long or short position in real estate derivatives.

The most frequently used real estate derivatives are forwards, futures, options, and swaps which are obligations, rights, or changes in cash flow in an exchange or over-the-counter derivatives market. Such markets are most active in the United Kingdom and the United States, but more developed countries adopting them.

The application before the real estate derivatives market was trying to model real estate based on some macroeconomic factors and hedging real estate indirectly based on hedging these factors such as real estate. However, a true hedge for real estate should rely on an instrument based on real estate index itself. Some important efforts in building real estate indices include S&P/Case-Shiller, GRA/Charles Schwab, Moody's/Real CPPI, REXX by Cushman & Wakefield and Newmark Knight Frank, the NCREIF, and others. These efforts are extremely important because the applicability of real estate derivatives is determined by the strength of the underlying real estate index.

This study examines various benefits and difficulties in hedging real estate with real estate derivatives. It also empirically analyzes some large commercial real estate investors and a fund investing in U.S. real estate companies. The research helps academicians, practitioners, and policy makers get a better grasp of market dynamics and contributes to the literature. Future studies can extend our research by using real estate market and various index data for different segments and locations in different countries.

LITERATURE:

1. Baroni M. , Barthelemy F., Mokrane M. (2008), Is it possible to construct derivatives for the Paris residential market?, *Journal of Real Estate Finance and Economics,* 233-264.

2. Beag, F.A., Singla N. (2014), Cointegration, Causality and Impulse Response Analysis in Major Apple Markets in India, *Agricultural Economics Research Review Vol.27 No.2,* 291.

3. Chegut A.M., Eichholtz P.M.A., Rodrigues P. (2013), The London Commercial Property Price Index, *Journal of Real Estate Finance and Economics,* 588-590.

4. Dsouza J.J. , Mallikarjunappa T. (2015) , Does the Indian Stock Market exhibit random walk?,*Paradigm 19(1)* , 8.

5. Lecomte P. (2007), Beyond Index-Based Hedging: Can Real Estate Trigger a New Breed of Derivatives Market?, *Journal of Real Estate Portfolio Management* , 345-351.

6. Syz J. , Vanini P., Salvi M. (2008), Property Derivatives and Index-Linked Mortgages, *Journal of Real Estate Finance and Economics,* 23-34.

7. Valente J. (2008), Real estate derivatives: Its our "dot-com" time, *Journal of Real Estate Portfolio Management Vol.14, No.1*, 76-77.

A SEEMINGLY UNRELATED REGRESSION ANALYSIS ON THE TRADING BEHAVIOR OF MUTUAL FUND INVESTORS

Nan-Yu Wang
Associate professor, Department of Business and Tourism Planning
Ta Hwa University of Science and Technology, Taiwan
nanyu@tust.edu.tw

Sen-Sung Chen
Associate professor, Department of Risk Management and Insurance
Feng-Chia University, Taiwan
chenss@fcu.edu.tw

Chih-Jen Huang
Professor, Department of Finance, Providence University, Taiwan.
cjh@gm.pu.edu.tw

Shih-Heng Hsiao
Graduate student, Department of risk Management and Insurance
Feng-Chia University, Taiwan
hanks0608@cathaylife.com.tw

ABSTRACT
This paper provides a comprehensive investigation on the causality relationship between fund performance and trading flows. We analyze if investors behave asymmetrically in fund purchasing and selling by seemingly unrelated regression which comprises several individual relationships that are linked by the fact that their disturbances or the error terms are correlated. The empirical result shows a significantly negative relationship between fund performance and purchase flows for domestic funds. The magnitude of domestic funds redemption negatively affects current return, but not for international funds. As previous fund return positively affects current net flows, the further lagged performances have no significant impact on the trading flows, revealing that fund investors are sensitive only to short-term past performance. Most importantly, while negative fund performance leads to the increases in redemption, positive performance contrarily leads to the decreases in purchase. The evidences strongly indicate an asymmetry behavior of fund investors in the return-purchase causality relations.
Keywords: *Fund performance, Fund flows, trading behavior, Seemingly unrelated regression.*

1. INTRODUCTION

The behavioral difference between purchase and redemption of fund investors can provide valuable management implications for fund managers. It is beneficial to know investors' attitudes toward trading with poor or good fund performance. Purchase could depend on investors' demand, the option to sell shares at any time, and could also be another way for investors to request redemption of outstanding fund units or shares. Therefore, one can study the open-end fund transactions of investor purchases and redemptions in accordance with the fund net value that is traded under normal conditions. Previous literature explored the relationship between fund performance and its flow, but most of them focused on the net flow (Ippolito, 1992; Carhart, 1997; Goetamann and Peles, 1997; Chevalier and Ellison, 1997; and

Sirri and Tufano, 1998) rather than on the purchase and redemption flows. Focuses only on the view of net flow point is likely to lose investor's decision-making process. Furthermore, it cannot understand detailed trading decisions. Therefore, this article looks at the fund flows in three parts—purchase, redemption, and net flows to discuss the fund's investment behavior. We use seemingly unrelated regression (SUR) to observe if the current and deferred fund performance impacts the fund flows. Fund flows may be affected by unknown factors that externally affect research results. Adopting the SUR models to observe current and deferred returns that affect the fund flows can effectively reduce the empirical results bias for residuals of the regression model. This article proceeds as follows. Section 2 provides research purpose, samples, research periods, and the statistical models. Section 3 provides the empirical evidences of the following questions: (1) the relationship between fund flows and returns linked to various types of domestic fund investors; (2) whether trade asymmetry exists in the relationship between fund returns in the domestic fund market and investment behavior; (3) whether policyholders who used various purchase and redemption methods held various views about return signals; and (4) whether the investment behaviors of policyholders in various risk groups influenced return factors at varying degrees.. Finally, Section 4 concludes the paper.

2.   RESEARCH METHODS

We can look at whether fund performance will impact fund flows and whether the current flow can be used to speculate future performance. Many scholars explore the relationship between fund performance and flows. The paper analyzes the trading behavior of mutual fund investors in an onshore fund and provides a future reference for mutual fund investors.

2.1. Research samples

Our sample focuses on Taiwan domestic funds from the *Taiwan Economic Journal (TEJ)*. The research period was from May 1, 2007 to December 31, 2011. The data drawn from the *TEJ* database included all types of domestic funds in Taiwan, monthly fund flows, the purchase prices of monthly funds, the redemption prices of monthly funds, the net value of funds at the end of each month, and the net asset value of funds. Domestic funds are divided into equity, balanced, and bond funds according to investment objective. Allocation of investment objective is as shown in Table 1. Equity funds are much greater than the others; the share is more than 50%, balance funds are less than 10%, and bond funds are 10%. Descriptive statistics can aggregate meaningful explanations and provide the average and distribution for sample data. This study will analyze the purchase, redemption, net assets, net flow, and fund returns to understand the distribution of those relevant variables. Table 2 indicates the statistical results. The study sample is divided into equity funds, balanced funds, and bond funds, respectively. We can understand the sample distribution by the different investment groups. For the sample distribution, the balance funds' purchase and redemption are more centralized than the equity and the bond funds. Therefore, investment decisions are more similar between different investors.

2.2. Research methods

This study investigated whether fund inflows and outflows were affected by return factors. Warther (1995) and Edwards and Zhang (1998) have defined fund flows as the difference between the amount of purchases and the amount of redemptions (i.e., the value obtained by subtracting the amount of redemptions from the amount of purchases). By referring to Johnson (2010), the flow of fund holders was calculated in this study. Because the total net assets of funds affect fund flows, the flow of fund holders is equal to the sum of the fund level and net assets during the entire research period.

The calculation formula is:

$$Flow_{i,t} = \sum_2^i Dollar_{i,t} / TNA_{i,t-1} \;,$$

where *Flow* denotes fund flows, *Dollar* denotes the total mutual funds at the tth phase, *TNA* denotes the total net assets of funds, *i* denotes the ith fund, and *t* denotes time. As indicated by previous studies, this definition considers the influence of asset size on total fund investment and therefore suitable for this study. Original return is the difference between the per-unit net value on a current day and the per-unit net value on a previous day. Because this study considered the influence of cash dividends on original returns, the rate of return is $Return_{i,t} = (v_{i,t} * Adj_{i,t} - v_{i,t-1}) / v_{i,t-1}$, where $Adj_{i,t} = v_{i,t-1} / (v_{i,t-1} - Div_{i,t})$, where *Return* denotes the rate of fund return, *V* denotes fund net value, *Adj* denotes adjustment factor, *Div* denotes cash dividend, *i* denotes the ith fund, and *t* denotes time. The adjustment factor that includes cash dividends can reflect the rate of actual return.

This study adopted a SUR model to investigate the relationship between fund flows and returns for various types of investors, various investment targets, and various purchase and redemption methods. In this study, net flows were decomposed into purchase inflows and redemption outflows to examine whether the relationship between purchases and sales by investors was a symmetric relationship. In this study, the relationship between fund flows and returns under various conditions was investigated by using the SUR model proposed by Zellner (1962) to replace a typical regression model and by using an ordinal least squares (OLS) method to estimate parameters. The SUR equation is as follows: $y_{\mu t} = \chi \beta_{\mu t} + \varepsilon_{\mu t}, \mu = 1,...,N; t = 1,...,T$; that is, $y_{\mu t} = \chi \beta_{\mu} + \varepsilon_{\mu t}, \mu = 1,...,N$, where y_{μ} denotes the vector of (T × 1), x_{μ} denotes (T × β_{μ}), and ε_{μ} denotes the model parameter for (β_{μ} × 1). The SUR equation can be expressed by using the following matrices:

$$\begin{bmatrix} y_1 \\ y_2 \\ \vdots \\ y_N \end{bmatrix} = \begin{bmatrix} x_1 & 0 & \cdots & 0 \\ 0 & x_2 & \cdots & 0 \\ \vdots & \vdots & & \vdots \\ 0 & 0 & \cdots & x_N \end{bmatrix} \begin{bmatrix} \beta_1 \\ \beta_2 \\ \vdots \\ \beta_N \end{bmatrix} + \begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \vdots \\ \varepsilon_N \end{bmatrix}$$

In a SUR model, the variables used in this study can be expressed as follows: $Flow_{i,t} = (Return_{i,t} Return_{i,t-1})$, where *Flow* denotes fund flow, *Return* denotes fund return, *i* denotes the ith fund, and *t* denotes time. This formula can be used to examine the impact of current and deferred returns on current fund flow and to investigate the investment behaviors of various types of investors in the Taiwanese mutual funds market. Zellner (1962) assumed that residual errors varied heterogeneously and were cross-sectional correlated errors; that is, a correlation existed among error terms. Therefore, the error terms of a regression model probably included some determinants that had the same effects as a dependent variable and further affected the error terms to some degree; thus the variance of error terms was a nondiagonal matrix. An OLS model was not an adequate method for estimating coefficients. The reason for using a SUR model to replace an OLS model is that although these two models yield similar results, the structure of a SUR model is conducive for explaining cross-sectional factors. In addition, for identical parameters, the estimated coefficients and standard deviation of a SUR model is 25% of the estimated coefficients and standard deviation of an OLS model, indicating that the SUR model can more accurately estimate model parameters (Lee & Forbes, 1980; Bolton, 1989).

This study adopted a SUR model to examine the relationship between investment flows and returns caused by the purchase of domestic funds through investment-linked products and to investigate whether a difference existed in investment behavior between policyholders who purchased funds through investment trust and consulting companies or banks. In other words, this study investigated whether the investment behaviors of fund investors who adopted various investment methods were similar.

3. EMPIRICAL RESULTS

Previous literature indicates that fund return and net flow share a positive relationship, but changes in net flow are related to fund inflow purchase and not solely redemption. This indicates that the investors' purchase decision is related to a fund's high returns, but their redemption decision is not significantly associated with fund return (O 'Neal, 2004; Johnson, 2010). In this paper, to verify whether fund return will affect the fund flow, we divide the fund performance into 10 divisions. Division 1 indicates that the fund performance is in the worst 10%, whereas division 10 indicates that the fund performance is in the best 10%. Thus, we can analyze whether high fund return can attract more capital inflow.

The research period is April 19, 2007 to December 31, 2011. Figure 1 shows the relationship between the fund flow and return in the different groups of return classification of the Taiwan onshore fund. This figure demonstrates that purchase and redemption undergo a large change at deciles 4 to 7. However, the fund return at the worst 40% has more trends consistent with purchase and redemption. The net flow influenced purchase at the best fund return of 20%. The results would explain that an investor's purchase decision is relative to high fund return and cannot explain the dramatic changes at deciles 4 to 7. It only shows that fund flow and return have a substantially consistent trend.

Previous studies noted that prior fund performance can trigger a response in fund flow, that is, fund return can affect fund investors' decisions. This study uses the SUR model to analyze the prior fund return impacts on the net flow of deferred purchases. Table 3 shows the relationship between net fund flow and fund return on the Taiwanese onshore fund from April 19, 2007 to December 31, 2011. The table includes the three SUR statistical models to explain the relationship between net fund flow and fund return. The variables include six prior fund returns, a dummy variable, and constant terms. The estimation result is multiplied by 100, and it shows the impact on the fund benchmark of each variable change of 1%. The results indicate that fund return has a significant positive correlation with fund flow and domestic fund net flows only have an impact on the current return.

Higher fund return usually attracts capital investment. When we sell an investment without considering the return level, this phenomenon is referred to as "buy and sell asymmetric behavior." In this paper, we explore different investment funds within the Taiwan onshore fund to see whether buy and sell asymmetric trading behavior exists. We separated data into net flow, purchase, and redemption, and used SUR model to analyze the impact on fund return. Net flow, purchase, and redemption are independent variables in Table 4. The empirical results show that fund flow has a significant negative correlation with current return in the onshore fund; however, prior return will produce a positive effect on current flow. As for other prior returns, they have no significant effect on fund flow. We also found that fund return has a significant negative correlation with redemption flow, but only for one prior return. The flow of redemption only affects the current funds in the Taiwan onshore fund.

4. CONCLUSION

To explore the general fund purchase behavior, we divided the research sample into equity, balanced, and bond funds by investment risk to better understanding investors' investment propensity under different risk preferences.

For the sample distribution, the balance funds' purchase and redemption are more centralized than the equity and the bond funds. The empirical result shows a significantly negative relationship between fund performance and purchase flows for domestic funds. The magnitude of domestic funds redemption negatively affects current return, but not for international funds. As previous fund return positively affects current net flows, the further lagged performances have no significant impact on the trading flows, revealing that fund investors are sensitive only to short-term past performance. Most importantly, while negative fund performance leads to the increases in redemption, positive performance contrarily leads to the decreases in purchase. The evidences strongly indicate an asymmetry behavior of fund investors in the return-purchase causality relations.

LITERATURE

1. Bolton, R. N. (1989). Sales response modeling: Gains in efficiency from system estimation. *Journal of Business Research,* 18(2), 107-107.
2. Chen, S, Wu, M., and Wang, N. (2008). The fund bargain behavior analysis of investment-linked products: A study on the life insurance company. J*ournal of Risk Management*, 10(2), 157-182.
3. Chen, S., Huang, X., Wang, N., and Chang, H. (2007). Investigate the dynamic relationship between mutual fund flows and performance. *Journal of Business Administration*, 74, 41-65.
4. Chih, H., Lin, Y., and Chou, P. (2007). Performance persistence and smart money effect: Evidence from Taiwan. *Journal of Management*, 24(3), 307-330.
5. Chou, J., Yu, H., and Chang, C. (2009). Term structure movements and the performance of bond mutual funds. *NTU Management Review*, 20(1), 189-225.
6. Dutton, R. E. (1965). The need for variable life contracts. *Journal of Risk and Insurance, 32*(3), 435-446.
7. Edwards, F. R., and Zhang, X. (1998). Mutual funds and stock and bond market stability. *Journal of Financial Services Research,* 13(3), 257-282.
8. Fama, E. F., and Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics,* 26(2), 301-325.
9. Fant, L. F. (1999). Investment behavior of mutual fund shareholders: The evidence from aggregate fund flows. *Journal of Financial Markets,* 2(4), 391-402.
10. Hsu, K. (2010). Using static and dynamic approaches for the mutual funds portfolio selection. *Journal of Management*, 27(1), 75-96.
11. Johnson, W. T. (2010). Who incentivizes the mutual fund manager, new or old shareholders? *Journal of Financial Intermediation,* 19(2), 143-168.
12. Kuo, W., and Li, K. (2006). Application of the mover-stayer model to evaluating the short-run performance persistence of mutual funds in Taiwan. *Academia Economic Papers*, 34(4), 469-504.
13. Lee, C. F., and Forbes, S. W. (1980). Dividend policy, equity value, and cost of capital estimates for the property and liability insurance industry. *Journal of Risk and Insurance,* 47(2), 205-205.

14. Lee, H., and Wu, H. (2009). The impact of information in technical analysis on herd behavior of mutual fund. *NTU Management Review*, 20(1), 227-260.

15. Lee, T., Huang, S., Lin, J., and Tsai, W. (2011). Can fund investors benefit from momentum and herding strategies in Taiwan market? *Journal of Management*, 28(2) 191-218.

16. Lin, C., and Chiu, S. (1999). Mutual funds classification schemes and performance persistence. *Journal of Financial Studies*, 7(2), 63-88.

17. Lin, C. & Hung, C. (2005). Mutual fund diversification, performance and risk adjustment behavior: An analysis of idiosyncratic risk. *Journal of Management*, 22(1), 109-131.

18. Lin, J., and Hsu, C. (2010). Persistence of Taiwan mutual fund performance: The comparison of multiple performance measures. *Journal of Management & Systems*, 17(1), 27-47.

19. Liu, Y., Chen, H., and Liu, W. (2008). A comparison of dollar-cost averaging with lump-sum investing for mutual funds. *Journal of Management & Systems*, 15(4), 563-590.

20. O'Neal, E. S. (2004). Purchase and redemption patterns of US equity mutual funds. *Financial Management,* 33(1), 63-90.

21. Shu, P., Chen, H., and Huang, S. (2005). Why do mutual fund managers trade in herd? *Management Review*, 24(4), 57-81.

22. Sirri, E. R., and Tufano, P. (1998). Costly search and mutual fund flows. *Journal of Finance,* 53(5), 1589-1622.

23. Wang, J., and Hsu, K.Y. (2004). The application of value-at-risk and the persistence of performance indicators on Taiwan mutual funds. *NTU Management Review.* 14(2), 23-47.

24. Wang, N., and Chen, B. (2009). A study of survivorship bias, fund categories, and fund performance persistence. *Journal of Management*, 26(6), 673-696.

25. Warther, V. A. (1995). Aggregate mutual fund flows and security returns. *Journal of Financial Economics,* 39(2-3), 209-235.

26. Wei, A., Chen, M., and Peng, C. (2011). The advertising spillover effect: Implication for mutual fund families. *Journal of Management*, 28(4), 361-377.

27. Zellner, A. (1962). An efficient method of estimating seemingly unrelated regressions and tests for aggregation bias. *Journal of the American Statistical Association, 57*(298), 348-368.

Table 1: Descriptive statistics of onshore fund characters in Taiwan

Fund Classification	Onshore fund	
	Number of funs(%)	
equity funds	644	60.75%
balanced funds	102	9.62%
bond funds	106	10.00%
other	208	19.62%

Note: This table shows that the Taiwan onshore fund market includes stocks, balanced, bond, and other types of funds.
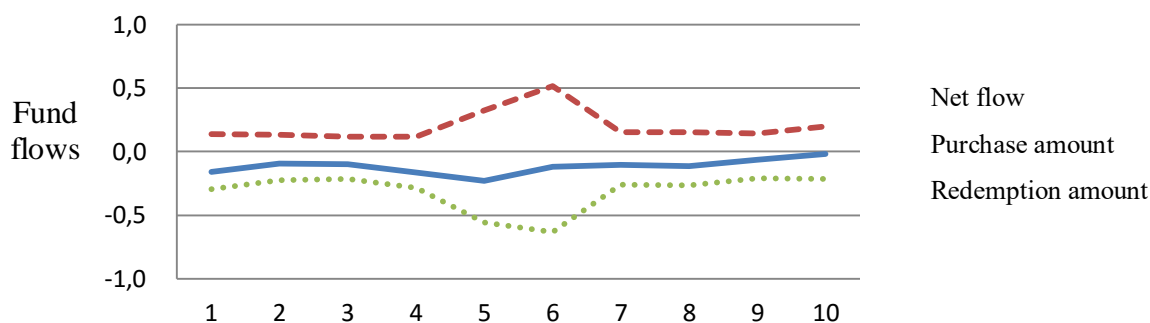
Fig. 1 shows the relationship between fund flow and return on the Taiwan onshore fund. The considered period is from April 19, 2007 to December 31, 2011.

Table 2: Sample descriptive statistics

Fund Classification	Domestic funds			Equity funds		
	mean	Standard deviation	median	mean	Standard deviation	median
Purchase	250	2159	16	268	22	2470
redemption	149	1776	3	156	1610	5
Net asset value value value	7688	3240	13276	5067	2375	6395
Fund net flows	-0.008	0.000	2.278	-0.004	0.000	2.996
Rate of fund returns	-0.008	0.002	1.154	-0.024	0.046	1.451

Fund Classification	Balanced funds			Bond funds		
	mean	Standard deviation	median	mean	Standard deviation	median
Purchase	53	8	218	109	436	14
redemption	27	152	2	197	2773	3
Net asset value value value	5353	5005	1305	639	579	178
Fund net flows	0.001	0.000	0.039	-0.113	0.001	2.819
Rate of fund returns	-0.006	0.001	0.575	0.017	0.004	0.391

Note: The statistical variables in this table are purchase, redemption, fund net assets (the unit is NT $(thousand).

Table 3: The relationship between fund flows and fund returns for
Taiwanese onshore fund

Period of returns	Domestic funds					
	Net flow		Purchase amount		Redemption amount	
period_0	15.435	**	-3.823	**	-19.258	***
period _1	14.522	**	2.969	*	-11.553	*
period _2	0.439		-0.375		-0.813	
period _3	2.726		0.983		-1.743	
period _4	5.481		1.555		-3.927	
period _5	2.646		1.679		-0.966	
period _6	-4.379		0.739		5.118	
R^2	0.303		0.187		0.274	

Note: The significance levels of 10%, 5%, and 1% are signified by *, **, and ***.

THE EFFECT OF SERVICE QUALITY DIMENSIONS ON CUSTOMERS' LOYALTY THROUGH CUSTOMER SATISFACTION IN JORDANIAN ISLAMIC BANK

Ayed Al Muala
Zarqa University
Faculty of Administration and Economic Sciences

ABSTRACT
This research aims to study the effect of banking Service Quality Dimensions on customers' satisfaction, and customers' loyalty; the dimensions include tangibility, reliability, empathy, responsiveness, and Assurance, Data were collected through questionnaires forming a representative sample. A total of 250 questionnaires were distributed to Jordanian Islamic Bank customers in Amman city, the findings indicated that there is a positive effect of Tangibility, Reliability, Empathy, Responsiveness, Assurance, on customer satisfaction toward customers' loyalty. The results of study support Hypothesis of study (H1, H2, H3, H4, H5, and H6) (2), the data indicate that the findings of Hypothesis are significantly and positively related to customers' loyalty.
Keywords: *Service Quality Dimensions, Customer satisfaction, loyalty, Jordan*

1. INTRODUCTION

In the past two decades, general interests into service quality in research fields showed A wide research about service quality has taken place in the last two decades manifested centrifugal relation among quality of customer services, performance improvement and organizational competitiveness. This relation clearly showed that the improvement of customer service will lead in its turn to an improvement in the performance and competitiveness (Douglas and Connor, 2003; Rosen et al., 2003). Certain standards and indicators of customer satisfaction and service quality are used by service units' administrators to value customers' needs by the institution. Service organizations consider service quality as substantial tool to keep their competitiveness in the marketplace. For instance, financial services that offered by different banks are considered as an important competitive tool by using distinguished products (Logasvathi, & Haitham 2015).. In other words, customers can be attracted by high quality services that banks offer. Therefore, structural adjustment improves banks plans to make different activities which empower them to be more competitive in market place Angur et al., 1999). In addition, banks play an essential role in economic and financial growth in Jordan. Apparently, the growth of Jordanian economy is greatly influenced by effective banking system. Furthermore, banks experience many challenges in their sectors due to the changing of customers requirements and to come over these challenges, it's important for banks to use the latest information technology to compete efficiently with global organizations(Lau et al., 2013). Moreover, banks are responsible to provide best quality service to customers to ensure permanent competitive advantages. Service providers face many challenges to value the quality of services due to the critical quality of service to business sector. The challenges of valuing the service quality come from its diversity, intangibility and the difficulty of separation (Saghier, & Nathan, 2013). In this vision, the service demands an autonomous framework for measuring and explaining quality. Service quality model developed by (Parasuraman et al., 1985, 1988) is the most popular model and is widely practiced to measure the quality of service in service sectors. In addition, wide research has taken place on service quality and customer satisfaction. Conversely, there are no recent researches on retail banking setting to look into the impact of the performance of service features on customer satisfaction in complete model.

2. LITERATURE REVIEW
Customers' Satisfaction and Loyalty

The strategic objective which is the basis of the relationship marketing approach consists of achieving customer loyalty. A comprehensive definition of bank loyalty views the construct as " the biased (i.e. non random) behavioural response (i.e. revisit), expressed over time, by some decision-making unit with respect to one bank out of a set of banks, which is a function of psychological (decision-making and evaluative) process resulting in brand commitment" (Bloemer et al., 1998). An important statement which has to be remarked is the distinction between customer loyalty and customer retention. According to Dick and Basu, loyalty is a complex construction, which comprises both psychological and behavioural components; different loyalty types are supposed to form a combination of repeated purchasing and relative attitude towards business firms (Dick and Basu, 1994). Therefore, customer loyalty can be defined in terms of customer behaviour, which will be equivalent with customer retention, and in terms of attitudes. behavioural loyalty or retention can be evaluated by various quantitative indicators such as: number of purchases made by the customer, the frequency of purchasing, the percentage from the total spending made by a customer for a particular service or product, with regard to a particular organization and the possibility of buying by the customer.

According to kotler customer satisfaction can be defined in many ways, but generally he emphasized that it is related to customer evaluation of experience and expectancy. Customer satisfaction should be taken into account to assure customer loyalty towards service supplies of any organization. In banks, customers care about the level of services given to them which leads them to decide to purchase if they're satisfied with these services after using them. Customers' satisfactions get higher when they have to offer minimal payment and get and get maximum of profit and usage. On the other hand, a study was done in the Malaysian retail banking industries by Lo, Osman, Ramayah and Rahim (2010) stated that assurance and empathy had the highest impact on customer satisfaction. More studies by Arasli, Smadi and Katircioglu (2005) showed that reliability had the highest influence on customer satisfaction. Finally, (Lau et al., 2013, Saghier, & Nathan, (2013) ………… due to the fact that loyalty is related to customer satisfaction, banks performed new affective strategies to improve the quality of service satisfaction and loyalty(Awan et al., 2011).

On the other hand, a study was done in the Malaysian retail banking industries by Lo, Osman, Ramayah and Rahim (2010) stated that assurance and empathy had the highest impact on customer satisfaction. More studies by Arasli, Smadi and Katircioglu (2005) showed that reliability had the highest influence on customer satisfaction. Finally, (Lau et al., 2013, Saghier, & Nathan, (2013) have identified the dimensions of service quality as the predecessors of customer satisfaction. Relatively many studies have investigated service quality in the retail banking sector in Jordan. Due to the fact that loyalty is related to customer satisfaction, banks performed new affective strategies to improve the quality of service satisfaction and loyalty (Awan et al., 2011).

Service Quality Dimensions'

Service quality has become the focus of attention for many academic researchers because of the serious Competition in the marketplace and has been identified as the main key in maintaining competitive advantage and trustful relationship with satisfied customers. (Zeithmal, 2000). According to Ueno (2010) consider the service quality gaps model is the conceptualization of service quality as the gap between expected service and perceived service. Furthermore, the importance of service quality can be represented in the service industries and service providers should understand the concept of service quality to show their customers the

differentiation of products. Many studies have been discussing service quality by developing new models and theories to address the importance of implementation and various dimensions of service quality. Moreover, service quality has been defined by many researchers in many different ways. (Eshghi et al, 2008), defined service quality as an overall evaluation by customer service, where other researchers stated that customer service is an expansion to which service fulfill customer's expectations and needs. In addition, service quality has been defined as the level of variation between customers' expectations for service and their understanding of the implementation of that service (Parasuraman et al., 1994).

Tangibles: as a service quality include the companies' structure of several elements, such as company representatives, physical facilities, materials, tools and communication materials. According to (Fitzsimmons & Fitzsimmons, 2001) care and attention paid for details and information given by the service providers resulted clear appearance of physical environmental conditions. Tangibles summarized as physical affirmation of the service (Davis et al. (2003) .more precisely, according to Parasuraman et al. (1985) tangibility appear to be physical facilities, tools, personnel and registered materials. finally, the recent research detected that tangibles are the banking services offered by the providers of the Jordanian bank as understood by Jordanian bank customers. these tangibles are valued by 4 items of the total 22 tangibles dimension of service quality.

Reliability: in service quality depends on dealing with the issues of customer services; provide these services at the first time and on time and keep a record of no errors. Moreover, reliability has been defined as the most essential factor in traditional service (Parasuraman et al., 1988). Reliability be formed of right order completion, precise records; precise quote, accurate bills, precise outcomes and credibility in the services. (Yang et al., 2004) indicated that reliability is the most important factor in banking services. a study by Parasuraman et al. (1985) stated that service quality was performed in four different companies, those companies include banks, maintenance service companies credit card companies and telecommunication companies. According to (Parasuraman et al., 1985, p. 24) reliability is higher in these four companies comparing to some of the values which are related to the important dimensions. Finally, reliability is defined as the "ability to perform the promised service dependably and accurately" (Parasuraman et al., 1988, p. 23). This research is concerned to discuss reliability as a possibility and capability of providing banking services at a particular Jordanian bank to fulfill the promised services as expected by the particular Jordanian bank headquarters' banking customers. Out of 22 items of service quality, 5 items of reliability dimension are used to measure this.

Responsiveness: as a SERVQUAL dimension Responsiveness is defined by (Parasuraman et al., 1988) as "the willingness to help customers and provide prompt service". on the other side Johnston (1997) defined responsiveness as quickness and timeliness of service delivery. this contains of operating quickness and abilities to respond immediately to customer requests. More specifically, responsiveness is defined as the desire and preparedness of workers to provide quality service. It contains the timeliness of service (Parasuraman et al., 1985). It also consists observing the needs and demands of customers, easy and fast processing time, taking care of customers individually by the staff, solving problems and customers' safety (Kumar et al., 2009).finally, responsiveness in this research is the preparedness of banking services providers at a particular bank headquarters, to offer services on time as expected by a particular Jordanian band headquarters' banking customers. Four items out of the 22-items of responsiveness dimension service quality are used to measure this.

Empathy: as a SERVQUAL dimension Parasuraman et al. (1985) defined empathy as individual attention and looking after clients by the company staff. it also consists giving attention to staffs who perceive the needs of their clients and clients facilities during working hours

Assurance: confidence and trust when dealing with the organization. These feelings reflect employees experience and knowledge and their capability to be confident in themselves and build a confidence in the customers themselves. According to (Blery et al., 2009) assurance can be developed by the level of information, knowledge and kind treatment by the employees in offering the services and their capability to build trust and confidence in clients. Thus, model of study as shown in figure 1, has dimensions of service quality as independent variables and customer satisfaction as dependent variable.

Figure (1) Research conceptual model

Hypotheses formulation

The current study is based on six hypotheses as following:

H1 Customer satisfaction is positively with Customer Loyalty
H2 Tangibility is related positively with Customer Satisfaction.
H3 Reliability is related positively with Customer Satisfaction.
H4 Empathy is related positively with Customer Satisfaction.
H5 Responsiveness is related positively with Customer Satisfaction.
H6 Assurance is related positively with Customer Satisfaction.

3. RESEARCH METHODOLOGY

This section will address the following issues that Pertains to research design such as population; sample size and sampling method, hypothesis of the research, questionnaires design, analysis method and result of reliability. The population of the study consists of all Jordanian Islamic Bank at Amman city. About 250 questionnaires were distributed to Jordanian Islamic Bank customers' at Amman city, however; only 200 questionnaires obtained have valid responses and were used for data analysis in this research paper. According to Sekaran (2003). Thus, a total of 200 responses were usable and used for subsequent analysis, giving a response rate of 80 %. The questionnaire has been adopted from questions of previous studies. It measures the quality of services by implementing the five dimensions "SERVQUAL" instrument: each dimension is followed by questions. The 5-point Likert -scale is used for all responses with (1 = strongly disagree, 2 = disagree, 3 =

undecided, 4 = agree, 5 = strongly agree). The questionnaire is divided into four parts: part (1) demographic variables (12 items); part(2) service quality dimensions (22) items were adapted from Parasuraman et al. (1994); part (3) customer satisfaction (5) items adopted from AL Muala and Al Qurneh (2012). Finally, part (4) customer loyalty (5) items adapted from AL Muala and Al Qurneh (2012). Furthermore, to draw a representative sample, a convenience sample was choose; Convenience samples are the most common form of sampling design in social science research Mohr (1990) and provide researchers with an acceptable database to use statistical inference techniques. This approach to sampling design is also applicable in services marketing.

Reliability Test
The reliabilities for the variables were calculated and all concur with Nunnally's (1978) minimum threshold of 0.70. Table.1, lists the Cronbach's Alpha (coefficient alpha) of each factor. All the factors show a high degree of reliability. Table (1) show that there were five independent factors and one dependent factor of customers' satisfaction that was examined by the researcher.

Table 1: reliability results

Variables	Number of Item	Cronbach Alpha
Customer Loyalty	5	0.80
Tangibility	5	0.85
Reliability	5	0.87
Empathy	4	0.86
Responsiveness	4	0.81
Assurance	4	0.85
Customers' Satisfaction	4	0.85
TOTAL	**35**	

Demographic variables
The respondents' gender are show that the male respondents (54.2%) than female (45.8%). The respondents belongs to the age group between 26 years old and 35 years old (48.2%). Respondents who possess a bachelor degree (26.6) or diploma are (18.3%). Moreover, 14% of the respondents are from the group with incomes less than 300 JD and 301- 500 JD (13.4%).

Hypothesis test
The results of Hypothesis (1) the data indicate tangibility dimension value is significantly and positively affect customers' satisfaction of the total sample (Beta=.109, p=.036),the data shows that reliability dimension is significantly and positively affect to customers' satisfaction of the total sample (Beta=.113, p=.025).
Therefore, the results support Hypothesis of study (H1, H2, H3, H4, H5 and H6) (2), the data indicate that the findings of Hypothesis are significantly and positively related to customers' satisfaction and customer loyalty.

Table 3: hypothesis results

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.834	.164		5.086	.000
	Tangibility	.109	.052	.110	2.105	.036
	Reliability	.113	.059	.113	2.920	.025
	Empathy	.170	.051	.173	3.305	.001
	Responsiveness	.016	.053	.015	.295	.000
	Assurance	.383	.044	.411	8.646	.000
	Customer satisfaction	.645	.123	.10	4.675	

4. CONCLUSION

The research examined the effect of banking service quality dimensions (Tangibility, Reliability, Empathy, Responsiveness, Assurance) on customers' satisfaction and customer loyalty at Amman city , after collecting and analyzing the data using SPSS, regression analysis show that all dimension have effect on customers' satisfaction. Among the independent variables, Assurance posses the highest effect on customers' satisfaction. Based on these results I recommend that Jordanian Islamic Bank should focus more on Assurance dimension to improve service quality in order to satisfy their customers' more as well as to enhance their buying decision of the bank service. Addition, customer satisfaction have a significant impact on customer loyalty.

LITERATURE

1. Al Muala, A.M., Al Qurneh, M. (2012). Assessing the Relationship between Marketing Mix and Loyalty through Tourists Satisfaction in Jordan Curative Tourism. American Academic & Scholarly Research Journal Vol. 4, No. 2, November 2012
2. Angur, M, Nataraajan,R & JrJaherea, J,(1999)"Service quality in the banking industry: An assessment of developing economy," International Journal of bank Marketing, vol. 17, no. 3, pp. 116-125.
3. Arasli, H., Smadi, Salih Turan Katircioglu, (2005) "Customer service quality in the Greek Cypriot banking industry", Managing Service Quality: An International Journal, Vol. 15 Iss: 1, pp.41 – 56.
4. Blery, E., Batistatos, N., Papastratou, E., Perifanos, I., Remoundaki, G., & Retsina, M. (2009). Service quality and customer retention in mobile telephony. Journal of Targeting, Measurement and Analysis for Marketing, 17(1), 27-37.
5. Bloemer, J., de Ruyter, K. and Peeters, P. (1998) Investigating drivers of bank loyalty: the complex relationship between image, service quality and satisfaction, International Journal of Bank Marketing, 16(7): 276-286.

6. Davis, M. M., Acquilano, N. J. & Chase, R. B. (2003), Fundamentals of Operations Management, McGraw Hill/Irwin, New York.

7. Dick, A.S. and Basu, K. (1994) Customer loyalty: Toward an integrated conceptual framework, Journal of The Academy of Marketing Science, 22(2): 99-113.

8. Douglas, L. & Connor, R. (2003). Attitudes to service quality - the expectations gap. Nutrition and Food Science, 33, 165-172. 12. Evans, M. & Jamal.

9. Fitzsimmons, J. A. & Fitzsimmons, M. J. (2001), Service Management: operations, strategy, and information technology, McGraw Hill Inc, New York.

10. Hair, J., Black, B., Babin, B., Anderson, R., & Tatham, R. (1998).Multivariate data analysis: Upper saddle river, NJ:Pearson prentice hall.

11. Jamal A, Kamal N.2004. "Customer satisfaction and retail banking: an assessment of some of the key antecedents of customer satisfaction in retail banking", International Journal of Bank Mark, 20(4): 146-160.

12. Johnston, R. (1997). Identifying the critical determinants of service quality in retail banking: importance and effects. The International Journal of Bank Marketing, 15(4), 111-119.

13. Kotler, p, and Armstrong, J (2004),Principles of marketing acquisitions, NewJersey: Julia Helmsic.

14. Logasvathi M, & Haitham, A, (2015), Study of customer satisfaction in the banking sector in Libya. Journal of Economics, Business and Management, Vol. 3, No. 7, July 2015.

15. Lo, L. K., Osman, M., Ramayah, T. & Rahim, M. (2010). The impact of service quality on customer loyalty: A study of banks in Penang, Malaysia. International Journal of Marketing Studies, 2 (2), 57-66.

16. Nunnally, J. L. (1978). Psychometric theory. 2nd edition. New York: McGraw-Hill.

17. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multi-item scale for measuring consumer perceptions of service quality. Journal of Retailing, 64, 12-40.

18. Saghier, N, & Nathan, D (2013), service quality dimensions and customer's satisfactions of banks in Egypt. 20th international business research conference. 4-5 april 2013, Dubai, UAE.

19. Ziethaml, A. V. and Bitner, M. J. (1996). Services Marketing. McGraw Hill Inc., Singapore.

20. Zeithaml, V., 2000, "Service quality, profitability and the economic worth of customers: What we know and what we need to learn", Journal of the Academy of Marketing Science, Vol. 28 No. 1, pp. 67- 85.

21. Ueno, A. (2010). What are the fundamental features supporting service quality? Journal of Services Marketing,Vol. 24, No. 1, pp. 74–86.

THE FLEXIBILITY OF THE INFLATION TARGETING SYSTEM: A DYNAMIC PANEL DATA ANALYSIS WITH FRAGILE ECONOMIES

Asli Guler

Ordu University, Faculty of EconomicandAdministrativeSciences, Turkey.
asliguler24@hotmail.com

ABSTRACT

The transitivity from exchange rate to inflation rate should be limited in inflation targeting system for the success of the strategy. Despite the fact that this transitivity has been decreased in recent years, exchange rate is still one of the main determinants of inflation in fragile economies with high current account values. Exchange rate increases detached from economic fundamentals are reflected to the prices in high percentages. Therefore, overvaluations or disvaluations require a monetary policy reaction. Changes in exchange rates should be considered when creating inflation expectations due to the impact of exchange rates on inflation. Depreciation in exchange rates began with the announcement by Fed that it will gradually exit from quantity easing. Inflation targeting has gained new flexibility to deal effectively with real economic instabilities according to recent empirical literature thanks to its ability to anchor inflation expectations. The objectives of the study were to make judgments about whether inflation targeting is a flexible monetary system or not by determining the strength of its anchoring effect on inflation expectations and to suggest some political recommendations according to the obtained results. In order to accomplish this objective, the relationship between exchange rates and inflation expectation will be analyzed via the dynamic panel method.It can be stated according to the acquired results that exchange rate continues to be an important indicator of inflation expectations for the sample group during the examined periods.

Keywords: Exchange Rate, Flexible Monetary Policy, Inflation Expectation, Inflation Targeting

1. INTRODUCTION

Even though there are people who criticize inflation targeting (IT) because it is not a flexible system, many are of the opinion that IT is not a strict monetary policy. For example, supporters of IT strategy Bernanke et.al. (2001) and Svensson (1997, 1999) made IT definitions which depict it as a flexible monetary policy system in which the central banks maintain price stability while adjusting the monetary policy against macroeconomic fluctuations.

A disciplined and reliable monetary policy is needed to actualize the announced inflation targets. On the other hand, establishing stability in macroeconomic fluctuations requires a certain flexibility. Accordingly, is it possible that IT is a strategy strict enough to reach its goal of price stability while at the same time flexible enough to provide a significant output stability? (Kuttner and Posen, 2011: 1). These two situations seemingly conflict with each other. The real problem here is the issue of the exchange between the flexibility and credibility of the monetary policy. Various theories have been put forth as to how a coordination can be provided among these two situations within the same monetary policy, to put it in other words, how the same monetary policy can be both reliable while also having the required flexibility conditions. According to one of these theories, the IT system provides flexibility to the central bank to struggle with macroeconomic fluctuations thanks to its ability to anchor the inflation expectations. For example, according to King (1997) and Kutner and Posen (1999), flexible inflation targeting enables the central bank to anchor the inflation expectations while approaching the rule dependent on the optimal situation. The anchored inflation expectations

allow the central bank to struggle with the economic shocks in the short term provided that it does not contradict with its medium term goal of price stability.

The production costs of anti-inflationist policies can thus be minimized thanks to the anchored expectations especially during times of large scale shocks. Inflation targets may act as a commitment device and coordination mechanism during times of large scale economic shocks (CerisolaandGelos, 2005, p. 3).

2. ANCHORING OF INFLATION EXPECTATIONS IN INFLATION TARGETING SYSTEM

The importance of a reliable nominal anchoring for inflation expectations has been understood a long time ago. The medium term inflation expectations of economic units have to be anchored in order to effectively carry out a monetary policy that aims price stability. For example, ex-President of Fed Ben Bernanke, states in his speech in 2007 on the inflation determinants and inflation expectations (Bernanke, 2007).

"The degree of anchoring of inflation expectations is a primary determinant of inflation and the general economic performance. When medium term inflation expectations are not anchored/free from anchor, they move with the realized inflation or deflation. In such a case, it is very costly to reestablish price stability."

Inflation expectations are the primary determinants of the realized inflation ratios. Hence, low and stable inflation expectations mean low and stable inflation ratios. The anchoring of inflation expectations is accepted as a primary goal of monetary policy because of its contribution to the sustainment of low and stable inflation ratios (Pétursson, 2004, p. 57). According to Walsh, if the applied monetary strategy can provide a strong nominal anchor and can decrease economic instability, it means that the policy of the central bank is a good one (Walsh, 2008, p. 21).

IT provides a more flexible system to politicians since it can anchor inflation expectations in a stronger manner (Siklos, 2010, pp. 60-61). Anchoring effect is the weakening of the relationship between the realized inflation ratio and the other macroeconomic variables that effect inflation and inflation expectations thus making inflation targets one the primary indicator that plays a significant role in shaping inflation expectations.

The medium and long term inflation expectations are realized closer to the inflation target when the monetary policy credibility increases thus becoming almost insensitive to economic developments (Valdés, 2007, p. 17).Demertzis et.al. (2009, p. 10) express the relationship between credibility and anchoring effect in monetary policy as follows:

"A monetary policy is credible when it succeeds in cutting the bond between inflation and other macroeconomic developments and inflation expectations."

In a stable monetary policy system, well anchored inflation expectations should have two properties: *First,*they should have a low distribution around a certain level (e.g. around the inflation targets announced by the central bank) that is they should have a low level of volatility, *second* the degree of correlation between the actualized inflation ratios and other variables that affect inflation and the long and short term inflation expectations should be low (Castelnuovo et.al., 2003, p. 18). In this regard, well anchored inflation expectations should be insensitive to the realized inflation ratios, changes in the short term monetary policy interest rate during periods of macroeconomic crisis and news related with macroeconomic developments such as exchange rate etc.

When it is considered that inflation expectation is the most important indicator of next term inflation, well anchored inflation expectations will limit the effects of temporary shocks such as oil prices and significant fluctuations in exchange rates. At the same time, this effect that is obtained via the anchoring of expectations is accomplished without any increase in output gap volatility (Berg et.al., 2013, p. 4).

3. EMPIRICAL MODEL

It has been determined in empirical studies carried out on fragile economies that in general the inflation expectations have not been anchored. In addition, it is a common result obtained from these studies that the past term inflation ratios in such economies are significant indicators of inflation expectations. Accordingly, there is a strong inflation persistence in fragile economies. Whereas proofs which put forth that inflation expectations are anchored better during the post-IT period have been obtained in various studies that examine whether IT is effective in anchoring inflation expectations or not; it has been concluded in some studies that there are no significant differences between the anchoring level of inflation expectations in pre-IT and post-IT periods.

Cerisola and Gelos (2009) carried out a study examining the basic macroeconomic indicators of inflation expectations of Brazil in which they put forth that real effective exchange rate creates an effect that increases expectations but that in longer delays this effect tends to reverse. According to GMM and OLS results, past increases in policy interest rate cause an increase in inflation expectations. Binal and Yılmaz (2012) tested the determinants of 12 month ahead inflation expectations in Turkey for two sub-periods of 2002-2011 and 2006-2011 using the cointegration method of Johansen and Juselius. It was determined as a result of the cointegration analysis carried out that, the change in CPI over the past 12 months for the 2002-2011 period continued to be a significant determinant of the 12 month ahead inflation expectations and that the effects of inflation targets on expectations increased after 2006. It was determined that the changes in the monetary policy interest rates during the 2002-2011 period had no statistically significant effect on the 12 month ahead inflation expectations. The effect of exchange rate was determined to be positive and significant for both periods and the transivity from exchange rate to the prices is ongoing. According to the findings acquired by Wimanda et.al. (2011) as a result of the analysis they made via the GMM method using monthly data for the 1980:m1-2008:m12 period, it was determined that the current period inflation is determined by backward looking inflation expectations, forward looking inflation expectations, output gap, depreciations in exchange rate and money supply growth rate.

Inflation targeting is mostly a monetary system that is dependent on information. Hence, all factors that might affect inflation is considered in monetary policy formulation. The transivity of exchange rate to inflation is quite high especially in developing countries that have experienced an exchange rate crisis in the past. That is why, it is quite important to understand the effects of exchange rate on inflation (transivity effects) in order to ensure that the applied policies become successful for inflation targeting system the primary aim of which is price stability.

The Quantitative Easing (QE) exit strategy declared by USA Federal Reserve, FED in May 2013 has currently affected at most the countries in need of external financing. All country currencies started losing value against dollar due to the expectation that dollar liquidity will decrease, however the highest depreciation occurred in fragile economies.

The transivity effect from exchange rate to inflation has to be small in the IT system[1]. Even though recently this transivity effect has decreased, exchange rate still continues to be an important primary indicator of inflation in fragile economies with high current deficits. Increases in exchange rate that are independent of economical bases have significant effects on prices thus over valuation or depreciations might require a monetary policy response. The changes in exchange rates should thus be considered because of the effects of exchange rate on inflation when generating inflation expectations.

---

[1]The effect of policy interest rate, which is the only monetary policy tool in the IT system, on inflation is limited in case the exchange rate transivity to inflation is ongoing.

Even though the depreciation in exchange rate that started when USA announced that it will exit quantitative easing had negative effects on economies, it has enabled testing the level of success of the inflation expectations of IT on decreasing sensitivity to such macroeconomic developments, in other words its ability to anchor expectations.

In this study, the countries taken as reference to compare the performance of IT in anchoring inflation expectations before and after a global financial crisis were all part of the group known recently as "fragile economies"[2]. In the analysis, it will be compared whether inflation expectations have been adapted according to exchange rate changes for 2002:1-2008:8 and 2008:10-2014:1 periods.

The data set used in this study was generated for two different periods as 2002:1-2008:8 for the sample set and 2008:10-2014:1.

The dependent variable of the analysis is the 12-month ahead inflation expectations. 12 month ahead inflation expectation series for Turkey was obtained from the Expectation Survey and Descriptive Statistics part of the CBTR (Central Bank of the Republic of Turkey) electronic data distribution system[3]. 12 month ahead inflation expectation series for Chile was obtained from the CCB (Chilean Central Bank) statistics database. Whereas 12 month ahead inflation expectation series for Brazil was obtained by taking the monthly average of the daily inflation expectation series published by BCB (Brazil Central Bank)[4]. 12 month ahead inflation expectation series were subject to analysis following seasonal correction via Census X12 method. Exchange rate series which is an independent variable was obtained from the OECD database as monthly averages of the value of US dollar in terms of the national currency of the respective countries. Seasonal corrections of the monthly exchange rate series were carried out via Census X12 method after which they were included in the analysis by taking their logarithms.

In this study, the panel autoregressive distributed lag model (panel ARDL) estimation developed by Pesaran et.al. (1999) was used to measure the effects of exchange rate on 12 month ahead inflation expectations. Panel ARDL specification is a test that enables the testing of whether there is a cointegration relationship or not between the series without any condition of the same degree of cointegration.The pth and q^{th} order lags of the dependant and independent variable inpanel ARDL $(p,q_1,...,q_k)$ model are located on the right hand side of the equation. (Pesaran et.al., 1999, pp. 623-624). The model used in the study is as follows:

$$\pi_{t+12}^e = \mu_i + \sum_{j=1}^{pi} \lambda_{ij} \pi_{t+12\,i,t-j}^e \quad + \quad \sum_{jo}^{qi} \delta_{ij}\, lex_{t_{i,t-j}} + \quad \varepsilon_{it}$$

The equation was re-parameterized as below in accordance with the suggestions of Pesaran et.al. (1999);

$$\Delta\pi_{t+12\,it}^e = \mu_i \phi_i \pi_{t+12\,i,t-1}^e + \beta'_i lex_{t_{i,t}} + \sum_{j=1}^{p-1} \lambda_{ij}^* \Delta\pi_{t+12\,i,t-j}^e + \sum_{j=0}^{q-1} \delta_{ij}^* \Delta lex_{t_{i,t-j}} + \varepsilon_{it}$$

---

[2] A fragility index was generated by taking into account the current account balance in the February 2014 monetary policy report of FED, the ratio of foreign exchange reserves to national income, interest, exchange rate and inflation ratios. This index was applied to 15 developing countries. Accordingly, it was determined that the most fragile country was Turkey which was followed by Brazil and India. See. Federal Reserve Bank, 2014.

[3]Proper average series was used for the12 month ahead inflation expectations.

[4]This method was used as the suggestion of the BCBresearcher.

In the above equations;

    i=3, t=2001:1,…….2008:8 and t=2008:10,……..2014:1,ε_{it} are included as error terms and are distributed independently between i and t.

    π_{t+12}^e represents the 12 month ahead inflation expectations, whereas $lnexc_t$ represents the exchange rate.

Whereas ϕ_i denotes the error correction coefficient and is expected to have a negative value.

    β'_i denotes the long-term coefficients for the explanatory variables in the models; λ_{ij}, denotes the short term coefficient for the past values of the 12-month ahead inflation expectations, whereas δ_{ij} represents the short term coefficients for the explanatory variables.

Unit root tests were applied during the first stage of the empirical analysis in order to determine the stability properties of the variables. "Levin, Lin &Chu" developed byLevin et.al. (2002) and "Im, Pesaran and Shin" panel unit root tests developed by Im et.al. (2003) were carried out in order to determine the stabilities of the variables. 12 month ahead inflation expectation(π_{t+12}^e) and exchange rate variables (lex_t)were stabilized by taking the first difference since they were not stable according to both unit root tests.

The results of the PMG and MG estimators of the panel ARDL model during which the short and long term relationships between exchange rate and 12 month ahead inflation expectations were analyzed have been summarized in Table 1. First of all, the negative and statistically 1% and 5% significant error correction coefficients (ϕ) for 2002:1-2008:8 and 2008:10-2014:1 periods respectively indicate the existence of a cointegration relationship between the exchange rate and the 12 month ahead inflation expectations.

Negative and statistically significant error correction coefficients indicate that the error correction mechanism is operating and that the 12 month ahead inflation expectations will converge to a long term balance in case they veer off from balance. However, the fact that the coefficient for the 2008:10-2014:1 period takes on a relatively greater value indicates that the convergence period will be faster during this period ($\phi_{2008:10\text{-}2014:1} > \phi_{2002:1\text{-}2008:8}$).

Table 1: Effect of Exchange Rate on 12 Month Ahead Inflation Expectations: Results Obtained from PMG and MG Estimators

	2002:1-2008:8			2008:10-2014:1		
	PMG	**MG**	**H.Test**	**PMG**	**MG**	**H. Test**
Long Term						
lnx_t	4.623*	22.640	1.29	2.137*	2.831	0.16
Error Correction						
ϕ	-0.529**	-0.506**		-0.872*	-0.790*	
Short Term						
lex_t	2.444**	6.303**		1.863*	1.634	
$\Delta\pi_{t+12}^e$ (-1)	0.124	0.033		-0.051	-0.105	
$\Delta\pi_{t+12}^e$ (-2)	0.077	0.076		0.000	0.000	
Δlex_t	0.098	-2.070*		-0.605	-0.896	
Δlex_t (-1)	1.436	1.179		-0.178	-0.367	
Δlex_t (-2)	1.636	1.491		0.000	0.000	
Constant	-0.031	-0.007		-0.004	-0.002	

Note: *Akaike information criterion was used for determining the optimal lag length. PMG estimations were calculated via back-substitution algorithm.*,**,*** indicate 1%,5%,10% significance levels respectively, H Test: Hausman Test*

When the short term coefficients obtained from the analysis are examined, it can be observed that contrary to expectations, the 2002:1-2008:8 period values of the exchange rate coefficients(lex_t)are greater than their 2008:10-2014:1 period values. This leads to reaching a conclusion that the changes in exchange rate were considered more when generating the expectations of the economic units during the 2002:1-2008:8 period.The expected outcome of the analysis results was that the inflation expectations were to be affected more significantly during the 2008:10-2014:1 period especially following the excessive depreciations in exchange rate after May 2013. However, the results indicate that the sensitivity of inflation expectations to exchange rate relatively decreased during the 2008:10-2014:1. Even though the 2008:10-2014:1 period was quite active in terms of exchange rates, the fact that the sensitivity of the 12 month ahead inflation expectations to changes in exchange rate indicates that the transivity from exchange rate to inflation might have decreased during this period.

When the long term coefficients obtained from PMG and MG estimators are examined, it can be observed that the short term relationships between exchange rate and 12 month ahead inflation expectations continues in the long term as well. According to the results obtained from PMG and MG estimators, the exchange rate during the 2002:1-2008:8 was more effective on 12 month ahead inflation expectations as was the case for the short term as well. In other words, the exchange rate should be taken into account more when generating the inflation expectations during this period.

As a result of the Hausman test in which it was analyzed whether the parameters were homogeneous in the long term or not, it was decided that the PMG estimator is the proper estimator which is the effective and consistent estimator under long term homogeneity since the long term homogeneity null hypothesis could not be rejected. The long term coefficients of exchange rate were determined to be statistically significant for both periods only under the PGM estimator. When the long term coefficients obtained using PMG estimator were re-evaluated, it was observed that there is a positive relationship for both periods between exchange rate and 12 month ahead inflation expectations. Accordingly, an increase in exchange rates leads to an increase in the 12 month ahead inflation expectations. When the periods were compared, it was determined that the exchange rate coefficient for the 2002:1-2008:8 period waslex_t=4.623, whereas for the 2008:10-2014:1 it waslex_t=2.137. Coefficients are statistically significant at a level of 1 %. It was observed that the exchange rate coefficient of the 2002:1-2008:8 period was greater than twice the exchange rate coefficient during the 2008:10-2014:1. According to this result, the effect of exchange rate during the2002:1-2008 on 12 month ahead inflation expectations is greater than twice that of the 2008:10-2014:1 period.

When the short term exchange rate coefficients obtained using PMG estimator were examined, it was again observed that the exchange rate was more determinant on 12 month ahead inflation expectations during the 2002:1-2008:8 period. Whereas the exchange rate coefficient during the 2002:1-2008:8 period was lex_t=2.444, it was determined as lex_t=1.863 during the 2008:10-2014:1 period. The coefficients are statistically significant at levels of 5% and 1% respectively. According to these results, it can be put forth that similar to the long term period, the exchange rate is more determinant on 12 month ahead inflation expectations in the short term during the 2002:1-2008:8 period as well. According to the diagnostic test results, no autocorrelation and heteroscedasticity problem was observed (Table 2).

Table 2: Effects of Exchange Rate on 12 Month Ahead Inflation Expectations: Diagnostic Test Results

	2002:1-2008:8 Period							
	PMG				**MG**			
	χ^2_{SC}	χ^2_{HE}	$\overline{R}^2$	LL	χ^2_{SC}	χ^2_{HE}	$\overline{R}^2$	LL
Turkey	15.66	1.25	0.33	-58.94	6.19	4.07	0.47	-49.93
Chile	9.04	4.37	0.43	26.79	10.65	4.37	0.43	26.85
Brazil	5.21	1.20	0.14	-59.56	6.29	1.34	0.14	-59.42
	2008:10-2014:01 Period							
	PMG				**MG**			
	χ^2_{SC}	χ^2_{HE}	$\overline{R}^2$	LL	χ^2_{SC}	χ^2_{HE}	$\overline{R}^2$	LL
Turkey	10.36	0.92	0.46	40.52	6.82	0.52	0.54	45.63
Chile	98.70	4.91	0.44	60.41	25.26	3.22	0.45	61.02
Brazil	1.51	4.43	0.48	60.47	0.14	7.80	0.53	63.30

Note: χ^2_{SC}:*Breusch –Godfrey auto-correlation test statistics,* χ^2_{HE}:*White heteroscedasticity test statistics,* $\overline{R}^2$:*Corrected* R^2, *LL: logLikelihood.*

4. CONCLUSION

According to a series of recent empirical studies, IT is more effective in anchoring inflation expectations in comparison to alternative monetary policies and owes its flexibility to its ability to anchor inflation expectations in addition to its operational properties. Accordingly, it was examined in this study whether IT is a flexible monetary system or not during which IT was subject to a flexibility evaluation with regard to its ability to anchor inflation expectations after it was examined whether IT is indeed a flexible system with regard to its operational properties or not.

In the study, the effects of exchange rate on 12 month ahead inflation expectations were tested empirically for the country group representing fragile economies during the 2002:1-2008:8 and 2008:10-2014:1 periods using the dynamic panel data method.

A cointegration relationship was determined between the 12 month ahead inflation expectations and exchange rate as a result of the empirical analysis carried out.

The coefficients acquired from panel ARDL model indicate that the determinant effect of exchange rate on 12 month ahead inflation expectations weakened during the 2008:10-2014:1 period. Accordingly, economic units consider the changes in exchange rate much less when generating inflation expectations in comparison with the 2002:1-2008:8 period. However, the fact that the error correction coefficient obtained from the panel ARDL model was greater during the 2008:10-2014:1 is an indication that the relationship between inflation expectations and exchange rate gained strength during the crisis period. In this case, the results can be interpreted such that the relationship between inflation expectations and exchange rate gains strength during periods of crisis.

According to the results obtained, inflation targeting could not put forth successful results in anchoring expectations. This result can be thought to be due to the negative global economic conditions that occurred after 2007 in general, whereas specifically it can be thought to be due to the lack of credibility of CBTR (Central Bank of the Turkish Republic). This result indicates that there is a significant credibility gap in the monetary policy. The lack of credibility in the monetary policy prevents the announced inflation targets to act as an anchor for inflation expectations. This failure of IT to anchor expectations can be thought to be due mostly to the fact that the announced targets are not considered credible by economic units and to the fact

that the commitments given related with the central bank reaching these targets is not deemed credible. It is possible to close the credibility gap by supporting the inflation targeting system applied in Turkey with institutional reforms. In addition, the narrowing down of the uncertainty gap around the inflation targetwill help in establishing credibility. However, the effects of the monetary policy applied by developed countries following the economic crisis on the domestic economy are still ongoing. Hence, the narrowing down of the uncertainty gap will bring with it a certain risk.

LITERATURE
1. Bernanke, Ben S. (2007).Inflation Expectations and Inflation Forecasting. *Speech At the Monetary Economics Workshop of the National Bureau of Economic Research Summer Institute, Cambridge, Massachusetts,* (July 10, 2007), Retreived 10.01.2016 from http://www.federalreserve.gov/newsevents/speech/Bernanke20070710a.htm.
2. Bernanke, Ben, Laubach, Thomas, Mishkin, Frederic S. and S. Posen, Adam. (2001). *Inflation Targeting: Lessons from the International Experience* (2. Edition). Princeton: Princeton University Press.
3. Castelnuovo, Efrem, Nicoletti-Altimari, Sergio and Rodriguez-Palenzuela, Diego. (2003). Definition of Price Stability, Range and Point Inflation Targets: The Anchoring of Long-Term Inflation Expectations. *ECB Working Papers* (p. 1-51). Vol. 273.
4. Berg, Claes, Hallsten, Kerstin, Queijo von Heideken, Virginia and Söderström, Ulf. (2013). Two Decades of Inflation Targeting: Main Lessons and Remaining Challenges. *Sveriges Riks Bank Economic Review* (p. 4-28). Vol. 3.
5. Binal Yılmaz, Canan. (2012). *Macroeconomic factors determining inflation expectations in Turkey (Unpublished Master's Thesis)*. Central Bank of Republich of Turkey.
6. Cerisola, Martin and Gelos, R. Gaston. (2009). What Drives Inflation Expectations in Brazil?: An Emprical Analysis. *Applied Economics*.(p 1215-1227). Vol. 41.
7. Demertzis, Maria, Marcellino, Massimiliano and Viegi, Nicola. (2009). Anchors for Inflation Expectations. *De Nederlandsche Bank Working Papers(p. 1-20)*. No. 229.
8. Federal Reserve Bank. (2014), *Monetary Policy Report*. Retreived 16.01.2016. from http://www.federalreserve.gov/monetarypolicy/files/20140211_mprfullreport.pdf
9. Im, Kyung So, Paseran, M. Hashem and Shin, Yongcheol. (2003). Testing for Unit Roots in Heterogeneous Panels.*Journal of Econometrics* (p. 53-74).Vol.115.
10. King, Mervyn. (1997). Changes in UK Monetary Policy: Rules and Discretion in Practice. *Journal of Monetary Economics* (p. 81-97). Vol. 39.
11. Kuttner, Kenneth N. and Posen, Adam S. (1999). Does Talk Matter After All? Inflation Targeting and Central Bank Behavior. *CFS Working Papers* (p. 1-49). No. 04.
12. Kuttner, Kenneth N. And Posen, Adam S. .(2011). How Flexible Can Inflation Targeting Be and Still Work. *Peterson Institute for International Economics Working Papers* (p. 1-32). No. 11-15.
13. Levin, Andrew T., Lin, Chien-Fu, Chu, Chia-Shang James. (2002). Unit Root Tests in Panel Data: Asymptotic and Finitesample Properties. *Journal of Econometrics* (p.1-24). Vol. 108.
14. Pesaran, M. Hashem, Shin, Yongcheol ve Smith, Ron P. (1999). Pooled Mean Group Estimation of Dynamic Heterogeneous Panels. *Journal of the American Statistical Association* (p. 621-634). 94(446).
15. Pétursson, Thórarinn G. (2004). Formulation of Inflation Targeting Around the World. *Monetary Bulletin* (p.57-84). 2004/1.
16. Siklos, Pierre L. (2010). Inflation Targeting: It's Not Broke, It Doesn't Need Fixing, But Can It Survive. *Journal of International Commerce, Economics and Policy* (59-80). 1(1).

17. Svensson, Lars E. O. (1997). Inflation Forecast Targeting: Implementing and Monitoring Inflation Targets. *European Economic Review*, (p.1111–1146). Vol. 41.

18. Svensson, Lars E. O (1999). Inflation Targeting as a Monetary Policy Rule. *Journal of Monetary Economics* (p.607-654). 43(3).

19. Valdes, Rodrigo. (2007). Inflation Targeting in Chile: Experience and Selected Issues. *Economic Policy Papers* (p.1-23). Vol. 22.

20. Walsh, Carl E. (2008). Inflation Targeting: What have We Learned?. *Prepared for International Experience with the Conduct of Monetary Policy under Inflation Targeting*, Bank of Canada, July 22-23.

21. Wimanda, Rizki E., Turner, Paul M., Hall, Maximilian J.B. (2011). Expectations and The Inertia of Inflation: The Case of Indonesia. *Journal of Policy Modelling* (p.426-438). Vol. 33.

22. Bank of Chile, http://www.bcentral.cl

23. Central Bank of Turkey, http://www.tcmb.gov.tr/

24. Bank of Brazil, http://www.bcb.gov.br/?english

THE ASSESSMENT OF THE COMPARATIVE EFFICIENCY OF REFORMS OF COUNTRIES WITH THE HELP OF FACTOR ANALYSIS

Ashot Davoyan
Senior researcher in "Ambert" research centre at
Armenian State University of Economics, Armenia
ashot_davoyan@yahoo.com

ABSTRACT

The theoretic and empirical idea of the research is related to the fact that all countries are included in the globalization process of the world economy in order to surmount both internal and external challenges. In practice the authorities of various countries try to solve the problems with the help of both tactical and strategic programs. Considering the historic experience of different countries governments of those countries overcome the issues with different efficiency that leads to huge differences in the welfare and the quality of life in different economies. In general, the governments of countries develop and implement transition reforms to get over the issues. The quantitative comparative assessment of the results of those reforms are expressed through different indexes developed by different organizations. We have tried to develop theoretic and methodological points that and create an integral index that will include as many indexes as possible that reveal the comparative effectiveness of reforms in various areas. The methodological approach of our assessment is based on two parameters:

1. *the change of the score of the country by different indexes for two periods of time,*
2. *the change of the rank of the country by different indexes for two periods of time.*

  Based on above-mentioned two indicators new indicators are created that reflect reforms of countries and the classification of countries represent their comparative effectiveness.
Keywords: *Reforms, effectiveness, assessment, transition, methodology, development.*

1. INTRODUCTION

The changes of the global economy, that are affected by geopolitical, ecological, social and other objective and subjective factors, caused challenges for the authorities of countries. Therefore, to surmount these challenges they develop and implement different strategic, perspective and tactical programs. While implementing those programs they face main empirical and scientific problem: how effectively countries develop and implement social economic reforms in comparison with other countries of the same level of development. As many international /World Bank, International monetary fund, UNO/ and non-governmental organizations develop many indexes /Global competitiveness, economic freedom, democracy index, etc./ that reveal different directions of reforms (Davoyan S., Davoyan A., The issues of the improvement of the methodology for the assessment of reforms, Recent Advances in Mathematics, Statistics and Economics, Proceedings of the 2014 International Conference on Economics and Statistics, Italy, Venice, March 15-17, 2014, p. 193).

2. METHODOLOGY AND RESULTS

In our research we set the goal to develop new methodology that will give us the opportunity to create the Integral Index of Life Quality that includes many different indexes and assess the comparative effectiveness of implemented reforms in different countries for 2010-2014. The basis of the methodology the we apply to create the Integral Index of Life Quality are following points:

1. The change of the rank of countries from t up to (t+1) period of time. For example, according to World Economic Forum that develops Global competitiveness index for 2013-2014 Armenia has improved its rank by 3 places.
2. The change of the score of countries for the same period of time. For example, for 2013-2014 the score of Armenia by Global competitiveness index has also increased by 0,08 points.

As the ingredients of the Integral Index of Life Quality we have chosen 17 indexes (Legatum Prosperity, Social Progress, Global Innovation Index, Network Readiness Index, Corruption Perception Index, Enabling TradeIndex, Environment Performance Index, Tourism and Travel Competitiveness Index, Doing Business Index, Global Peace Index, Economic Freedom Index, Democracy Index, Global Gender Gap Index, The Basel AML Index), that unveil implemented reforms of countries in different directions. As those indexes varies in different intervals, we normalize them in the interval of (0;1) (Davoyan S., Davoyan A., Khachatryan A., (2016), The assessment of the comparative efficiency of various reforms of high-income countries, Economics&Education, World Academy of Science, Proceeding of the 12th International Conference on Educational Technologies, Proceedings of the 10th International Conference on Business Administration, Spain, p. 147).

The important aspect of the Integral Index of Life Quality is the selection of quantititive method, that will give us the opportunity to define the scale of each index that are measured with the help of cluster and factor analysis. In general, cluster analysis is the method of multifactor research of social-economic processes that reveals the feature of multifactor analysis with higher accuracy in the process of clussification of studied objects.We made cluster analysis with the help of SPSS program. As a result we have 4 clusters for 70 countries that we discuss in our article.

Table 1. Number of countries included in each cluster

Cluster	The number of countries
The best	18
Upper-middle	20
Lower-middle	25
The worst	18

The analysis of the contain of the clusters witness that the best cluster mostly includes the economies with the high level of development /Canada, Finland, Sweden, Swtizerland, etc./, France, Czech Republic, Poland, etc are grouped in the upper-middle cluster, Armenia, Azerbaijan, Khazakhstan, Romania, etc. in the cluster with lower-middle values, Bangladesh, Bolivia, Indonesia in the worst cluster. Factor analysis give us an opportunity to reveal latent factors in the presented indicators for the objects of the research.

The equation of factor analysis is represented below:

$$x_i = \sum_{j=1}^{m} \alpha_{ij} f_j + e_i, \qquad i = \overline{1,k}; \, j = \overline{1,m}$$

x_i - observed variables /indexes/

f_i - latent factors,

α_{ij} -factor loadings,

e_i - standard error.

Factor loadings describe correlation between basic indicators and latent factors. The participation of each index in the creation of the Integral Index of Life Quality is defined with the help of factor analysis through SPSS program. As a result we find out the scales of 17 indexes for each period of time.

Table 2. The scale coefficients of ingredients of the Integral Index of Life Quality for 2014 (Davoyan S., Davoyan A., Khachatryan A., (2015) The assessment of the comparative efficiency of reforms through the Integral Index of Transformation, World Academy of Science, Engineering and Technology, International Science Index, France, 17 (5) Part X, p.1309).

Index	Scale-coefficient	Index	Scale-coefficient
Legatum Prosperity	0.071	Global Competitiveness Index	0.060
Social Progress	0.071	KOF Globalization Index	0.060
Global Innovation Index	0.069	Human Development Index	0.057
Network Readiness Index	0.068	Global Peace Index	0.052
Corruption Perception Index	0.067	Economic Freedom Index	0.051
Enabling Trade Index	0.066	Democracy Index	0.051
Environment Performance Index	0.061	Global Gender Gap Index	0.039
Tourism and Travel Competitiveness Index	0.061	The Basel AML Index	0.038
Doing Business	0.060		

In general, we have grouped the indicators of 17 indexes considering the principle of the classification of World Bank and organized the 13 pillars (Figure 1).

Figure following on the next page

The Integral Index of Life Quality

- Pillar 1 Economy&Growth
- Pillar 2 Education
- Pillar 3. Environment, Climate change
- Pillar 4 Financial Sector
- Pillar 5 Health
- Pillar 6 Infrastructure
- Pillar 7 International Trade and Services
- Pillar 8 Political Sector
- Pillar 9 Private Sector
- Pillar 10 Public Sector
- Pillar 11 Innovation, Science and Technology
- Pillar 12 Social Development, Social-protection
- Pillar 13 Crime

Figure 1. The structure of the Integral Index of Life Quality

Applying the above mentioned methodology we create the Integral Index of Life Quality for 2010-2014 and compare the results for 3 groups of countries classified by the principle of World Bank: lower, middle and high income countries. Moreover, we compare the results by the report for 2010-2014 to the basic year and the values of Integral Index of Life Quality for 2010-2014 to the basic year that reveals the countries that have implemented reforms with higher efficiency rather than others, and the countries that need to adjust their strategy to handle challenges to have better results.

Figure 2. The ranking of high income 27 developing countries by reports and IILQ based on new methodology for 2010-2014 compared to the basic year (2010)

According to the ranking of high income countries represented in Figure 2, reforms were more effectively implemented in Netherlands, Australia, Denmark, New Zealand and less efficiently in Slovak Republic, Slovenia, Finland and Austria.

*Figure 3. The ranking of middle income 24 developing
countries by reports and IILQ based on new methodology for 2010-2014 compared to the
basic year (2010)*

368

The results of middle income developing countries witness that some countries such as Georgia, Romania, Kazakhstan, South Africa, Armenia and Azerbaijan made progress while implementing reforms, rather than Macedonia, Turkey, Mongolia and Brazil did not take sufficient measure to fulfill social-economic reforms.

	Cambodia	Central African Republic	Ethiopia	Guinea	Korea, D em. Rep.	Liberia	Madagascar	Malawi	Mali	Mozambique	Nepal	Niger	Rwanda	Sierra Leone	Somalia	Tanzania	Togo	Uganda	Zimbabwe
Ranking by reports for 2010-2014	3	15	17	19	6	12	11	10	13	9	7	16	2	14	1	5	8	4	18
Ranking by new methodology through IILQ for 2010-2014	3	18	7	17	8	10	15	16	14	11	1	9	2	5	19	12	4	6	13

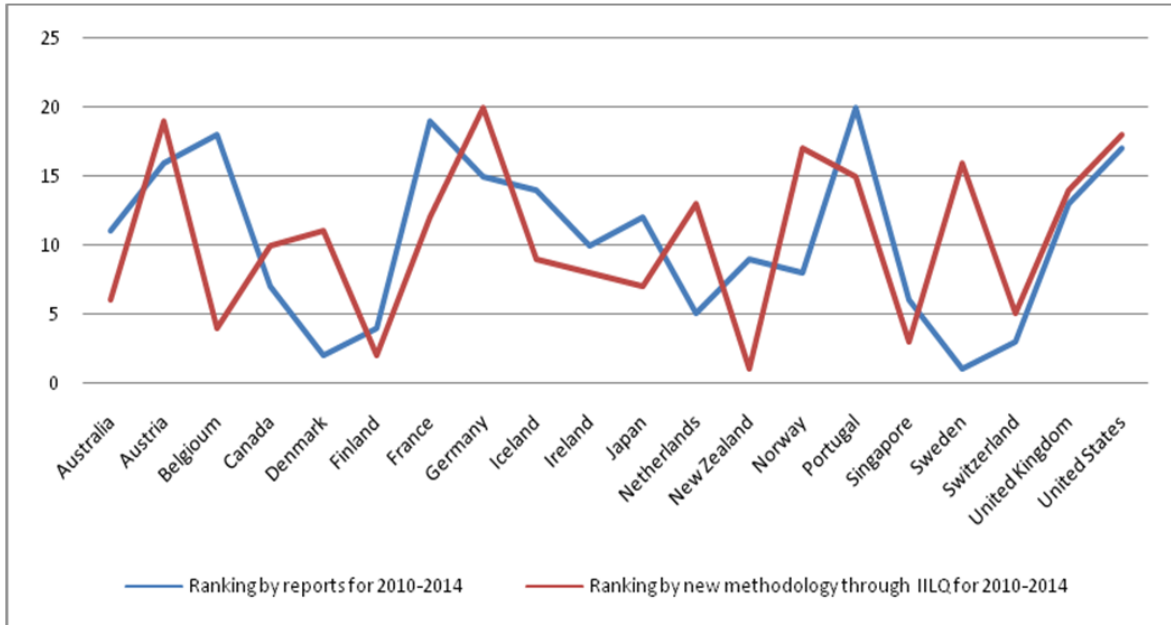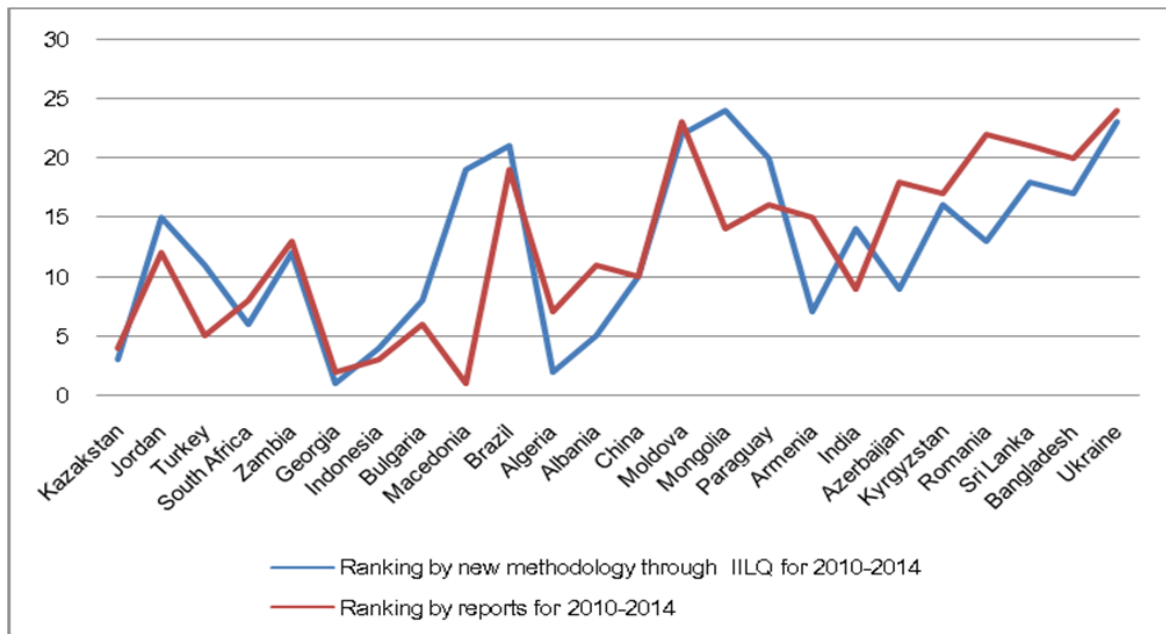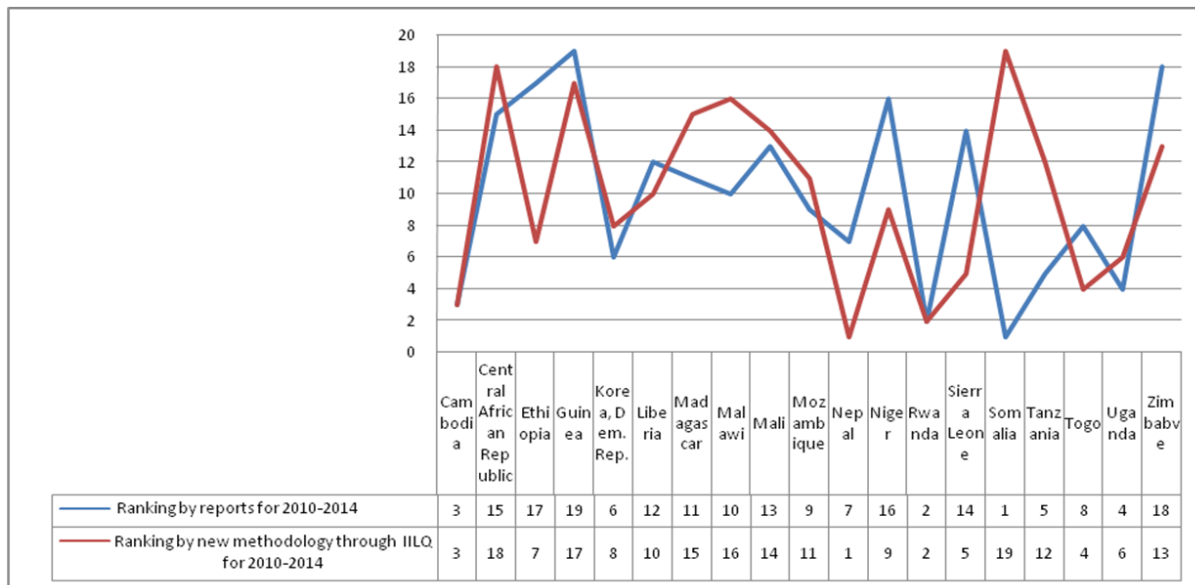*Figure 4. The ranking of low income 19 developing
countries by reports and IILQ based on new methodology for 2010-2014 compared to the
basic year (2010)*

The results of social-economic reforms of low income 19 countries, represented in Figure 4, certify that Cambodia, Nepal, Uganda and Togo generate more resources to implement social-economic reforms with high efficiency, rather than North Korea, Malawi, Zimbabwe are required to put more efforts and develop appropriate programs to provide economic development.

3. CONSLUSION
Finally, analyzing three levels of the Integral Index of Life Quality: Indexes (17), Pillars (13) and Indicators (720) we have following results:

1. Our research outlines the progress and efficiency of reforms for countries in comparison with others in the group for 2010-2014.
2. We measure the comparative efficiency of reforms by the Integral Index of Life Quality for two period of time and for 2010-2014 revealing the indexes and directions of reforms that caused that changes.
3. As we had the changes of the indexes that significantly influenced the change of the comparative effectiveness of countries, we could evaluate the pillars that caused the improvement of the results.
4. Considering the pillars that led to changes, we could also define and analyze the indicators that particularly caused the increase of the value of the Integral Index of Life Quality for 2010-2014.
5. We also observed the example of three Caucasus countries: Georgia, Armenian and Azerbaijan.

To sum up, the results of our research certify that we can provide guidance for the authorities of countries with the help of the Integral Index of Life Quality revealing the indexes, pillars and indicators that led to progress and changes that negatively impacted the results of reforms and constrained the opportunities of countries to realize their potential.

LITERATURE
1. Davoyan S., Davoyan A., (2014) *The issues of the improvement of the methodology for the assessment of reforms,* Recent Advances in Mathematics, Statistics and Economics, Proceedings of the 2014 International Conference on Economics and Statistics, Italy, Venice, March 15-17, 2014, p. 192-199.
2. Davoyan S., Davoyan A., Khachatryan A., (2016), *The assessment of the comparative efficiency of various reforms of high-income countries,* Economics&Education, World Academy of Science, Proceeding of the 12th International Conference on Educational Technologies, Proceedings of the 10th International Conference on Business Administration, Spain, p. 145-150.
3. Davoyan S., Davoyan A., Khachatryan A., (2015), *The assessment of the comparative efficiency of reforms through the Integral Index of Transformation,* World Academy of Science, Engineering and Technology, International Science Index, France, 17 (5) Part X, p.1309-1315.
4. The Global Competitiveness Report, The World Economic Forum, weforum.org.
5. Doing Business Report, The World Bank, doingbusiness.org.
6. World Economic Forum, http://www.weforum.org/issues/travel-and-tourism-competitiveness/.
7. The World Bank, http://lpi.worldbank.org/international/global.

REINDUSTRIALISATION AS THE BACKBONE OF THE NEW DEVELOPMENT PARADIGM IN TRANSITION COUNTRIES

Andjelko S. Lojpur
University of Montenegro, Faculty of Economics in Podgorica, Montenegro
andjelko@ac.me

Ana Lalevic-Filipovic
University of Montenegro, Faculty of Economics in Podgorica, Montenegro
savana@ac.me

ABSTRACT
Without denying the importance of the initial economic, political, geographical, historical and other circumstances of the individual countries at the time they entered the transition, there is ever more reason to believe that the reasons for their falling behind should be sought in their lack of understanding and recognising that there has been a change in the development paradigm. At the same time, globally, the ever more intense competition threatens the survival of both the companies which are capable of transforming themselves to become innovative, productive and responsive to the pressures from the environment, and the whole national economies. Consequently, when it comes to finding a new formula for the development in transition countries, it is argued that the today's multi-polar world requires a new development paradigm, specifically designed to tackle problem of deindustrialisation amongst other things. In other words, overcoming the deadlock in the development of the countries in transition is possible only through a "new" framework, i.e. by accepting a "new" paradigm of the economic development and reactivating entrepreneurial economy. The paper seeks an answer to the question of whether it is possible and how to reverse the concept of development in the countries in transition towards a greater global equality in wealth, in the light of re-opening the issue of their re-industrialisation.
Keywords: Competitiveness, New Economy, Reindustrialisation, Transition.

1. INTRODUCTORY REMARKS

At the beginning of the 90's, the former socialist countries were swept by a large and powerful wave of optimism regarding the final outcome of transition, only to be replaced by an even more powerful wave of pessimism at the turn of the 21st century. As the global systemic crisis was deepening, doubts were voiced about the ability of the former socialist, less developed countries, to be equal participants in the processes of the multinational economy, along with the concerns that they could end up at the periphery, further deepening the gap between the rich and the poor, all accompanied by a painful exploitation of the already scarce economic resources and deeper lag in industrialisation.

When they started the transition process in the late 80's and early 90's, the former socialist, mostly less developed countries, found themselves under a very strong impact of globalisation, full of uncertainties. The globalisation of the economy has actually become a dominant feature of contemporary capitalism and a proven measure of success at the global level (C.Jessua, 2008;48). In this light, if we assess the achievements of the nearly three-decade long transition and compare them against the expectations, we will find that many countries in transition are facing similar problems: a huge balance of payment deficit, high external indebtedness, unbalanced budget, high unemployment, still slow and insufficient progress when it comes to institutional reforms, unfavourable demographic trends, etc. In other words, this type of globalisation and the "introduction" of the market economy has not brought about the results

promised by the political elites in most of the economies transitioning from communism to the market economy.

At the same time, bearing in mind the topic of this paper, special attention must be given to the key question posed in one of the recent reports of the European Bank for Reconstruction and Development: *Will the countries in transition (the region) ever be able to catch up with the standard of living of the developed economies?* The said document clearly states that the economic growth of this group of countries is still under the pre-crisis levels and that many of them have turned their backs on the reforms which might hold the key to revamping the economies of the former Eastern block. In support of the thesis that many of the transition countries have failed to implement the necessary reforms, we quote the professor D. Đuričin, a good connoisseur of the transition process, who, explaining the example of Serbia, states that the country's biggest problem is the so-called *output gap*, i.e. the gap between the actual output of the economy and its potential output. "The economy of Serbia is impotent and out of tune", whereas "the environment (regulations + institutions + the prevailing strategies of economic entities) in which the reforms are implemented is inadequate. This especially goes for the institutions such as the securities exchange commission, stock exchanges and the central bank, but also for the mentality of the economic entities in the so-called *brotherly privatisations*" (for more, see D.Đuričin, 3).

Commenting on the fact that Croatia keeps losing its industrial substance and tradition, Ž. Primorac emphasises that the bad state of the industrial sector is a result of several factors. "Part of them, have certainly been caused by the world's economic and financial crisis," he continues, "however, part of the responsibility for the negative development rests with the economic policies of the country. The management of the economic sector, i.e. the total economic policy seems to be inadequate, incompetent and inconsistent" (Ž.Primorac, 2013;9). Instead of hiring employees in the industries in which they were most efficient, they were *broken*, which was often labelled as deindustrialisation, although the term was understood very differently from its interpretation in the developed Western economies. As opposed to such an understading of the transition process, we quote the following observation made by the prof. Lj. Jurčić: "It is difficult to find a developed country which has become developed without first developing its industry and without now investing huge efforts in trying to make its industry more competitive on the world's market" (for more, see: Lj.Jurčić, 2014;121).

2. REFORM MISCARRIAGE OF THE COUNTRIES IN TRANSITION

The transition "vortex" and radical changes which shook the global real economy at the turn of the 21st century imposed the need for a more serious rethinking of the existing conceptual foundations of the economic science and prevailing practices. With this in mind, already at the start of this paper, we shall point to the necessity of completing the process of deindustrialisation, as well as raising the level of national competitiveness of the countries in transition. Although belatedly, this requires that new industrial policies be created and implemented as part of the process of reindustrialisation, i.e. industrialisation based on knowledge.

In literature, there is a consensus regarding the definition of deindustrialisation as a relative decrease in the share of workers in manufacturing industry, or share of manufacturing industry in the GDP of a national economy. However, despite the fact that it naturally comes along the development path of most economies, we must bear in mind that in the transition countries the said process starts at incomparably lower incomes per capita, which is why the problem turns out to be much more complex. Thus, apart from decreasing the share of manufacturing industry and the workers employed in it, at the same time these countries are facing an absolute decrease in added value, which is further deepening their crisis – and this is not the case in the developed

economies. To illustrate this point, we shall refer to the example of Montenegro – at the beginning of the 90's, the share of manufacturing industry in the country's GDP amounted to more than 35% with about 56,000 employees, whereas in 2015 the share was reduced to as little as 11%, with the processing industry constituting only 4.2% of the GDP. Prof. Jurčić is right to say that "many countries have fallen victim to crisis not because of the world's economic crisis, but as consequence of a lack of active industrial policies," whereby deindustrialisation, the author continues, has come "as a consequence of leaving the national economy to the *invisible hand* in a situation when all smart countries have set clear industrial policies and goals" (Lj.Jurčić; 2014;124). In the case of the Western Balkan countries, we may ask the following question: *why and to which extent have these countries failed to invest efforts to change the order of priorities when it comes to economic policies so as to give priority to industrial policy with the focus on processing industry?[1]* Furthermore, what the economic policy-makers in transition countries should bear in mind is the inevitable fact that, having failed to reduce poverty, globalisation could not have ensured stability (Stiglitz, b; 2002;20). In other words, globalisation will not make itself more humane, efficient and equal – transition countries will have to fight for a better competitive position by themselves. In the long term, the main force which truly leads to greater equality is dissemination of knowledge and skills (T.Piketty; 2103;33). This points to the conclusion that the development pace of individual national economies will increasingly depend on their ability to raise their competitiveness level by better effectuating their knowledge.

On the other hand, countries in transition are not the only ones confronting problems. Namely, the global challenges which the EU is facing have remained the same, the only difference being that they have become more robust and complex: continued economic strengthening of the emerging economies, reorganisation of finances at a global level, climate change and limitation of resources. The said trends, contained in the development documents such as the EU's *2020 Strategy*, are especially evident in the countries which have joined the EU but are often treated as *poor relatives*. In support of this argument, **table 1** presents the progress achieved by a group of countries in transition, by the so-called *transition indicators[2]*.

Table following on the next page

---

[1] For more, see: Lj.Jurčić; p.124.

[2] The EBRD's country-level transition indicators indicators have existed since 1994 and cover the period since 1989. The indicator of the transition (Transition Country-level indicators) shows that countries thrive in transition coverage on several grounds (columns) and allows comparison between them. Indicators are the grades ranging from "little or no progress in transition" (indicator 1) until the "end of transition", the equalisation of the country at that element with advanced market economies (indicator 4 plus).

Table 1. *Progress achieved in the group of countries in transition (EBRD, Transition Report 2014; Counry level transition indicators; table S.7)*

Country	Enterprises			Trade and market		
	Large-scale privatization	Small-scale privatization	Management and restructuring	Price liberalization	International trade	Competitive policy
Albania	4-	4	2+	4+	4+	2+
Bosnia and Herzegovina	3	3	2	4	4	2+
Croatia	4+	4+	3+	4	4+	3
Bulgaria	4	4	3-	4+	4+	3
Estonia	4	4+	4-	4+	4+	4-
FYR Macedonia	3+	4	3-	4+	4+	3-
Hungary	4	4+	4-	4+	4+	4-
Lithuania	4	4+	3	4+	4+	4-
Montenegro	3+	4-	2+	4	4+	2
Poland	4-	4+	4-	4+	4+	4-
Romania	4-	4-	3-	4+	4+	3+
Russia	3	4	2+	4	4	3-
Serbia	3-	4-	2+	4	4	2+
Slovenia	3	4+	3	4	4+	3-
Ukraine	3	4	2+	4	4	2+
Turkey	3+	4	3-	4	4+	3

The indicators presented in table 1 point to an evident lagging behind of the countries in transition when it comes to the key development pillars such as: management and restructuring, competition, education and training, innovative Europe etc., which are all the so-called *soft* factors or non-price competitiveness factors. The IMF's report for Western Balkans states that these countries achieved the level marked as "advanced transition stage" as late as in 2002, which would require a grade of 3 or more, whereas certain new EU members (with the exception of Romania and Bulgaria) achieved that level as far back as in 1994. This shows that the expected convergence has failed to occur[3]. The same Report adds that the new EU member states have continued to reduce the gap between them and the leading EU members, whereas the development gap between them and the countries of the Western Balkans has continued to widen. There are many reasons accounting for the said gap – as key reasons this and similar reports point to an insufficiently fast progress in the following (amongst other factors): institutional reform, infrastructure, efficiency of the goods market, labour market and financial market.

The transition experience gained so far has shown that usually there are big impediments to the development of entrepreneurship and establishment of new companies in countries in transition. Bearing in mind that these countries find themselves at different levels of development and that they are characterised by different levels of entrepreneurship, it is evident that they are facing unique problems regarding the transformation of their society and culture from an earlier position of dependence on the state to the position in which individual risk-taking is accepted and fostered (D.Deakins, 2012;216).The research which the GEM[4] has been conducting for

---

[3] Regional Economic Issues, Special Report; The Western Balkans: 15 years of Economic Transition.
[4] The review presented by the GEM for 2014 encompassed 73 countries, 3,936 experts and more than 206,000 participants. The GEM participant economies represent 72.4% of the world's population and 90% of the world's GDP. The conceptual framework is made up of 10 components: entrepreneurial finance, education for entrepreneurship, government policy, government entrepreneurship programs, r&d transfer, internal market openness, physical infrastructure for entrepreneurship, commercial and legal infrastructure for entrepreneurship, and cultural and social norms.

years has shown that the level of entreprenuership varies amongst the countries and that it constantly measures low rates. This additionally confirms the impression that the economic and industrial policies require time and consistency from policy-makers, especially when it comes to the interventions intended to find long-term incentives for entrepreneurial activity. Research also suggests that entrepreneurship, in its various forms (growth, start-up, intrapreneurship), positively correlates with economic growth, whereby the correlation depends on the stage of the economic development[5].

The continuing widening the gap between the developed and less developed countries to which we have referred above, points to the conclusion that the development pace of individual national economies will increasingly depend on their ability to raise their competitiveness levels. The success of a national economy or its individual economic entities in the modern world, characterised by an unprecedented level of economic change, is most frequently expressed as an aggregate indicator defined as the level of national competitiveness. The review of the level of global competitiveness achieved, for Switzerland as the leading country and a number of countries in transition from the region compared against Switzerland, is given in **table 2**, broken down by the pillars of competitiveness.

Table 2. Comparison of the level of competitiveness for Switzerland, Bosnia and Hercegovina, Montenegro, Serbia, Croatia and Slovenia, as per 2015/2016 report (WEF; Global Competitiveness Report 2015/16).

Countries	Switzerland	Bosnia and Hercegovina	Montenegro	Serbia	Croatia	Slovenia
Index of global competitiveness GCI – ranking	1	111	70	94	77	59
Basic requirements	2	95	58	96	69	45
pillar 1: Institutions	7	127	70	120	89	67
pillar 2: Infrastructure	6	103	73	75	46	38
pillar 3: Macroeconomic stability	6	98	79	126	127	89
pillar 4: Health and primary education	11	48	33	62	63	15
Efficiency enhancers	4	112	75	83	68	56
pillar 5: Higher education and training	4	97	54	71	51	22
pillar 6: Goods market efficiency	9	129	70	127	105	47
pillar 7: Labour market efficiency	1	131	74	118	105	95
pillar 8: Fin. market development	10	113	44	120	88	128
pillar 9: Technological readiness	2	79	55	51	43	35
pillar 10: Market size	39	97	131	75	79	85
Innovation and sophistication factors	1	120	86	125	90	39
pillar 11: business sophistication	1	125	102	132	84	51
pillar 12: Innovation	1	115	69	113	92	33

Apart from pointing to a significant lag of the regional countries in transition in relation to the leading countries as per the global competitiveness level, the data presented in table 2 also suggest that there is an evident lag per individual key pillars such as "business sophistication" and "innovation", relative to the country's overall ranking.

---

[5] For more, see GEM; p. 20.

3. PROPOSAL OF A CONCEPTUAL FRAMEWORK FOR THE REINDUSTRIALISATION PROCESS

Industrial policy basically refers to the strategy adopted by a country, involving several measures and activities, i.e. mechanisms, aimed at achieving specific goals of an individual branch (industry) of economy or the economy as a whole, most notably the goals of productivity and a more significant participation in and contribution to the country's GDP. At the same time, industrial policy is part of a whole set of intertwined economic policies of a country, which is why the issue of reindustrialisation is amongst the top open questions, both in the EU and in most countries in transition. In this vein, Ž. Primorac notes that reindustrialisation in Croatia "is very important for both the future, long-term development of the country, and the current overcoming of the economic crisis". In addition, he does not fail to observe that "at the end of the previous century and especially at the beginning of this century, huge changes occurred in the industrial developement regarding its conceptual framework as "the tradional industries were subdued and replaced by new technologies..." (for more, see Ž.Primorac, 2013;5-9).

The onset of the global economic crisis revealed that both the transition and developed countries were having huge problems. Thus, according to the strategically thought out vision of the European market economy for the 21st century, formalised in the key document, the economy of the EU should be: intelligent, sustainable and integrative[6]. In one of the recent annual reports on the competitiveness of the EU member states (2014), it was pointed out that "Europe is coming out of a crisis and is slowly showing signs of recovery. However, while we are making progress, we are still not reaching the level of growth that we had envisaged and which we need in order to create employment".[7] The said report states that the manufacturing's share of the EU gross value added declined from 15.8% in 2008 to 15.1% in 2013. In the same period, 3.5 million jobs were lost in manufacturing and, of all member states, only Germany managed to increase employment in this area. In the context of returning to industrial policies, the notion of the *new industrialisation* or *reindustrialisation* has been revived, bearing in mind that the main goal of revitalising the EU's economy as a whole was determined as having a 20% share of industry in its GDP until 2020[8].

The said report highlights the following six key messages given as recommendations to implement in order to achieve the needed increase in competitiveness of the EU member states: a) firstly, more investment is needed in all sectors of the economy; b) secondly, growth needs investment and investment needs capital; c) the third message is that we (the EU) should underline the importance of innovation for growth; d) the fourth message is that Europe has a competitive disadvantage, inter alia, due to high energy prices; e) the fifth message states that the European companies must have a better access to markets and must be fully integrated in the global chain of value; and f) the sixth message says that the EU member states should improve the quality of their public administration, bearing in mind that the inefficiency of the public and legal systems has been recognised as the key hurdle to improving the EU's competitiveness.

---

[6] Europe 2020 Strategy.

[7] For more details, see: *Competitiveness Reports Press Briefing*; 11 septembar 2014, pp. 1-15.

[8] The key idea of the integrated industrial policy for the EU was presented in the *Industrial Policy Communications* in 2010, 2012 and 2014. Some member states, such as France, Germany, Spain and the UK, adopted their industrial policies at national or regional levels after 2008. The same was done by Croatia in 2014, when it passed the *Industrial Strategy for the Period 2014-2020*. Montenegro, as a membership candidate, was obliged to determine its vision of the country's socio-economic development, with the necessary individual investments and development measures needed for their implementation. In order to do so, the government of Montenegro passed the *Development Directions 2013-2016*, which proposed solutions for harmonising the goals of the sectoral and national strategies in various areas of development.

Reindustrialisation as understood in this paper does not suggest a "defence" of socialism, still less appealing for a "centrally-planned economy", nor a needless ideologisation and falling into the trap of a new ideological debate. On the contrary, it has been shown that in the today's multipolar world there is no entrenched development paradigm; exit from the crisis for the countries in transition is possible only via a new order, which, as things stand, will not rely on the socialist concept to a great extent. This said, we believe that the following trends can be designated as conceptual directions for the governments of the countries in transition: a) the new role of the state; b) creating a functional institutional infrastructure; c) "creative destruction", completing the process of "deindustrialisation"; d) the new industrial policies; e) regional clusters; f) abandoning the myth of foreign investment; g) translation of absolute and comparative into competitive advantages; h) reducing inequality; i) the process of technological convergence; j) the new role of "social capital"; k) reactivation of entrepreneurial economy. We shall comment on each of the listed components.

a) The new role of the state. Let us start from the fact that there are ever more supporters of the idea that if "the development is completed under the domination of the state, then, equally, the development without the state is completed." In this regard, the new role of the state could be briefly described as its abandonment of the role of the leading entrepreneur and its assuming the role of adjusting the market anomalies and failures. Our starting hypothesis is that "the state makes mistakes", but that the market, in turn, makes even more mistakes than the state. However, both positions, the "counter-market" and the "counter-state" have something in common – there is a need to rein in and take control of "the mad" financial capitalism and thoroughly modernise the system of taxes and transfers which are at the heart of the modern "welfare state" (for more, see A.Lojpur; 2015;24). Broadly looking, when it comes to the position of the state within the entire social reality advocated, that is, the advocacy for the government, this aspect requirs change and the adoption of the new mindset, a new "way of thinking", as presented in **table 3**.

Table 3. "New" government action-taking mindset (World Bank, 2007; p.50)

| Role / Way of thinking | Way of thinking | | |
	Liberatisation mindset	Modernisation mindset	KB economy mindset
Is about	Undoing things	Building things	Building winning oportunities
Creates	Freedom Fluidity Even playing field	Modern institutions Rule of law Good basic business Environment	Vision A winning mentality Clusters A vibrant home base for business
Main Focus	Stability Incetives	Productivity Catch-up	Becoming globally competitive
Domain	Economy	Economy Society	Society
Government's role	Get out of the way Stop being an operator	Become a good regulator	Become a challenger Become an integrator

b) Creating a functional institutional infrastructure: The practice of both developed and less developed countries has shown that all development models which have fallen into the *institutional vacuum*, i.e. which have ignored institutions, have not been able to avert crises. D. Rodrick argues that the mutual relation and influence of political and economic institutions must contribute to establishing institutional competition and functional institutional structure

which contributes to the socio-economic development (2000;5-7). The example of the countries in transition suggests that the institutional changes are changes of the infrastructure and that their absence has destructive effect on engaging and effective using of economic resources. Bad institutions result in individuals getting rich through corruption, which just redistributes the existing income and wealth and does not increase employment or national wealth.

c) "Schumpeter's creative destruction" (1942) as the completion of the "deindustrialisation" process. The transition countries we have focused on are small economies according to their important characteristics, which is why they have to be open to the global environment, but at the same time cannot significantly affect the international capital flows and the overall trends in the global market. They have achieved a certain level of stability, but they have reached the stage where the economic growth can no longer be sustained by using the macroeconomic instrument policies. This would mean a total abandonment of the unproductive "chimney industry", shutting down big business systems, former socialist giants which still survive in a number of the countries in transition, mainly owing to non-economic reasons, such as "political" ones, etc. Simultaneously, this would, in turn, result in abandoning the so-called "culture of dependency", inherited from socialism, where individuals rely on big companies for employment (Deakins, D; 2012, p.15).

d) New industrial policies. Promoting entrepreneurship in new industrial policies, not those inherited ones but those proven as meaningful, as the cornerstone for social activities, should become the focus of a changed awareness of future progress and dynamics of the countries in transition. It would be necessary to design a proper industrial long-term policy, specifically tailored for small national economies characterised by a huge dependence on the world's market. The experience of the developed countries shows that the market cannot solve the country's development problems on its own, which means that there should be a certain level of the very necessary protection of domestic industry and a gradual opening up to the world, including the removal of numerous business barriers (for more, see A.Lojpur, 2015; 25).

e) Regional clusters. Reindustrialisation which would result in the economic growth will not be possible if the old development policies are still pursued, particularly if they are to rest on the outdated institutional and organisational grounds. Besides, a number of countries cannot timely transform into an entrepreneurial economy due to the lack of the "economy of scale", unbalanced regional development, crushed industry, high mortality rate of family businesses, etc. Instead, it would be possible to foster a new entrepreneurial infrastructure, which, for example, in the initial phase could be created through the innovation-based entrepreneurial clusters, so as to amplify the advantages of an economy based on knowledge and reinforce it until it is fully networked at a regional and possibly supranational level.

f) Abandoning the myth of foreign investments. The experience gathered so far shows that it is unrealistic to expect that the necessary funds for reforms, i.e. reindustrialisation, will be provided by the developed countries or anyone else for that matter; therefore, the conclusion is that the "financing" of development must largely rely on domestic savings. In our view, the countries in transition should focus on creating the conditions for a profitable investment of the domestic capital – the question is not whether there is such capital or whether such capital is sufficient, as can often be heard, but how to put it to good use. In addition to observing that the gap between the rich and the poor countries is still huge, T. Piketty notes that "there is no evidence that the catch-up process is primarily a result of investment by the rich countries in

the poor. Indeed, the contrary is true: past experience shows that the promise of a good outcome is greater when poor countries are able to invest in themselves" (T.Piketty, 2014;10).

g) The translation of absolute and comparative into competitive advantages. For a fuller understanding of the problems treated in this paper, we find that it is of particular importance to make a distinction between the comparative and the competitive advantage and their connection with the competitiveness of a national economy. Namely, the progress made so far in the developing countries has mainly been based on a combination of abundant natural and other domestic resources, government subsidies, cheap labour or some other inherent advantages, which are usually denoted as absolute and/or comparative advantage. However, efforts to convert the comparative advantage, which is easily sustained, into the competitive advantage, are still failing, as can be seen on the ranking list of global competitiveness (WEF), where many countries rich in natural resources rank very low.

h) Reducing inequality. Convergence of inequalities is possible only through a gradual establishment of a new development paradigm based on the "economy of knowledge". Let us start from the fact that it has become quite clear that knowledge and innovation have a key role in the development of civilisation. The key force of convergence is the process of spreading knowledge and investing in professional education (for more, see T.Piketty;32-33).

i) The process of technological convergence. "The progress in the direction of technological rationality," notes T.Piketty, "would automatically lead to the victory of human capital over financial capital and real estate managers able to win over shareholders deep pockets, victory competencies of origin" (Piketty;33). With the rapid globalisation and technological revolution over the past few decades, knowledge has become the key factor of competitiveness and on that basis new models of the economic growth are being re-shaped today. This strategy is based on four basic pillars: a) labour, b) modern and adequate information infrastructure, c) efficient system of innovation, and d) developed national institutional framework[9].

j) New role of social capital. Social capital can be described as a framework for a huge number of various interconnections between the entrepreneurs, their families, friends and communities, in which a specific system of values and informal sanctions is established. Actually, this concept centres on the rise of the "human capital", whereby the starting hypothesis is that, by using a well-designed strategic approach to the development of human potential, small underdeveloped countries can achieve not only a national recognition in the regional terms, but also a significant acceleration of their economic development. In this way, the less developed countries, the countries from the "periphery", would be able to free themselves from the world centres of the economic and political power. This is how Finland, the world's leading country in terms of competitiveness, has succeeded, having used the benefits of an economy based on knowledge, with most of the merit resting with its insisting on constant innovation (K.Ohmae, 2007;17).

l) Re-activation of entrepreneurial economy. The idea of re-activating this premise in the process of reindustrialisation is not new, but the reality is that we have "entrepreneurship in the language and classics on the mind (at work)." Additionally, in most transition countries, the tradition of collective entrepreneurship caused problems in the introduction of individual entrepreneurship, launching family businesses, etc.

---

[9] For more, see: *Building Knowledge Economies,* pp.23-28.

Evidently low entrepreneurship in the countries in transition is almost a logical consequence of the fact that this is mostly the so-called *necessity-driven entrepreneurship* and not the *opportunity-entrepreneurship*, which prevails in the developed countries (D.Deakins, 2012;39).

4. CONSCLUSION

If we view the decades-long achievements of a group of the countries in transition which have been the focus of this paper, it becomes evident that there has been no convergence. In other words, the "development gap" between the developed countries and those in transition keeps widening. In the same vein, the reform process which started in the socialist countries, especially in the countries of the Western Balkans, stopped in 2000 and we may label it as still incomplete. For the most part, the inconsistency of those reform processes, rather than their very nature, has resulted in the fact that these countries have become victims of their own "reform fatigue", which further explains their failure to undergo true and deep structural transformation.

In the end, taking into account the post-crisis economic growth in the transition countries and their incomplete and suspended reforms, the restarting of the fundamental structural reforms remains key priority for the industrial policy in the entire region. This requires the embracing of a new conceptual framework, i.e. starting the process of reindustrialisation on the new development grounds (new economy), as explained in the paper. In order to avoid new straying, the new development strategies should rely on the priorities set by the EU, particularly for the countries in transition which are in the process of accessing the Union: knowledge society, single market, creating the enterpreneurial environment, labour market as the factor of social cohesion and environmentally-friendly sustainable development.

LITERATURE

1. Deakins, D; Freed, M. (2012). Entrepreneurship and Small Firms, translation, Datastatus, Beograd.
2. Đuričin, D, *Nacrt strategije reindustrijalizacije Srbije*, Beograd
3. Jessua, C. (2008). *La capitalisme*, translation, *Zagreb.*
4. Jurčić, LJ. (22014). *Industrial Policy in the Global processes,* Acta Economica; B.Luka, No.13.
5. Lojpur, A.(2015). *Reindustrialization – Between the late Awekening and a New Paradigm of Economic Growth*; Acta Economica, B. Luka, No. 22; p.9-31-
6. Lojpur, A., Drašković,V. (2013). *Underdeveloped countries in conditions of globalization – serach for a valid development paradigm*, VIII International symposium regarding Corporate Governance; *Teslić,* May; p.153-173.
7. Ohmae, K. (2007). *The Next Global Stage*, translation, Mate, Zagreb.
8. Primorac, Ž.(2013). *Croatia needs a New Industrial Policy,* Financing; B.Luka, No; 2; p.5-12.
9. Piketty; T. (2114). *Capital in the 21st Century*, prevod; Zagreb, Profil.
10. Rodrik, D. (2000). *Institutions for High Quality Growth: What They Are and Hoe to Acquire Them*; Studies in Comparatives International Development, Vol.35; p.3-31.
11. Rodrik, D. (2009). Industrial Policy: Don't ask why, ask how; Middle East Development Journal, br.01.
12. Rodrik, D. (2007). *One Economies – many recipes*; globalization, institutions and economic growth"; Princeton University Press.
13. Senet, R. (2007). *The Culture of The New Capitalism*, translation, Arhipelag, Beograd.
14. Stiglitz, J.: (a) (2007). *Making Globalization Work*, Penguin Books.

15. Stiglitz, J.: (b) (2002). *Globalization and Its Discontents*, W.W.Norton &Company, prevod SBM, Beograd.
16. Vietor, H.K.R. (2010). *How countries Compete; Strategy, Structure, And Goverment In The Global Economy*, Harvard Business School Publishing, (translation), Mate, Zagreb.
17. Walser, C.D. (1999). *Industrial Policy in the Process of Transition*, Dissertation, Stuttgart.
18. The Western Balkans: 15 years of Economci Transition, Interantional Monetary Fond, Washington, D.C.; March 2015.
19. Western Balkan 2004.godine; *Help, Cohesion and New Boundaries Europe*, ESI.
20. Industrial Policy of The Montenegro by 2020, Ministry of Finance, Government of Montenegro, Podgorica, June, 2015.
21. Global Competitiveness Report 2015/16; several years, The World Economic Forum.
22. WEF; The Europe 2020 Competitiveness Report: Building a More Competitive Europe, Edition, 2014.
23. Global Entrepreneurship Monitor, GEM Report, 2014.
24. Regional Economic Prospects in EBRD Countries of Operations, November, 2015.
25. World Bank (2007), *Building Knowledge Economies, Advanced Strategies for Development , Washington.*

THE IMPORTANCE OF COLOR AS A MARKETING TOOL IN TOURISM

Anica Hunjet
University North, Croatia
anica.hunjet@unin.hr

Martinia Ira Glogar
University of Zagreb, Faculty of Textile Technology, Croatia
miglogar@ttf.hr

Djurdjica Parac Osterman
University of Zagreb, Faculty of Textile Technology, Croatia
djparac@ttf.hr

Goran Kozina
University North, Croatia
goran.kozina@unin.hr

ABSTRACT
In current times of frequent changes, marketing experts must innovate, think fast and be one step ahead of their competition. Every introduction of a new product is initialized by strong impulses from the market, whether it is enhanced by customer wishes or by the attractiveness of the competition. The fact is that energy of each colour hue has emotional and psychological properties, which is used as a tool in informal communication in the aim of long term memory. When designing new, or renovating existing spaces in hotels, designers do not choose a colour randomly, but with the aim of transferring a certain message to the customer about the product or service. The aim is to influence an observer's visual perception, mood and behaviour, by harmonious relations of colours. Furthermore, some hues stimulate productivity and creativity of the employees, so if the harmonious relation among colours is achieved, some very positive effects on business activity can be accomplished.
The research was based on the assumption that wrong colour choice in marketing communication could cause negative perception of milieu respectively information receivers. Testing was performed on 182 respondents (ages from 30 to 60 years), according to psycho-physical method of constant stimuli based on Stevens' method of evaluation of colour hue influence on psychological experience of a colour hue stimulus, in hotel advertising. Statistical analysis of results was performed by methods of descriptive statistics, Kruskal-Wallis ANOVA and Median test. It has been shown that green and blue hues of high chroma are less noticeable. Corporations and distinguished brands can easily influence their customers if they use the right colour combination which will prove their wealth, authority, social influence and acknowledgement.
Keywords*: colour as communication element, colour energy, visual perception, marketing communication, business competition, tourism*

1. INTRODUCTION
Aubert, Exner, Newton, Helmholtz, Hering, Land, Munsell and Ostwald were the first to conduct research into psychophysical perception of colour which provided the basis for the understanding of the phenomenon of colour (Hunjet, 2006., p. 4). They found that colour perception is contingent on and varies depending on the change of parameters and viewing

conditions, such as an observer, the light source, background colour, light energy levels, etc (Hunjet, Parac-Osterman, Vučaj, 2013., p. 83). Colour is energy that must be used positively. Colour is an integral part of the service. It is also one of the many marketing tools for creating and maintaining customer awareness of brand image (Parac-Osterman, Ira Glogar, Hunjet, 2013., 46). Colour is a tool for shaping the customer's feelings and responses. Colours must be selected based on all the factors in the specificity of the symbol and its purpose. Colours emit signals; thus it is very important to choose a good colour palette. Colour is highly important in the presentation of a product and affects attention, the understanding of the message, attitude and intention. Colour is conducive to an increase in the number of readers of the message. In his research, H.J. Rudolph came to a conclusion that the audience of ads in which two colours were used grew only by 1%, whereas the audience of ads in which four colours were used grew by 54%. When choosing colours one should be aware of the differences in meanings of colours between different cultures. While designing new or refurbishing the existing hotel premises, designers do not choose the colours randomly, but are trying to convey a specific message to customers about the product or service so as to make it distinctive (Kesić, 2003., p. 265). Marketing in tourism always appears as a sum of individual marketing activities that are, at the moment of that community, characterised by the object that the entire marketing effort is aimed at – the consumer (tourist). Tourism development is connected to a particular space. Marketing subjects in tourism are all operators, or participants or subjects of tourist offer who participate in the tourist market with their products and services and who satisfy tourists' needs through tourist consumption. However, they should not neglect their own economic interests in the process (Perkov, 2005., p. 99). Furthermore, there are various constraints in the competition and there are efforts to overcome them by using various instruments of business policy. In tourism, the term promotion includes all activities of providing information, persuading and reminding (Matika, Gugić, 2007., 152). Design in tourism does not only imply attractively designed objects that are sold as souvenirs, but it also implies attractively designed goods that could be interesting for tourists as well as attractively designed and useful objects for use in furnishing tourism spaces. This also partially expands our understanding of design in tourism to producers and products in different branches of economy in which goods sold in the tourist market are produced (Burzov, Budumir, 2013, p. 190). The importance of marketing communication has grown along with the increased importance of marketing in modern economies. These phenomena have been determined by an array of changes in the business environment, adoption of new electronic media, changes in ethical and environmental requirements of the modern society. Different forms of marketing communication aim at creating positive opinions, preferences and purchasing of a product or service (Kesić, 2006., p. 435). Marketing communication mix consists of advertising, direct marketing communication, sales promotion, personal sales, public relations, publicity and external advertising. The structure of marketing communication determines how to manage the environment, satisfy consumers and adjust the communication mix to achieve the desired market results. Over the past few years, the most renowned hotels have set the following priority goals: providing improved services to guests, achieving a higher level of guest satisfaction and higher level in satisfying their needs and to be better than the competition. To develop successful marketing communication, it is necessary to continuously monitor changes in the environment. Monitoring refers to competition, social changes, economic conditions, legislation activities (Hunjet, Kozina, 2014., p. 59). It is necessary to continuously monitor changes in the environment and to adjust policies as well as strategies to these changes so as to offer products and services expected and desired by consumers/hotel guests, and by adjusting these products to the changes they would also achieve success in the global market. We can face the competition by building a quality brand and respectable image through combining good

communication methods and quality products/services. The role of communication in image creation is of particular importance. The basic structure of image comprises perception, identity and attitude. Perception is the process of receiving, interpreting and storing communication content in the cognitive structure of an individual, whereas, from the aspect of marketing communication, perception is the most important complex psychological concept, as each stimulus transferred by the communication process is perceived by a consumer in a specific way and forms his or her behaviour. Identity is a set of opinions and beliefs of the recipient about the features of a product, service, hotel, and company, whereas attitude is a belief and readiness for an action that is aligned with internal values and aimed at objects or situations (Kesić, 2006., p. 53). In the process of communication management, marketing experts must concentrate on the structure of information and the appeal through which they are trying to convey the desired meaning. The visual elements of the message are especially important for successful communication. Images are used to complement the verbal part of the message. The visual part increases the memorization of messages. To be successful, the message should include a positive appeal, reasoning and emotion (Kesić, 2003., p. 441). The retention of information represents its transfer to long-term memory. Storage and retention of information is based on the knowledge of how the human brain, which is divided into left and right hemisphere, functions. The left hemisphere of the brain is responsible for logical, abstract and conceptual thinking, while the right part, which is focused on creative, imaginary and intuitive thinking, processes visual information. Both hemispheres of the brain help to process verbal information. Marketing experts create communication messages so that appeals reach their target, store the information and monitor how long they remain in the memory. In the immediate memory, the stimuli are processed on the basis of physical characteristics such as the volume of a sound, size, brightness, or colour. Long-term memory is used to store information that we will use immediately as well as information important for future decisions (Kesić, 2003., 442). The purpose of colour in marketing communication is to stimulate people's interest so that it stays in their minds as long as possible. Colour provides information, enhances recognition memory and calls for participation. All of this points to the importance of colour in marketing (Parac-Osterman, 2007., p. 3). The aim of the research is based on Stevens' estimation method determining the affect of the advertising message hue in hotels on the psychological perception of the hue stimuli. Nonparametric statistical tests were used to test the hypotheses including the Mann-Whitney U Test, the Kruskal-Wallis ANOVA, and the Median test (Hunjet, 2006., p. 54; Hunjet, Parac-Osterman, Benšić, 2006., p. 123).

2. RESEARCH METHODOLOGY

One of the most accurate psychophysical methods for measuring the threshold of visual perception is the method of constant stimuli. For psychophysical perception of colour the method of constant stimuli and Stevens' estimation method are used with the most common method being the method of constant stimuli in which psychophysical perception of colour caused by different light sources, etc. is estimated for each psychological property of colour (hue, brightness and saturation) (Parac-Osterman, Hunjet, Burušić, 2004., p. 78).

The survey included 182 respondents aged 30 to 60. All respondents had to take the Ishihara test to identify those with normal colour vision. Twenty respondents were found to have the red-green colour vision deficiency, thus reducing the number of respondents to 162. The respondents came from Zagreb, Varaždin, Koprivnica and Crikvenica from various sectors (culture, tourism, local and regional self-government, public administration, education, the civil sector, specialized institutes).

The main competitive advantage of the modern economy, including hotel management and tourism industry, is based on human resources. Recruiting and retaining the best people for the

organization has become the overarching goal of all managers who aspire to achieve peak performance. People make organizations and their knowledge and skills provide organizations with a competitive advantage (Bobera, Hunjet, Kozina, 2015., p. 190).

The respondents were divided into three age groups: I: 30-40, II: 40-50, and II: 50-60.

The survey was conducted in April-June 2014 using a questionnaire. The respondents were asked the following questions:

How are you affected by the colour of curtains in a restaurant or a hotel lounge if

       1. *the walls are painted white and the curtains are green?*
       2. *the walls are painted white and the curtains are blue?*
       3. *the walls are painted white and the curtains are red?*

To simplify the statistical analysis, the respondents were offered two answers: A - the curtain colour creates a feeling of warmth and intimacy and B – the curtain colour leaves me indifferent. The results of the evaluation of the perception of colour were processed using Statistica (StatSoft) and SAS software package (SAS Institute). The effect of colour on the respondents' perception is shown using Box & Whisker Plot (Figures 1-3).

3. DISCUSSION OF RESULTS

Any colour in the visible spectrum that can be perceived by a human, considering the frequency of the corresponding wavelength, has its specific energy. This energy is the very factor that defines the overall psychophysical perception of the observer. Therefore, the knowledge and understanding of how to use colour and direct its specific energy and contrasts created is an important marketing tool. Colour is a valuable tool and an integral element of marketing communication. It is a silent communicator that creates added value for the company message. It affects mood and emotions, as well as the perception and helps businesses to differentiate their logo. The purpose of colour in marketing communication is to create people's interest so that it stays in their minds as long as possible. Colour provides information, enhances recognition memory and calls for participation. All of this points to the importance of colour in marketing (Tkalac Verčič, Kuharić Smrekar, 2007., p. 201).

The structure of marketing communication determines how to manage the environment, satisfy consumer needs and adjust the communication mix to achieve the desired market results. Marketing communication aims to influence the belief associated with the brand, create or customise views, affect emotional responses and direct the choice of brand. Perception represents an impression or an image that one gets on the basis of a group of individual stimuli that the human mind receives and mental processes that process these stimuli in order to create a particular opinion, attitude and behaviour (Kesić, 2003., p. 77). Most modern advertising strategies aim to boost consumers through emotional sensors using emotions. An appeal to emotion encompasses a wide range of positive and negative appeals, and there are products that are associated with emotions. Visual communication is the environment in which the communication message appears and presents to a potential consumer conditions in which the product is used. Interdisciplinary connections between culture and tourism are important in the European Union due to interdisciplinarity, creativity, and better business opportunities, i.e., pronounced intercultural communication skills offered in the context of future life and work (www.turizaminfo.hr).

Therefore, when designing a hotel space, one starts off by selecting the style, i.e. deciding whether it will be modern or traditional. After that, one needs to know what type of customers the hotel owner wants to attract and based on that information the materials and amenities that this particular hotel must have are selected. As the curtains and decor are a very important part of the design and style, not only in hotels, but elsewhere as well, a logical next step in the

research is to determine how the curtain hue will affect the psychological experience of a person in that space. Colours can be used to generate a positive association and can be conducive to return visits. As in all aspects of life, the first impression is very important in marketing too, and there is no better way to attract attention to the product than by using colour. Therefore, it is quite important which colours you choose to communicate with your consumers. The psychological perception of colour is the real state of communication between the environment and a colour. It depends on the source of light, the energy of the selected hue, and in particular on the observer and his/her psychological state (and health) (Hunjet, 2006., p. 16; Hunjet, Parac-Osterman, Benšić, 2007., p. 123). The method of constant stimuli with a colour hue was used to conduct research for the purpose of this paper. The respondents were divided by their age into three groups as follows: I: 30-40, II: 40-50, III: 50-60. The colours used were psychological primaries: blue, green and red. According to Hering's colour theory the perception of colour is enabled by receptors in the eye. The respondents were offered two answers: A - the curtain colour creates a feeling of warmth and intimacy and B – the curtain colour leaves me indifferent. The results of psychological perception of colour are shown using Box & Whisker Plot (Figure 1-3).

Figure 1. The psychological experience (f-frequency experience) blue colour tone curtains; A-feeling of warmth and intimacy and B- indifferent (age: I: 30-40, II: 40-50 and III: 50-60)

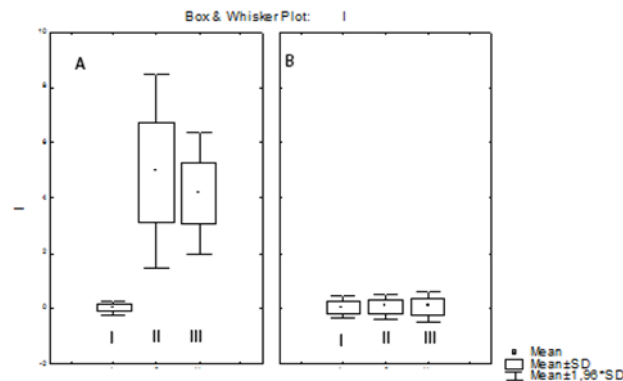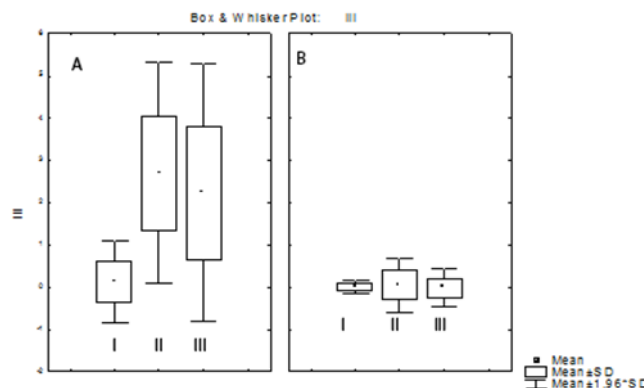*Figure 2. The psychological experience (f-frequency experience) green colour tone curtains; A- feeling of warmth and intimacy and B- indifferent (age: I: 30-40, II: 40-50 and III: 50-60)*
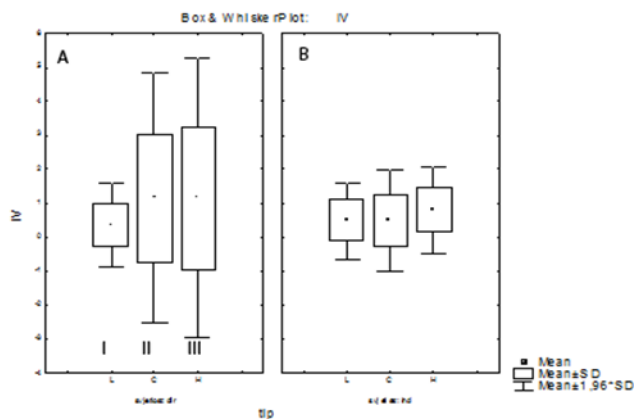
Figure 3. The psychological experience (f-frequency experience) red colour curtains; A-feeling of warmth and intimacy and B- indifferent (age: I: 30-40, II: 40-50 and III: 50-60)

The answers to the question - how are you affected by the colour of curtains in a restaurant or a hotel lounge - depended on the respondents' age and the curtain hue. The first group of respondents who were asked to describe their perception of the curtain colour and the way they felt in the room confirmed that the blue colour (Figure 1) does not create a feeling of warmth and intimacy in group I (aged 30-40). The respondents from group II and III (40+) experienced a feeling of warmth and intimacy. The blue colour created a feeling of tranquillity and gave the space a serious and professional look; the respondents remain indifferent. However, in the response B – blue curtain colour was less noticed and left the respondents indifferent. Compared with blue, the green colour of the curtains (Figure 2) made the respondents feel more comfortable, which will lead to more open communication. In the case of the red colour of the curtains (Figure 3), the psychological experience of all respondents, especially the ones in group II and III, included the sense of warmth and intimacy, which is conducive to more open communication. Due to its high specific energy, the red colour causes the strongest visual reactions of observers and draws the observer's attention. It was confirmed by this research that the red colour will remain in the memory longer, which relates to the psychophysical visual phenomenon, and thus will be conducive to open communication. The perception is an impression that an individual gains based on a group of individual stimuli that a human mind receives and mental processes that process these stimuli in order to create a particular opinion, attitude and behaviour. As in all aspects of life, the first impression is very important in marketing tool, and there is no better way to attract attention to the product than by using colour. Blue and green colours in large spaces remain unnoticed and are less conducive to open communication.

4. CONCLUSION
The paper presents the results of research on the attitudes of respondents and experts in the fields of culture and tourism, and shows that cooperation with institutions dealing with international projects in culture and tourism has been intensified. In the context of dramatic economic, political and social changes affecting the world, culture and tourism play an important role in communicating the key values of intercultural dialogue, the protection and promotion of cultural diversity and the preservation of cultural heritage. All the aforementioned and cooperation on international projects and research with partner institutions from the country and abroad are imposed as a strategic priority in the development of regional hotels meeting at the same time market needs and the requirements for sustainable development. Complete tourist satisfaction is achieved through a wide range of primary and secondary tourist offer. The message can be perfectly phrased, it can go around the world and it is an essential

communication tool; however, in addition to the above, it must also be coloured, because only then we have a complete brand identity. Just like the logo, colour is crucial to brand awareness, too. In addition to a high-quality product, a good marketing strategy, and excellent communication, colour is also a critical communication tool that differentiates us in the market with a view to a more competitive business. This paper proved that shades of blue and green, with high saturation, are least observed in messages, they provide tranquillity and stress seriousness and professionalism, and respondents remain indifferent thereto and reduce open communication.

LITERATURE

1. Bobera, D., Hunjet, A., Kozina, G. (2015). Poduzetništvo. Sveučilište Sjever, Koprivnica/Varaždin. 308 str. ISBN 978-953-7809-23-2
2. Buzov, V., Buzov, I., Budimir, I. (2013). Website Design Analysis of Croatian Hotels. Zbornik radova 17. međunarodne konferencije tiskarstva, dizajna i grafičkih komunikacija, Senj, Hrvatska, 190-204
3. Hunjet, A. 2006. Utjecaj okoline na doživljaj boje, doktorska disertacija, Sveučilište u Zagrebu Tekstilno-tehnološki fakultet, Zagreb
4. Hunjet A.; Parac-Osterman Đ.; Benšić M.: Utjecaj boje okoline na doživljaj žutog i plavog tona/ Influence of Ambient Colour on the Sensation of Intensity of Yellow and Blue Hue, Tekstil 55 (3) 121- 126 (2006)
5. Hunjet, A., Parac-Osterman, Đ., Vučaj, E. (2013). Statistic analyses of the Color experience according to the age of the observer. Collegium Antropologicum, Vol. 37, Suppol 1, 83-91.
6. Hunjet, A., Kozina, G. (2014). Osnove poduzetništva. Sveučilište Sjever, Koprivnica/Varaždin. ISBN 978-953-7986-01-8
7. Kesić, T. (2003). Integrirana marketinška komunikacija. Opinio d.o.o., Zagreb, ISBN 953-98250-0-8
8. Kesić, T. (2006). Ponašanje potrošača. Opinio d.o.o., Zagreb, ISBN 953-98250-1-6
9. Matika, D., Gugić, A. (2007). Turizam i sigurnost. Adriatica.net, Zagreb, ISBN 978-953-7404-04-8
10. Parac-Osterman, Đ. (2007). Osnove o boji i sustavi vrjednovanja. Tekstilno-tehnološki fakultet Sveučilišta u Zagrebu, Grafički zavod Hrvatske, d.o.o., Zagreb, ISBN 978-953-7105-11-2
11. Parac-Osterman, Đ., Ira Glogar, M., Hunjet, A. (2013). Utjecaj boje na vrijeme zadržavanja poruke/Influence of Colour on Time of Maintaining the Message. Zbornik radova 17. međunarodne konferencije tiskarstva, dizajna i grafičkih komunikacija, Senj, Hrvatska, 46-52.
12. Parac-Osterman Đ.; Hunjet A.; Burušić J.: Psycho-physical study of color, AIC2004, Color and paints, Porto Alegre, Brazil (2004) 78 -84
13. Perkov, D. (2005). KVALITETA HOTELSKE USLUGE JE ODRAZ ORGANIZACIJSKE KULTURE, Stručni rad sa 2. bijenalnog međunarodnog kongresa. "Hotelplan 2005", objavljen u zborniku radova "Hotellink", vol. 6, br. 6, UDK 640.4, COBISS.SR-ID 107030284, Viša hotelijerska škola, Beograd, 2005., str. 99-105 (Second Biennial International Congress, November 18-19, 2005, Belgrade, Congress Proceedings)
14. www.turizaminfo.hr/jednostavnost-u-uredenju-tople-boje-i-udobna-post... (accessed on 30.04.2015.)
15. Tkalac Verčič, A., Kuharić Smrekar, A. COLOR IN MARKETING COMMUNICATIONS: DISCUSSING THE ROLE OF COLOR AS A MEDIATING VARIABLE IN THE PROCESS OF COMMUNICATION, TRŽIŠTE, UDK: 159.937.51:658.8, Vol. XIX (2007), br. 2, str. 201 - 211

RISK AS A DRIVING FORCE OF CONTEMPORARY SOCIETIES, ECONOMY & POLITICS

Anna Olofsson
Mid Sweden University, Sweden
anna.olofsson@miun.se

Susanna Ohman
Mid Sweden University, Sweden
susanna.ohman@miun.se

Katarina Giritli Nygren
Mid Sweden University, Sweden
katarina.giritli-nygren@miun.se

ABSTRACT

This paper discusses understandings of risk as a driving force of societies not only as a tenet of the risk society thesis but also in terms of the economy, risk governance, risk regimes and as a technology for risk governmentality. Risk policies has also, during the last couple of decades, been developed in association with concepts such as vulnerability and resilience which we would say, implicates a certain understanding of the world. The dilemmas of materialism and idealism in addition to actors and structure will be analysed in relation to how risk concepts express notions of social, economic and political stability or instability and relationships between individuals, organisations and societies in different ideological systems, e.g., liberal or state-oriented. We suggest that there is a need for a genealogical questioning of the relationships between the self, markets and society, a questioning that can illustrate the contingency of these relationships, or, as we would have it, release them from their black boxes. Using illustrative local examples we will reflect upon the role of individualisation, marketization, and globalisation and anticipated catastrophes for the governing through risk. The analyses show the interaction between economic, social and technical systems through the normalisation of risk (de)responsibilisation and that the developments of neoliberal governance in terms of freedom and security interacts with the management of global terrorism and climate change.
Keywords: Economic globalisation, Individualism, Risk Societies

Full paper is not published at the Author's request

THE ROLE AND IMPACT OF E-COMMERCE ON CONSUMER BEHAVIOUR

Ashok V. Giri
Assistant Professor
MES Garware College of Commerce,
Ph.D & M.Phil Research Guide Savitribai Phule Pune University
Pune-411004. (Maharashtra, India)
capt.drashokgiri@gmail.com

ABSTRACT

Electronic commerce refers to the 'buying and selling of information, products and services via computer networks' (Kalakota & Whinston, 1996). Bloch, Pigneur and Segev (1996) extend this to include 'support for any kind of business transactions over a digital infrastructure.' Thus, broadening the definition to absorb activities such as the provision of information to consumers, marketing and support activities. In effect, all the activities, which are common to the combined efforts of each of the three channels conventionally used in the buying and selling process, these being, communications, transaction and distribution channels. Consequently, in an online environment a web site is able to advertise products, allow consumers to pay for them, and in the case of digital software, distribute the product via a download (Li, Kuo & Russel, 1990). Concerning non-digital products, communications and transaction functions can be achieved on a web site but not distribution. Therefore, depending upon the product, from a business to consumer (B2C) perspective, electronic commerce has the potential to be used in all phases of a commercial transaction, and in turn, will have significant implications for the retailer. The aim of this paper however, is to set out to bring together aspects of consumer behavior that the researcher considers are pertinent to a retailer striving to meet consumer needs in an online environment. In doing so, this paper will be focusing upon the consumer information search process and consumer value. However, with both attempting to determine how online retailers are firstly facilitating the search process and secondly, offer consumer value via their web site. Finally, the ultimately aim of this paper will be to establish how retailers are striving to motivate consumers to buy online.
Keywords: *Consumer behavior, E-commerce, Information Processor, Optimism, Purchase behavior*

1. INTRODUCTION

In view of increasing levels of e-commerce activity by retailers, it still remains uncertain how they are going to use this technology to gain competitive advantage or market advantages (Hart et al, 2000, Dawson 2000). The on-line environment to be a truly successful medium for consumer spending, the technologies will need to match the utility provided by the traditional high street retail formats. Such utilities include immediate delivery; credit facilities and choice of method of payment; display; personal assistance in selecting goods; return services and warrantees. In terms of online retailers delivering such utilities, much debate has taken place with regards its potential success. The value created by retailers on the Internet is currently low. However, a good number of retailers are not deterred, and see their presence on the web as an opportunity to further meet the needs of consumers. If meeting the needs of consumers, retailers will need to sufficiently motivate consumers in order for them to make purchasers in online environments. Consecutively to achieve this, an understanding of consumer behaviour is required specific to shopping behaviour. This includes such things as, firstly, understanding how consumers search for information in online environments prior to purchasing products and

services. Such insights will increase the likelihood of their web site being the end point of the consumer's search. Further to this, once the web site has been reached, it will assist retailers in terms of the design and structure of the site in order to facilitate consumers finding products and services they desire. Secondly, an understanding of what consumers value in terms of their shopping experience, may help to secure a competitive advantage for the retailer. Therefore, this paper endeavors to bring together aspects of consumer behavior that the researcher considers are pertinent to a retailer striving to meet consumer needs in an online environment. Whilst there exists many aspects of consumer behavior that are relevant to the study of online retailing, such as psychological, personal or lifestyle characteristics, trying, to embrace all of these is beyond the scope of this paper. Thus, the paper's objectives are limited to firstly, examining how retailers are facilitating consumer information searches for products and services. Secondly, examining how online retailers offer consumer value. Today, shopping for goods and services online is becoming more of a common practice. Ecommerce (electronic commerce) has been around for over 40 years. Consumer-using ecommerce really did not start to take off until around the mid 1990s. One reason ecommerce emerged during the 1990's was due to the increased number of household computers. For ecommerce to work, a consumer must have an Internet enabled device to complete a transaction. As technology becomes cheaper and broadband Internet becomes more accessible there is a greater chance that ecommerce will take over the traditional businesses model. For my graduate project I developed an ecommerce website that that sells goods and provides services. For this study I do not want to only look at ecommerce in relation to commerce, but also look at consumer behavior while purchasing a good online. Research in ecommerce and consumer behavior will help me better understand the market and my future customers. To complete this study, I have collect data and information from journal articles, newspapers and other media. I feel there is room for more successful online businesses and in the future, I personally want to compete in the online marketplace. Building customer relationships and trust is hard for any business. Most of studies that I have look at shows consumers react to security, mainly processing payment and personal data online. I question if a consumer security concerns decreases when shopping at a well known brand such as Walmart.com and if the same applies for any online brand that gives an impression that they are a million dollar company even though they are actually a mom and pop store from a small suburb.

2. OBJECTIVES OF THE STUDY

- To understand the complexity of e-commerce and its many facets.
- To explore how e-business and e-commerce fit together.
- To identify the impact of e-commerce.
- To recognise the benefits and limitations of e-commerce.
- To use classification frameworks for analysing e-commerce.
- To identify the main barriers to the growth and development of e-commerce in organisation

3. LITERATURE REVIEW
Internet access is practically everywhere in the United States, schools, restaurants, libraries, retail stores, and even in random parts of some towns sometimes providing free Internet access. The emergence of ecommerce resulted to increased competition among businesses and is changing the traditional brick and mortar businesses to an online based operations as a strategy to remain competitive. Online sales only made up 5.7% of retail sales in 2013. In 2005 2.4% of sales came from online and increased to 6.2% in 2014. Holiday shopping increased 4th quarter

sales and decreases 1st quarter sales for the beginning of the New Year. On average there is a negative 16.9 percent change from 4th quarter to the 1st. This data indicates ecommerce has been increasing over the last nine years, but within the last years started moving sideways with little volatility. The data only gives an idea of the US retail sector and no indicator of global change that may occur in ecommerce. According to studies another study, ecommerce is growing at an annual rate of 20.7 percent at a global level on sale from $ 661 billion in 2011 to $ 963 billion in 2013. The rapid growth has resulted from increased use of broadband connection, innovative payment products and use of smart phones. The aim of adopting ecommerce is to meet the needs of the changing market dynamics, where merchants focus on improving customer experience and secure way of conducting business to establish a secure way of making transactions to create innovative payment method and consumer oriented solutions. Adoption of ecommerce always encounters challenges associated with technology, people and money. However, the cost of disregarding ecommerce is at times more that the cost of adopting because it is an important tool that increase competitiveness in the business. Traditional business models conduct business without the use of the digital world. Traditional businesses conduct business through physical store and business transactions carried out on a physical basis with customers. Arguably, brick and mortar business operation is expensive as it involves physical based marketing, establishment of physical warehouse and stores. Traditional business model also involves paper based billing, rent and others cost. The increased cost in traditional business model resulted to the adoption of ecommerce, which is considered as an effective model that assist business to gain market shares, improve customer relationships and communication and streamline business processes. There are other forces that have promoted the evolution of ecommerce including advancement in technology. The availability of secure, fast and cheap technology has enabled business players to adopt ecommerce making the market cost effective and highly competitive. According to U.S census in 1993, 22% of households had a personal computer. Needs among consumers have evolved making online retailers work at identifying consumers' needs and their shopping behavior so they can offer innovative products. Retailers are now focusing on customers on the basis of their demographics and spending habits to improve the market. Ecommerce enables retailers to increase sales and make businesses more profitable.

As the infrastructure grows around the world more and more people will be able to barter with each other. "The Internet has the highest adoption rate of any technology in history". The Internet has helped transform commerce in many ways. Anyone with an Internet connection can start a home-based business for free or with little money compared to a brick and mortar business. Overhead cost is much lower with ecommerce than traditional brick and mortar business making it easier to compete with larger businesses than ever before. Predicting success of an online business is nearly impossible. Businesses such as Google and Face book are considered a phenomenon. These businesses did not have the goal to take over the world but instead fill a need for a small group of people. Although these websites came out of nowhere and became a sensation practically overnight they did start somewhat of a trend. The trend is to give out free products to the consumer, in result, profiting from advertising revenue. One of the opportunities the growth of the Intern et has provided is the ability for users to browse commercial products shown on the Internet, and in some cases to order them over from a computer. The act of ordering is called e-commerce,2 and its growth has been a matter of much speculation. In this paper we look at its impact on consumer behavior, and by extension, on price measurement in the CPI. Because of some obvious advantages in convenience to the purchaser, expected cost advantages to the supplier in not having to maintain such a visible inventory and the opening up of more diverse markets for suppliers, e-commerce was predicted to grow quickly.

4. WHAT IS E-COMMERCE ?

Even today, some considerable time after the so called 'dot com/Internet revolution', electronic commerce (e-commerce) remains a relatively new, emerging and constantly changing area of business management and information technology. There has been and continues to be much publicity and discussion about e-commerce. Library catalogues and shelves are filled with books and articles on the subject. However, there remains a sense of confusion, suspicion and misunderstanding surrounding the area, which has been exacerbated by the different contexts in which electronic commerce is used, coupled with the myriad related buzzwords and acro nyms. This book aims to consolidate the major themes that have arisen from the new area of electronic commerce and to provide an under-standing of its application and importance to management.

In order to understand electronic commerce it is important to identify the different terms that are used, and to assess their origin and usage. According to the editor-in-chief of International Journal of Electronic Commerce, Vladimir Zwass, 'Electronic commerce is sharing business information, maintaining business relationships and conducting business transactions by means of telecommunications networks. He maintains that in its purest form, electronic commerce has existed for over 40 years, originating from the electronic transmission of messages during the Berlin

airlift in 1948. From this, electronic data interchange (EDI) was the next stage of e-commerce development. In the 1960s a cooperative effort between industry groups produced a first attempt at common electronic data formats. The formats, however, were only for purchasing, transportation and finance data, and were used primarily for intra-industry transactions. It was not until the late 1970s that work began for national Electronic Data Inter change (EDI) standards, which developed well into

the early 1990s. EDI is the electronic transfer of a standardized business transaction between a sender and receiver computer, over some kind of private network or value added network (VAN). Both sides would have to have the same application software and the data would be exchanged in an extremely rigorous format. In sectors such as retail, automotive, defense and heavy manufacturing, EDI was developed to integrate information across larger parts of an organization's value chain from design to maintenance so that manufacturers could share information with designers, maintenance and other partners and stakeholders. Before the widespread uptake and commercial use of the Internet, the EDI system was very expensive to run mainly because of the high cost of the private networks. Thus, uptake was limited largely to cash-rich multinational corporations using their financial strength to pressure and persuade (with subsidies) smaller suppliers to implement EDI systems, often at a very high cost. By 1996 no more than 50,000 companies in Europe and 44,000 in the USA were using EDI, representing less than 1 per cent of the total number of companies in each of the respective continents. According to Zwass, electronic commerce has been re-defined by the dynamics of the Internet and traditional e-commerce is rapidly moving to the Internet. With the advent of the Internet, the term e-commerce began to include:

- Electronic trading of physical goods and of intangibles such as information.
- All the steps involved in trade, such as on-line marketing, ordering payment and support for delivery
- The electronic provision of services such as after sales support or on-line legal advice.
- Electronic support for collaboration between companies such as collaborative on-line design and engineering or virtual business consultancy teams.

The wide range of business activities related to e-commerce brought about a range of other new terms and phrases to describe the Internet phenomenon in other business sectors. Some of these focus on purchasing from on-line stores on the Internet. Since transactions go through the Internet and the Web, the terms E-commerce(Internet commerce), e-commerce and even Web-commerce have been suggested but are now very rarely used. Other terms that are used for on-line retail selling include e-tailing, virtual-stores or cyber stores . A collection of these virtual stores is sometimes gathered into a 'virtual mall' or 'cybermall'.

5. SOCIAL MEDIA
Social media has helped increased the rapid evolution of business operation model from traditional commerce to ecommerce. Social media platforms have created new opportunities from retailers to adopt ecommerce business model to raise awareness of their products and promote their business brand name. Online social networking platform are mainly used by the population between the ages of 18 to 29 years. This is making it an effective medium for loyalty and branding. 90% of user between the age of 18-29 use social media. 73% of all 6 Internet users use social media. Nearly one fourth of the world uses social media. Social marketing has increased providing an excellent platform for customers to give feedback and complaints. Increased use of Internet and smartphone users is another force that has led to the rapid evolution of ecommerce business model. The rate of Internet users has increased from mobile devices, making retailers exploit this increased usage to be able to market a wide range of products to a large market. Consumer behavior / Security Our society has been overtaken by technology and ecommerce and m-commerce is growing along side with the rapid growth of technology. 34% of Internet users spend a whopping 25 to 35 hours a week browsing the Internet and only purchasing 520 items per year.

6. MOBILE
M-commerce is using this trend renaming it "premium" by charging a subscription fee to use these so called free products. Using these tactics, consumers are sucked in with the glorious word "free" but then they will be forced to pay a fee for premium content targeting consumers through game apps is a good idea. Mobile technologies such as smart phones and tablets have also boosted Ecommerce. An article from CNN reports that Americans are using smart phones and tablet apps more than PC's. While web use is still 500 times lower on 7 mobile browsers compared to personal computers. Over 50% of the world owns their own personal cell phone and 82% of adults in the United States have their own mobile phone. 84% of individuals in the United States use the Internet for pleasure and business.

7. SECURITY
 The main challenge involves security concerns despite the decrease in incidences of fraud from 2009 to 2010. During this period, the cost of counter attacking frauds increased; as a result, of the increase in volume and more lucrative sectors. The nature of online fraud has become more sophisticated overwhelming customers because of fear to shop and make transactions online. Poor digital marketing skills are the second challenge affecting ecommerce. In some businesses, ecommerce is still a new concept, where marketing team in online retail shops are working towards developing marketing approaches and effective ways of reaching consumers. Traditional business relationships began with a handshake and conversation. When a consumer is shopping online for a product trusting a company is a gamble. The Internet is full of brilliantly thought out schemes to scam consumers to get all they have. The majorities of consumers are aware of these schemes and do their best to avoid them.

Since consumers are aware of these schemes they are very careful when shopping online. Security measures from payment processors and Internet security verified web pages helps consumers build confidence when ordering online.

8. STRATEGIES

Poor marketing strategy have a negative impact on sales, customer acquisition, brand equity and retention. Poor integration technology has a negative impact on customer experiences. It becomes difficult for customers to shop and make payments over the Internet when retailers have not integrated a back end system seamlessly with frontend systems. Some online businesses lack a multichannel option of making payment leading to a negative impact on their businesses. An online merchant has to establish effective ways of promoting their products to make business effective, and enable the business to survive in a competitive and dynamic business environment. There are areas of operation which businesses need to focus to streamline their operation including enhanced conversion rate. Consumers use the Internet to make a comparison and choose products. Therefore, businesses are investing in digital marketing and data analytic tools to make their consumers loyal customers. Enhancing fraud control is another priority in online merchants because security is the main problem that needs to be addressed to develop trust on ecommerce among consumers. Online retailers need to identify areas of risk and establish effective measures to address these security hitches. Online merchants are focusing on developing diverse payment channels and optimizing their business model.. Many tools have been introduced to give consumers confidence insuring a safe checkout. One form of security is to secure pages with hypertext transfer protocol secure instead of the traditional http://. This protects transmission of sensitive information such as 9 passwords, credit card details, and personal information with the expectation that encryption guarantees privacy. There is only consumer confidence if the consumer understands the security features. 70% of males are aware of the secure protocol and 58% of women are aware.

9. CONSUMERS AS INFORMATION PROCESSORS

Typically consumers visit retail stores either to make purchase for a specific item and, or enjoy the shopping experience with the possibility perhaps of an impulse purchase. In doing so, they will either engage in directed or purposeful searches for goods or alternatively involve themselves in general browsing. Consumers still need to process the whole array of information that is available to them in order that they become aware of and make a final purchase decision. The consumer is viewed as the problem solver engaged in goal directed activities of searching for information and finally arriving at carefully considered judgmental evaluations. The prime motive for undertaking information searches prior to purchase is to make better consumer choices, for example cost savings. Further to this, consumer behaviour literature suggests that information search methods may be classified in terms of spatial, temporal and operational dimensions. Each of these dimensions is examined in turn.

10. OPERATIONAL DIMENSION

The operational dimension of the consumer search strategy refers to the variety of product information sources the consumer chooses to use as part of their investigation for goods and services. With regard to information searching and online shopping behaviours, the significance of brands is part of the information search. Consumers using the Internet focus on the use of brands for sources of information. Although it is the more recent adopters of the Internet who will typically rely on brand names as they search for products and services. The Internet can further be used to support the operational dimension of the information search, as in order to search for a brand name, typically an individual will use any number of search tools.

11. THE SPATIAL DIMENSION

With regards to the second dimension of the information search, spatial, the nucleus of the search may either be internal i.e. the individual examines memories of past consumption, or external, where the individual searches for information outside their personal experience as they would, for example, if using the Internet and other public sources of information. Typically, individuals will use a mixture of internal and external information sources and these will vary depending upon different consumers. Indeed, the Internet can facilitate both, that is using the search tools, support external searches, whilst the use of bookmarks facilitates experiential searches for information.

12. THE TEMPORAL DIMENSION

The final dimension, temporal, refers to the time between a consumer's first thinking about buying the product and the actual purchase itself. With regards to the Internet, it may be considered that Internet shoppers are convenience seekers looking to use the Internet as both a search tool and transactional medium in order to save time visiting high street stores. Alternatively, they may be recreational shoppers using the Internet to fully involve themselves in timely information seeking behavior such as that is what technology can offer. It is believed; consumer's prior knowledge, complexity or difficulty of the search process, level of interest in the product category and the nature of the information obtained affect this duration. It is difficult to establish how much search an individual actually undertakes, as they may have been involved in an ongoing hunt for some time. Impulse buying or unplanned purchases could well be culmination of a longer purchase decision process. Thus, the information search behaviour is more complicated and multi-faceted.

13. THE POTENTIAL FOR IMPULSE PURCHASE BEHAVIOUR USING THE INTERNET

Consumers can shop on line 24 hours per day, 365 days per year. Thus, the time-consuming parts of shopping at physical stores, driving, parking and coping with traffic are all eliminated. Such a factor is driving optimism in e-commerce, which rests on the hope that people will spend more online than they would in shops. The act of shopping, it is anticipated, will be made so easy that the barrier to purchasing and, in particular, to impulse buying will be lowered People who want particular information are used to filling out card, posing them and then waiting for the information to be returned to them via the mail. Such time delays kills impulse buying and cripples thoughtful information seeking. Technologies such as the Internet and the fax on demand services can get the right information into the hands of users while they are still interested and can use it to do business.Whilst the above indicators are positive, there are those who doubt the effectiveness of the Internet to stimulate impulse purchases. Certainly, a criticism of online shopping is complexity of some web sites. Hunt suggests that 'too many shoppers leave sites because they can not find the product they want and can not navigate the complex buying procedure' therefore indicating that impulse purchasing online would be unlikely.

14. CONSUMER VALUE

One way of achieving customer satisfaction is through understanding consumer value as it is, considered that perceived value is an important contributor to customer satisfaction. Perceived value may be defined as benefits customers received in relation to total costs, or as the overall assessment of what is received relative to what is given. However, Bowman and Ambrosini propose that 'customer perceptions of a value of a good are based on their beliefs about the good, their needs, unique experiences, wants, wishes and expectations.' Further to this, in line with the classical economists, they defined two types of value, use value and exchange value.

Each are defined below:

Use value: Specific qualities of the product perceived by customers in relation to their needs. Here subjective judgments are made pertaining to the individual that, in turn, translates into what the customer is prepared to buy.

Exchange value: refers specifically to price. 'The monetary amount realized at a single point in time when the exchange of the good takes place'. Holbrook (offers a model that considers that various concepts surrounding the term of use value, what he refers to as consumer value. His model offers a typology that identifies the key dimensions of this. Using these dimensions, he developed a matrix where each cell of the typology presented represents a distinct type of consumer value. He proposes that the model is flexible enough to be able to apply it to a variety of consumer experiences. To test this, the researcher has applied the model to online retail sites' offerings. The prime purpose being to assess how online retailers are currently creating value for consumers via their web sites. Each of the above types of consumer value is now considered:

Excellence

Excellence may be acquired through the quality of products and services received, which functions to bring excellence for the consumer's benefit. Desirability referring to the consumer's need for attachment to the offering and usefulness, referring to the traditional utility based definition of quality such as fit for purpose. With regard to the value derived in the form of excellence pertaining to online retail offering, examples include, the standard of service offered via home deliveries. Another example is the excellence of information regarding product attributes e.g. product information. Further to this, ease of accessing information or ease of making transactions, payment security and returns policies plus visual representations offering clarity of detail of products would also be termed as excellence in the context of Holbrook's typology. Efficiency as a value may be acquired through convenience, which involves the consumer actively doing something for their own sake which functions to bring efficiencies, for example, using time saving products or services. Cost efficiencies accrued through products and services are also seen as efficient. Web sites also offer a personal model whereby the user may build and select their clothes based on their own shape and lifestyle.

Status

It is suggested that status is derived from an individual actively manipulating their behaviour as an end in itself to achieve a favorable response from others. In terms of using a web site to engage in status seeking behaviour, chat room facilities can function to provide this.

Esteem

Esteem is defined as an outcome as a result of an individual reacting to a response to others appreciation of that individual. Sportswear retailers provide an account of athletes who performed in the Athens 2004 Olympics as the Nike Web site has done.

Ethics

Holbrook argues that purchasing products or services which are environmentally friendly or for ethical reasons is a form of intrinsic value and therefore such behaviour is valued for its own sake, what is referred to colloquially as 'virtue is its own regard'. Here value is accrued via the virtue one communicates to others by making such a purchase.

Spirituality

Holbrook defines spirituality as being a sense of communion one may feel within himself or herself and with humanity. In Brown's (1999) view purchasing activities are not typically

determined by such convictions and therefore this dimension of consumer value is not considered here.

Play

Enjoyment may be derived from individuals accessing web sites who offer puzzles, games and so forth. Pleasure for its own sake can also be derived from undertaking information searches. A number of web sites provide value to various enthusiasts in this way. An example is the UK fashion retailer; Top shop that sells personalized CDs from its web site whereby a visitor is able to select a 10 track CD from a choice of 80 music tracks after listening to 30-second samples.

15. CONCLUSION

This paper sought out to bring together aspects of consumer behaviour that the researcher considers is pertinent to a retailer striving to meet consumer needs in an online environment. In doing so, the paper focused upon the consumer information search process and consumer value. Both with a view to determining how online retailers firstly are facilitating the search process and secondly, offer consumer value via their web site. From this study, it is clear that the Internet offers utilities in the form of search tools such as search engines, browsers and intelligent agents, plus the use of bookmarks and good web site design to speed up the process of purchase decisions, all of which go to support the operational, spatial and temporal dimension of a consumer's information search.

The paper also established through examples, which online retailers are endeavouring to offer value to consumers. Using Holbrook's typology, evidence was provided that value is delivered in the form of excellence, efficiency, play, aesthetics, esteem, status, and ethics. In conclusion ecommerce has been

on a steady incline over the last 15 years. Security and tangibility issues prevent some consumers from shopping online. Even with security concerns consumers are still willing to shop online. Online businesses must change their business model to reinforce security measures and consumer trust into their brand. Traditional brick and mortar businesses might not be as cost effective as an online retail, but have more consumer trust overall. Until ecommerce can guarantee a 100% security traditional commerce will be winning the ball game. A few ways ecommerce can gain consumer trust is by providing information about security. Trust marks on a website can intergraded trust into a brand. A business must show positive social presents. And finally a privacy statement that informs consumers that they are protected. Although ecommerce is considered risky, consumers enjoy the convenience that comes with shopping online. Electronic commerce is not going take over commerce any time soon, but has potential if security risk can be minimized to zero. Whilst this paper has provided some insights into retailers motivating consumers to buy online, through an examination of consumer behaviour, it is by no means complete. More in-depth research is called for. Although there is a long tradition of empirical research in consumer information search behaviour, very little exists in relation to online behaviour. Understanding consumer search behaviour and what they value in an online environment, is crucial to retailer's meeting consumers needs. As Barron (2000) points out, the ultimate challenge is how to marry the online shopping experience with the offline reality of shoppers purchasing goods in high stores.

LITERATURE

1. Barron, K. (2000). Act Two, Scene One. *Forbes* (July 24): p176.
2. Bloch, M., Pigneur, Y., & Segev A. (1996). *On the road of Electronic Commerce: A Business Value Framework, Gaining Competitive Advantage and Some Research Issues*
3. Bowman, C., & Ambrosini. V (2000). Value Creation Versus Capture. *British Journal of*

Management 11(1): 1-15.

4. Brown, S. (1999). Devaluating Value: The Apophatic Ethic and the Spirit of Postmodern Consumption. *M.B Holbrook Consumer Value.* Routledge Ch.8

5. On-Click Shopping. (1999). *Computer Weekly.* (April 15): 42.

6. Dawson, J. (2000*).* Retailing at Century End: Some Challenges for Management and Research.*International Review of Retail Distribution and Consumer Research* v10(2): 119-148.

7. Hart, C., Doherty, N., & Ellis Chadwick, F. (2000). Retailer Adoption of the Internet – Implications for Retail Marketing. *European Journal of Marketing* 34(8).

8. Holbrook, M.B. (1999). *Consumer Value: A framework for Analysis and Research.* Routledge.

9. Hunt, J. (2000). The Lights Are on but No One's Home. *Revolution* (July 26): 30-32. Kalakota, R. & Whinston, A. (1996). *Frontiers of Electronic Commerce.* Addison Wesley

10. Li., H. Kuo., C. & Russell, M.G. (1999) The Impact of Perceived Channel Utilities, Shopping Orientations, and on the Consumer's Online Buying Behaviour. *Journal of Computer-Mediated Communication* 5(2).

11. Alrawi, K. W., & Sabry, K. A. (2009). E-commerce evolution: a Gulf region review.

12. Ba, S., Whinston, A. B., & Zhang, H. (2003). Building trust in online auction markets through an economic incentive mechanism. Decision Support Systems. doi:10.1016/S0167-9236(02)00074-X

13. Benbasat, I. Do I Trust You Online, and If So, Will I Buy? An Empirical Study of Two Trust-Building Strategies. Journal of Management Information Systems, 233-266.

14. Cooke, M. Conference notes – Social media and market research: we are becoming a listening economy and, while the future of market research is bright, it will be different. International Journal of Market Research, 550.

15. Demil, B., & Lecocq, X. (2010). Business model evolution: in search of dynamic consistency. Long Range Planning, 43(2), 227-246.

16. E-Commerce: Security And Applications. American Journal of Applied Sciences, 1868-1871.

17. Garima Malik., & Abhinav Guptha. (2013). An Empirical Study on Behavioral Intent of Consumers in Online Shopping. Business Perspectives and Research.

18. Hahn, E. D., Doh, J., & Bunyaratavej, K. (2009). The evolution of risk in information systems offshoring: the impact of home country risk, firm learning, and competitive dynamics. Management Information Systems Quarterly, 33(3), 12.

19. In Gorham, J. (2000). Mass media 00/01. Guilford, CT: Bushkin/McGraw-Hill.

20. ITU: Committed to connecting the world. (n.d.). Retrieved from http://www.itu.int/

21. International Journal of Business Information Systems, 4(5), 509-526.

22. Kumar, Vineet. (2014). Making "Freemium" Work. Business Source Elite, p27-29.

23. Mangiaracina, R., & Alessandro. (2009). Payment Systems in the B2c eCommerce: Are They a Barrier for the Online Customer? Journal of Internet Banking & Commerce, 14(3).

24. Mobile apps overtake PC Web usage in U.S.. CNNMoney. Retrieved July 24, 2014, from http://money.cnn.com/2014/02/28/technology/mobile/mobile-apps-internet/

25. Netcraft | Internet Research, Anti-Phishing and PCI Security Services. (n.d.). Retrieved from http://netcraft.com13

26. PR Newswire. (2014). Global Online Payment Methods: First Half 2014.

27. Peslak, A., Shannon, L., & Ceccucci, W. (2011). AN EMPIRICAL STUDY OF CELL

28. PHONE AND SMARTPHONE USAGE. *Issues in Information Systems, Volume XII*(1), Pp. 407-417.

29. SIDI., JABAR., MUSTAPHA., SANI., ISHAK., & SUPIAN. (2013). Measuring computer security awareness on internet banking and shopping for internet users. Journal of Theoretical and Applied Information Technology, 53(2).

30. Statista - The Statistics Portal for Market Data, Market Research and Market Studies.

31. (n.d.). Retrieved from http://www.statista.com/Cavalcante, S., Kesting, P., (2011). Business model dynamics and innovation :(re) establishing the missing linkages. Management Decision, 49(8), 1327-1342.

32. Social Networking Reaches Nearly One in Four Around the World - eMarketer (Social Networking Reaches Nearly One in Four Around the World - eMarketer) http://www.emarketer.com/Article/Social-Networking-Reaches-Nearly-One-Four-Around-World/1009976

33. Social Networking Fact Sheet (Pew Research Centers Internet American Life Project RSS) http://www.pewinternet.org/fact-sheets/social-networking-fact-sheet/

34. Theory - Definition and More from the Free Merriam-Webster Dictionary. (n.d.). In Dictionary and Thesaurus - Merriam-Webster Online. Retrieved from http://www.merriam-webster.com/dictionary/theory

35. Thaw, Y. Y., Mahmood, A. K., & Dominic, D. D. (2009). A Study on the Factors That Influence the Consumers? Trust on E-commerce Adoption. International Journal of Computer Science and Information Security, 4(1).

36. United States Census Bureau. (n.d.). Census.gov. Retrieved July 24, 2014, from http://www.census.gov

37. Winter, S. J. (0). The rise of cyberinfrastructure and grand challenges for eCommerce.Information Systems and E-business Management. doi:10.1007/s10257-011-0165-5

38. Morris, L. Business Model Innovation The Strategy Of Business Breakthroughs. International Journal of Innovation Science, 191-204.

39. Ondrus, J., Lyytinen, K., & Pigneur, Y. (2009, January). Why mobile payments fail?

40. Towards a dynamic and multi-perspective explanation. In System Sciences, 2009. HICSS'09. 42nd Hawaii International Conference on (pp. 1-10). IEEE.

EFFICIENT AGRICULTURAL LAND MANAGEMENT IN REPUBLIC OF CROATIA: DREAM OR REALITY?

Blazenka Micevic
Agricultural Land Agency, Croatia
blazenka.micevic@mps.hr

ABSTRACT

Importance of agricultural land management, in a meaning of land policy in its narrower and broader sense, in Republic of Croatia has been neglected through years. In the narrow sense, positive and effective land policy is a base for competitiveness and profitability in agricultural production because of its mission of selling and leasing state-owned agricultural land, enhancing agricultural land management and preventing land contamination. In a broad sense, land policy measures are the part of the overall sustainable development of the state as an important part of environment protection policy, spatial planning and rural development. According to the law, agricultural land is an asset of the interest to the Republic of Croatia and enjoys the latter's particular protection. Therefore, it is of extreme importance to know the position, shape and usage of each cadastral parcels of agricultural land. Adoption and enforcement of land policy measures is impossible without knowledge about this facts and usage of information system as a basis for effective and transparent land policy. Agricultural land information system is a tool for the adoption of legal, administrative and economic decisions, planning and development. This paper presents the management of agricultural land in the Republic of Croatia in terms of surface and finance, inventory of state owned agricultural land data and application of state owned agricultural land information system.
Keywords: Agricultural Land Agency, agricultural land management, cadastral parcel, information system, state owned agricultural land

1. INTRODUCTION

Agriculture is a strategic activity whose economic, environmental and social role contributes sustainable development of the Republic of Croatia. The overall activity of policy makers in agriculture is included in agricultural policy through measures for achieving its defined goals. Agricultural land management is regulated through land policy measures and it is the most important measure of agricultural policy. According to Grahovac, 2007 land policy can be defined as part of agrarian policy that refers on agricultural land. Policy primary encompasses: ownership of agricultural land, size of the property, possessor structure, land restructuring and others. Legal framework of land policy comprises Law of agricultural land[1] (Official gazette 39/13, 48/15) (hereinafter referred to as the Act) which among other, regulates the maintenance and protection of agricultural land, usage of agricultural land, land use change and disposal of state-owned agricultural land.

Although on the normative level agricultural land is an asset of the interest to the Republic of Croatia and enjoys the latter's particular protection, situation on the field is far from being good (Kontrec, 2014). Until 2014 accurate status of agricultural land data was unknown, both state-owned and private, and there is lack of procedures for managing this resource. At the same time, certain agricultural policies rely on vaguely defined land policy and are impracticable. Due to the neglect of own assets state had never made data inventory, which is necessary to obtain prompt information on agricultural land which will be a basis for making agricultural and land policy. Based on the implemented data inventory the state knows how many and where

---

[1] First Law of agricultural land in independent Republic of Croatia entered into force on 24 July 1991

is the state owned agricultural land, how many agricultural land is in the Land Fund, and for which needs is to be used. Basis on this information land measurement and consolidation can be planned, decisions about the long-term lease or privatization can be made, as well as the planning of the agricultural production in a particular area.

A prerequisite for the realization of agricultural policy measures is the development of an information system to support its implementation.

2. AGRICULTURAL LAND MANAGEMENT

For many years, a special issue and problem in Croatia is land policy which includes disposal of state owned agricultural land, land protection, land markets, consolidation, denationalization, records and others.

First Agricultural Land Act (hereinafter the Act) in the independent Republic of Croatia entered into force 24.07.1991.g. (Republika Hrvatska, 1991). This Act for the first time regulates the ownership rights on the Croatian agricultural land in the former socially-owned property on Croatian territory in a way that the holder of property rights becomes the Republic of Croatia. At the time of writing this paper, currently valid is the Agricultural Land Act which came into force on 01.05.2015. So, for a period of 24 years, the Agricultural Land Act has been amended 13 times. Amendments to the Act in 24 years were related to a large extent on disposal of state-owned agricultural land, the level of decision-making in the agricultural land management and the reassignment of fees from disposal state-owned agricultural land (example: income from the sale or rental income). In all the Act amendments there are clearly visible:

- political decisions: the social measures in the procedures of disposal, reallocation of resources, the level of decision-making on the management, priority groups (veterans or family farms), priority concessions and the like,
- professional decisions: the forms of disposal of state-owned agricultural land (rental or sale) and their duration.

2.1 Official registers of agricultural land

In Republic of Croatia until 2014 the evidence of state owned agricultural land had never been established. Seven (7) institutions (Ministry of Agriculture, Bureau of Statistics, State Geodetic Administration, Paying Agency, Agricultural Land Agency, Croatian Mine Action Centre, Croatian Forests) were gathering data of agricultural land (state or private) or use of the land on different grounds. Collected data are never been compared nor unified collected in one place. A centralized database on agricultural land based on these data had never been established. The overall efficiency of such system of shared agricultural land management is given in Table 1, from which it is clear that it was not possible to obtain unambiguous information on agricultural land data and area.

Table following on the next page

Table 1: Official data of the area of agricultural land in Croatia
(Source:author)

Institution	Year	AREA OF AGRICULTURAL LAND	
		STATE OWNED AGRICULTURAL LAND	USED AGRICULTURAL LAND
		(ha)	(ha)
Bureau of Statistics	1960.		2.353.600,00
Ministry of Agriculture	2001.-2013.	553.036,80	
Bureau of Statistics	2003.		860.195,17
Bureau of Statistics	2005.	703.461,00	890.214,00
Ministry of Agriculture	2008.		1.087.536,00
Bureau of Statistics	2008.		1.289.091,00
Bureau of Statistics	2011.		1.326.083,00
Bureau of Statistics	2011.		918.435,64
Paying Agency	2013.		1.017.793,48
Paying Agency	2014		1.022.083,93

2.2. Disposal of privat owened agricultural land

The issue of private agricultural land is related to the total area of private agricultural land and arable land in private ownership, which is not cultivated in the preceding vegetative period (annual or perennial coarse state). The total area of private agricultural land is still unknown in Croatia. It is only possible from the LPIS data (from Paying Agency) and the Central Bureau of Statistics data to obtain information on the used agricultural area which is privately owned. Regarding to agricultural land that has not been used legislator tryed from 1993.-2008.g. to find the appropriate legal solution to solve this problem. The purpose of these legal provisions were to put in economic function the land that has not yet been used. This would be achieved by providing the use or lease of a natural or legal person for a fee of market value or lease to the land owner, the most for a period of three years or in the case ofovergrown vegetation for a period of 10 years. Decision of the Croatian Constitutional Court on 30 March 2011. the provisions that were related to the possibility to dispose of cultivable but uncultivated agricultural land in private ownership, the provisions pertaining to the payment of fees at the conversion of agricultural land into construction land, as well as an entire chapter of the Act which lays down rules disposing private agricultural land were repealed. The Constitutional Court found that these provisions has been a violation of property rights within the meaning of Art. 48 of the Constitution. In this situation, the legislator opted for the adoption of the new Act in 2013.

2.3. Disposal of state owned agricultural land

The most important period of disposal of state-owned agricultural land were from 2001.-2013. and of 2013.- 2015.

2.3.1. Period from 2001.-2013.

Disposal of state owned agricultural land from 2001 until 10.04.2013. was conducted under the State owned agricultural Program (hereinafter: Program) whose creation was under the jurisdiction of local municipality. The Ministry of Agriculture gave approval to those programs and also were collecting data about those Programs.

According to the collected data the following facts are revealed:

1. Croatia has 553,036.80 hectares of state owned agricultural land according to the areas contained in the Programs.
2. From a total of 547 municipality 398 of them submitted Program for approval to the Ministry (72.76%). Consent was given for the 384 municipality (96%) and 14 municipality (4%) did not receive the approval.
3. 74 municipality did not submit Programs for approval (14%) while 75 municipality (14%) stated that there is no state-owned agricultural land on their municipality,
4. Contracts are concluded for the 268,073.78 ha (48%) while 284,963.01 hectares of state agricultural land (52%) is still not in use.

Considering that 74 municipalities have not been submitted Programs to the approval there are no exact data showing how many state-owned agricultural land data Croatia has. Data on contracts concluded also are not completed because there was no legal basis nor the political will to force the local governments to provide such information to the Ministry. Disposal of state-owned agricultural land in this way has never resulted with accurate data showing how many state-owned agricultural land data Croatia has, where it is located, and how many state-owned agricultural land in the Republic of Croatia is still not used. Income from disposal and disposal area of state owned agricultural land from 2006.-2013. were shown in Table 2. Overall gross collection of disposal in eight years amounted to 1,201,347,652.91 kn.

Table 2: Income from disposal and disposal area of state owned agricultural land from 2006.-2013. (source: Agricultural Land Agency)

YEAR	OVERALL INCOME FROM DISPOSAL	OVERALL DISPOSAL AREA
	(kn)	(ha)
2006.	137.616.305,35	49.143,98
2007.	158.778.194,12	29.715,35
2008.	165.074.027,83	23.476,27
2009.	138.903.740,21	17.453,75
2010.	97.000.975,99	19.982,86
2011.	175.390.183,20	56.004,44
2012.	147.467.699,01	21.799,00
2013.	181.116.527,20	58.551,41
TOTAL	**1.201.347.652,91**	**276.127,06**

2.3.2. Period from 2013.-2015.g.

From 2013. disposal of state-owned agricultural land is under the jurisdiction of theAgency. This is stipulated by the Agricultural Land Act (Republika Hrvatska, 2013.). There are six forms of disposal of state-owned agricultural land: lease and rental of ponds, lease of common pastures, temporary disposal, replacement, direct selling agreement,lease without a public call. Income from disposal and disposal area of state owned agricultural land from 2013.-2015. were shown in Table 3.

Table following on the next page

Table 3.: Income from disposal and disposal area of state owned agricultural land from 2013.-2015. (source: Agricultural Land Agency)

GODINA	OVERALL DISPOSAL AREA	OVERALL INCOME FROM DISPOSAL
	(ha)	(kn)
2013.	58.551,41	181.116.527,20
2014.	18.597,97	205.960.697,07
2015.	37.375,21	245.800.603,02
TOTAL	114.524,59	632.877.827,29

3. ESTABLISHMENT OF AN EFFECTIVE AGRICULTURAL LAND MANAGEMENT INFORMATION SYSTEM

The Republic of Croatia has never systematically made data inventory regarding state-owned agricultural land. The data from the previous period was unplanned and unsystematicly collected which resulted with the inability of proper agricultural land management. Prerequisite for systematic inventorying and data processing is the existence of an information system which is based on a plot, i.e. cadastral parcel as the main spatial unit. It is based on a unique spatial reference system, which allows integration of data within the system with other spatially related data. It consists of:

- spatial database of a specific area and
- procedures and techniques for collecting, updating, processing and dana distribution

To ensure the cadastral-based and spatial reference system it is necessary to gather official cadastre and geodetic land survey data in jurisdiction of the State Geodetic Administration. Using this approach will avoid unnecessary new collection of new spatial data that is in jurisdiction of other institutions and will encourage the exchange of information between state and public institutions with conducting quality data update procedures in order to improve their accuracy. The efficiency of such a system depends on the up-to-date data, accuracy, completeness, availability and user-oriented design.

Information system should be an indispensable system of information primarily on agricultural land. It contains cadastral parcels data, maintenance, protection, change of use and disposal of land. In detail, system contains information about type of disposal in the past and today, about characteristics of the soil, land use, climate, relief, soil suitability for various purposes and the necessary measures for land restructuring, as well as guidelines and recommendations for the further development of individual branches of agricultural production. Data are alphanumeric, graphic and spatial and gathered from relevant institutions. They are an important and expensive resource and therefore must be effectively used. This system is a modern basis for the planning of agricultural development because by using above mentioned information system final users will be able to reach necessary reliable land information in real time. By using information system the state will be able to provide quality information for agricultural producers. The system will provide sufficient information as:

- location of unused agricultural state-owned land ready for disposal, their cadastral and land registry data, size and the land use,
- answers to specific questions about location of state-owned land and land use,
- advice on pedological characteristics of the soil,
- necessary agro-technical operations in terms of the intensive use of agricultural land,
- optimal type of use of agricultural land due to the branch of agricultural production,
- recommendations about types of crops,
- recommendations for the land consolidation,

Providing high quality and timely information to agricultural producers will increase economic viability of agricultural production, i.e. by reducing input costs and increasing yields. Consequently, such a system will ensure a credible public register of state-owned land. As long as an increasing number of users inquire cadastral/spatial information, the real-time updating is frequent and rapid and the need to ensure the quality data should not be underestimated.

3.1 Agricultural Land Agency Information System

In 2014 the Agency has established an Agricultural Land Agency Information System (ALAIS) based on the above recommendations.

It resulted for the first with accurate date on state owned agricultural land and what its spatial distribution. By establishment of an ALAIS for the first time it is assessed that there are 738.125,52 ha on 601.893 cadastral plots of state–owned agricultural land in Croatia. According to these data, the least state-owned agricultural land is in Krapina-Zagorje County (219,04 ha) while the most is in Lika-Senj County (113.973,48 ha). The analysis of these data revealed that from 738.125,52 ha of state-owned agricultural land pastures are in area of 399.639,53 ha and gardens are in an area of 59,26 ha. Data are shown in Table 4.

Table 4: State-owned agricultural land type of use (source: Agricultural Land Agency)

Type of use	Total size
	(ha)
Unclassified	14,85
Garden	59,26
Swamp	786,31
Olive groves	1.033,49
Orchard	5.241,90
Vineyard	6.525,95
Pond	7.594,47
Reed	8.388,17
Lawn	46.879,96
Acres	261.961,63
Pasturage	399.639,53
TOTAL	**738.125,52**

Possibilities of ALAIS:
1. According to ALAIS it is possible to calculate an average area of cadastral parcels in counties as shown in Table 5. Such a calculation will be used as a basis for preparing a consolidation plan for state-owned agricultural land and preparation of selling the cadastral parcels of state agricultural land that can't be consolidated. This report can be used as a basis for the preparation of land consolidation. The analysis of data revealed that the average area of state agricultural land is 1,37 ha.
2. According to ALAIS it is possible to calculate amount of cadastral parcels registered in the cadastre as General Public assets (hereinafter referred to as the GPA) and the Social Property (hereinafter referred to as the SP) for which it is necessary to conduct registration of ownership of the Republic of Croatia in Land registry, as shown in table 6. Such a calculation will be used as a basis for the preparation of the plan of registration Croatian property rights as legal activity of the Agency (article 59 of the Act) and for arrangement of legal status of state-owned agricultural land. The analysis of data

revealed that the most cadastral parcels remained registered in the cadastar on social property in Istria County 33.377 cadastral parcels on 6.722,73 ha, and in the Split-Dalmatia County 7.490 cadastral parcels on 26.456,18 ha.

3. According to ALAIS it is possible to calculate amount of cadastral parcels owned by the state smaller or equal to the area of 1 ha. This calculation would be used as a basis for the preparation of the disposition plan of cadastral parcels of state agricultural land in accordance with the legal activity of the Agency (article 50 of the Act). Before sale of the cadastral parcels it is necessary to analyze amount of cadastral parcels located within manufacturing-engineering units that constitute a "panel" in the field as well as an analysis of the amount of cadastral parcels that are already in some form of disposal. The analysis of data revealed that most of cadastral parcels area less or equal to 1 ha are in the County of Istria 86.843 cadastral parcels on 17.036,96 ha and in Lika 70.519 cadastral parcels on 15.250,51 ha.

4. CONSLUSION

By conducting the inventarisation of data, for the use of development of an information system, complete inventory of state agricultural land was made, which resulted with the GIS database of state agricultural land. Such data inventory is necessary in order to obtain prompt information that will be the basis for the adoption of agricultural and land policy. Based on data inventory, state is informed about amount of the state agricultural land available in its Land Fund, and in which purpose it should be used. State can plan the land restructuring measures, consolidation, make decisions about the long-term lease or privatization, as well as plan the type of production in a particular area.

In the end it can be concluded that effective management of state-owned agricultural land is not a dream but reality in the Republic of Croatia. Reality where more should be done. Now we established an effective information system for the implementation of land policy and it is based on scientific facts and expert recognized methodologies. This confirms the already proven fact that prerequisite to all structural measures in the rural area and agriculture is precise and defined land policy regulating the use, ownership and land market (Franić, 2006). Such a policy needs stable land management as a support to its implementation. Although the collection and maintenance of land data is expensive process, well managed land system derives benefit that significantly exceeds operational cost of the system. According to Dale and McLaughlin, 2000 main issue is not whether the country can afford such a system, but can it afford not to have it.

LITERATURE:

1. Dale, P., McLaughlin, J. D. (2000): Land Administration. Oxford University Press, Oxford
2. Franić, R (2006) : Politika ruralnog razvitka – nova prilika za Hrvatsku. Pregledni znanstveni članak, Agronomski glasnik 3/2006
3. Grahovac, P. (2007): Poljoprivredno zemljište i zemljišna politika. Znanstveni skup: Poljoprivreda i privredni razvoj povodom 80. godišnjice rođenja Akademika Vladimira Stipetića. Zbornik radova, Petar Grahovac urednik. Ekonomski fakultet Zagreb, 2007. vol. 1, poglavlje 3, pp 33-53.
4. Kontrec, D. (2014): Pravni status i raspolaganje poljoprivrednim zemljištem u Republici Hrvatskoj – povijesni prikaz, de lege lata, de lege ferenda. Radovi Zavoda za znanstveni rad HAZU Varaždin; br. 25, 2014., str. 69-95.
5. Republika Hrvatska (1991): Zakon o poljoprivrednom zemljištu (NN 34/91).
6. Republika Hrvatska (2013): Zakon o poljoprivrednom zemljištu (NN 39/13).

FINANCIAL STRUCTURE OF STOCK COMPANIES IN MONTENEGRO IN THE FUNCTION OF PROFITABILITY

Ana Lalevic Filipovic
University of Montenegro, Faculty of Economics in Podgorica, Associate Professor
Jovana Tomasevica 37, 81 000 Podgorica
Phone: +382 78 105 962
savana@t-com.me

Selma Demirovic
University of Montenegro, Faculty of Economics in Podgorica, Teaching Assistant
Jovana Tomasevica 37, 81 000 Podgorica
Phone: +382 78 113 315
selma987@t-com.me

ABSTRACT
The financial structure of the company refers to the structure of financing of business assets and concerns the relationship between their own and borrowed sources of financing. Financial strategy of the company, as a part of business strategy, has one of the main financial objectives: to achieve desired financial result, which would guarantee the preservation of their own capital and the realization of the principle of continuity. One of the company's financial goals is to provide optimal financial structure that has the purpose of maximizing business performance. The aim of this paper is to determine the degree of correlation between financial structure (measured by indicators of indebtedness and interest coverage) and profitability (measured by profit rates and rates of return on equity). This paper seeks to answer the question of cause and effect in the context of financial structure and profitability of the company: whether a certain financial structure (higher or lower indebtedness) causes more or less profitability, or there is a reverse effect. Empirical research is conducted in the case of joint stock companies in Montenegro, which according to the Law on Accounting and Auditing of Montenegro have the obligation to draw up quarterly financial statements. It should also be noted that the legal form of companies is one of the factors of the financial structure, and consequently, this research can be the basis for further analysis in the case of other legal forms of enterprise.
Keywords: *financial structure, profitability, correlation, joint stock companies, Montenegro.*

1. INTRODUCTION

Economic subjects, as legal and economic entities perform a set of labour, tangible, intangible and financial resources, which they used for the purpose of creating added value. In order to adequately manage resources, companies creates a business policy in which the financial strategy of the company has a dominant role. The general objectives of the company resulting from the strategies are maximization of profit in the long term and permanent realization of liquidity, as the company's ability to pay obligations by its own assets. To achieve these objectives, the financial function of the company must abide by certain principles. One of the principles is the financial stability of the company from which also arises the financing method of obtained resources.

Resources of the company can be financed from its own sources and from other sources. The most common is to make a certain combination of own and external sources of funding. Financial structure is visible from the balance sheet liability of the company, where the relationship between external and own sources of the company is called financial structure, while it is often identified with the term structure of capital, which would be a ratio of own

capital and long-term debts. There are numerous theories about the possibility of forming an optimal capital structure that should maximize the profit of the company in the long term, but also ensures its permanent liquidity. Previous studies did not lead to a general conclusion on the optimal ratio of own capital and debt, but they showed that financial structure in some cases has a direct impact on achieving profitability of the company, while in others no.

The researchers analyze the ratio of debt and trying to answer the question whether the optimum ratio exists or not. In this regard, usually, the optimal ratio is one that should minimize the average cost of capital, and therefore maximizes the value of the company and its profitability. Theory and empirical researches have come to different results in terms of this dependence. This paper assesses the link between financial structure and profitability of joint stock companies in Montenegro, in order to obtain an answer to the question: whether the debt affects profitability, and if affects whether it is a positive or a negative correlation.

2. LITERATURE REVIEW

The ratio of debt and own sources in the total resources of the company is always hot topic for more than fifty years, since this relationship was explored by the authors Modigliani and Miller (1958). Basically, there are three essential theories which highlight the relation between debt and profitability, namely: signaling theory, the agency costs theory and tax theory (Kebewar, 2012). According to signaling theory, the debt, in the presence of asymmetric information, should be correlated positively to profitability of the company. According to the agency costs theory, there are two contradictory effects of debt on profitability of the companies: firstly it is positive in the case of agency costs of equity between shareholders and managers, secondly it's effect is negative, resulting from the agency costs of debt between shareholders and lenders. Finally, the tax theory shows its complexity in the sense that the ratio of debt and profitability depends on the tax treatment of interest and income (interest and income tax).

An ultimate goal of a company is the maximization of value of that company (Miller and Modigliani, 1958, 1963, Miller 1977). In their study in 1958, Miller and Modiglani created their irrelevance theory, based on which they consider that the capital structure has no influence on the value of the company. However, in their research in 1966, they came to the conclusion that in the presence of income tax and cost of capital, the market value of the company is positively correlated with long-term sources of funding (long-term debt).

Myers (1984), Myers and Majluf (1984) and Shyam-Sunder and Myers (1999) claim that companies prefer first to use internal sources of funding, then borrowing and, at the end, financing through the issue of shares. Preferences are incurred as a result of asymmetric information and agency problems. However, profitable companies are more likely to choose to create profit based on external sources of funding, or on the basis of newly issued shares. This indicates a negative relation between leverage and profitability of companies. Jensen and Meckling (1976) have also supported this relationship by their research, while Kunt and Maksimovic (2001) showed once again that the company is more profitable as its ratio of debt is lower (lower leverage). Authors Kester (1986), Harris and Raviv (1991), Rajan and Zingales (1995), Hung Albert and Addie (2002) suggest that companies should choose internal sources of funding, rather than bank loans or broadcasting of debt securities.

On the other hand, Miller and Modigliani (1977) in their research came to the conclusion that there is a positive correlation between leverage and the value of the company. Ross' model (1977) has also suggested that the value of the company will grow with the increase in leverage. According to Ehtrhard and Brigham (2003) the value of a company that respects the principle of continuity of operations is calculated as the present value of all future expected inflows of the company, which is discounted by using the average cost of capital (WACC). Therefore, the WACC has a direct impact on the value of the company (Johannes and Danraj, 2007). The

capital structure has to find the relation between capital and debt that would create the lowest possible average cost of capital and thereby maximize the value of the company (Messbacher, 2004). Some authors have not found a connection between debt and profitability of companies. Long and Maliz (1986), as well as Fama and French (1998) concluded that there is no link between financial structure and profitability of companies. They even showed that the companies with the lowest rates of indebtedness also prefer the model of financing through the issue of shares. Brealey and Myers (2003) concluded that the relation between own and external sources of funding is solely a marketing problem. Empirical researches in recent years still indicate the existence of both negative as well as positive impact of debt on the profitability of companies. The negative impact was confirmed by Majumdar and Chhibber research (1999), Eriotis (2002), Goddard (2005), Rao (2007), Zeitun and Tian (2009). On the other hand, Baum (2006), Berger and Bonnaccorsi (2006) and Margaritis and Psillaki (2007) have shown a positive impact. Berger and Bonaccrossi (2006), Margaritis and Psillaki, as well as Kebewear (2012) have shown that the effect is not linear. Finally, Baum (2007) in the example of american industrial companies showed that there is no impact between indebtedness and profitability.

3. METHODOLOGY
3.1. Research objectives and hypothesis
The aim of this paper is to determine the relation between indebtedness (measured by the ratio of foreign sources of financing and total sources of financing) and profitability (measured by the rate of return on assets (ROA) and the rate of return on equity (ROE)) of joint stock companies in Montenegro which are listed on the stock market, and do not perform financial activity.
The paper set two hypotheses:

H1: Indebtedness has a negative impact on the rate of return on assets of joint stock companies in Montenegro.

H2: The indebtedness has a negative impact on the rate of return on equity of joint stock companies in Montenegro.

3.2. Population, sampling design and research period
In order to establish a link between debt and profitability, most of empirical research was conducted on companies listed on the stock exchange. Due to the order of magnitudes, it should be emphasized that in Montenegro, all joint stock companies are listed on the Montenegro Stock Exchange (about 360), while only 21 companies are listed in the so-called A and B list of the Montenegro Stock Exchange, 7 in the A list and 14 in the B list. The conditions for the classification of companies in the A and B list are that the issuer is registered at least three years ago, or one year ago; that he has a share capital of at least 2 million euros; perform share issue of at least 100,000, or 20,000 euros; respectively. It is essential for A list that the company has not made a loss in the previous year. From a total of 21 companies, 7 of them performs financial activities, thus due to the nature of the activities they were excluded from further analysis. Of the remaining 14 companies in the A and B list of the Montenegro Stock Exchange, for the five of them it was possible to obtain quarterly data for variables that were analyzed. The sample consists of 35.71% of the population (if the population viewed companies in the A and B list of the Montenegro Stock Exchange which do not perform out financial activities).

The period of conducted analysis is from 2010 to 2015, with reference to the third quarter of 2015, given that these are the last available financial statements. As joint stock companies, in accordance with the Law on Accounting and Auditing of Montenegro and the Law on Securities, have the obligation to draw up quarterly financial statements, for the five selected companies financial statements were available for 23 quarters.

3.3. Data description

In order to quantify the relationship between debt and profitability, it was necessary to collect data on the basis of financial statements. The authors are, for 23 financial statements in accordance with the company, collected data on the debt, putting the ratio of total liabilities to total sources of funding and profitability, measured by the ratio of business net income and total assets (ROA), respectively, measured by the ratio of net profit and own equity (ROE). In the table below descriptive properties of series related to the variables are shown:

Table 1: Descriptive measueres of data

Variable	DEBT	ROA	ROE
Min.	0.07385	-0.083034	-0.213222
1st Qu.	0.016683	-0.008387	-0.018614
Median	0.21497	0.004941	0.004516
Mean	0.23082	0.003648	-0.004525
3rd Qu.	0.28323	0.017569	0.015756
Max.	0.57657	0.068453	0.070599

Source: R statistical program

Data analysis in the table below shows that all series are stationary, which means that series have a movement that is taking place according to a set pattern in terms of immutability of its properties.

Table 2: Stationarity of time series by Maddala-Wu Unit-Root Test

Variable	DEBT	ROA	ROE
chisq	8.3481	35.8654	34.6402
df	2	2	2
p-value	0.01539	-1.629e-08	3.006e-08

Source: R statistical program

The stationarity check was performed by Maddala Wu-Unit-Root Test, and all three variables are stationary ($p < 0.05$).

3.4. Research variables and models

For testing defined hypothesis, it is necessary to set up an independent and dependent variables of the model. According to the primary research goal, profitability of the company, measured by ROA and ROE ratios, is set as the dependent variable of debt. For modeling process, a simple linear regression model of the form is used :

$$ROA_{i,t} = \beta o + \beta_1 DEBT_{i,t} + \varepsilon_{it, \text{ or}}$$
$$ROE_{i,t} = \beta o + \beta_1 DEBT_{i,t} + \varepsilon_{it}$$

where "i" refers to the analyzed company, and "t" represents the moment in time. ROA and ROE are dependent variables, while DEBT is the independent variable of debt.

In further analysis, the Durbin-Wu-Hausman test pointed to the consistency of both models, thus it is advisable to use a random effects model. The null hypothesis of this test can not be rejected (p-value = 0.5266, that is far greater than 0.05), which claims that both models (fixed effects and random effects) are consistent.

4. RESULTS

4.1. Correlation between the variables

The first part of the analysis of the collected data series refers to determining the correlation between the given variables. The correlation is shown by Perason correlation matrix, which is located within the Table 3.

Table 3: Pearson correlation matrix

Variable	DEBT	ROA	ROE
DEBT	1	-0,413007007	0,892946378
ROA	-0,413007007	1	-0,549885832
ROE	-0,549885832	0,892946378	1

Source: *R statistical program*

Table 3 shows a high positive correlation between ROA and ROE (0.89), and a negative correlation between indebtedness and ROA (-0.41), or indebtedness and ROE (-0.54). Since the ROA and ROE indicators are related to the assessment of profitability, and considering that their degree of correlation is positive and high, it raises the question whether the defined two models could be reduced to the impact of debt to only one of the given dependent variables. The mere correlation of dependent variables with the independent variable shows the negative impact of debt on the company's profitability.

4.2. Regression analysis

After performed regression analysis of the relationship between DEBT and ROA, the obtained results are shown in the following table:

Table 4: Coefficents for regresion model of DEBT and ROA

Coefficents	Estimate	Std. Error	t-value	Pr (|t|)
(Intercept)	0.0221080	0.0085351	2.5902	0.010854
DEBT	-0.0799760	0.0304732	-2.6245	0.009878

Source: *R statistical program*

The parameter with the independent variable is statistically significant, while the residual tests showed the fulfillment of all prerequisites of the model, so the model can be shown as follows:

$$ROA_{i,t} = 0,0221080 - 0,0799760 \text{ DEBT}$$

If the debt increases by 1%, profitability measured by ROA indicator would be reduced by 7.99%. Given that debt and profitability are measured by percentage terms, this would mean that the debt that has been, for example, 20% after an increase of 1% is 20.2%, and the profitability which was 5%, after the reduction of 7.99% is 4.6005%.

Because of that high positive correlation between the ROA and ROE the similar results are also expected in regression model of depending ROE on DEBT. The results are shown in the following table:

Table 5: Coefficients for regression model of DEBT and ROE

Coefficents	Estimate	Std. Error	t-value	Pr (|t|)
(Intercept)	0.042699	0.012758	3.3467	0.001111
DEBT	-0.204590	0.045175	-4.5289	1.478e-05

Source: *R statistical program*

The parameter with the independent variable is statistically significant, while the residual tests showed the fulfillment of all prerequisites of the model, so the model can be shown as follows:

$$ROE_{i,t} = 0,042699 - 0,204590 \text{ DEBT}$$

If the debt increases by 1%, profitability measured by ROE indicator would be reduced by 20.46%. Given that debt and profitability are measured by percentage terms, this would mean that the debt that has been, for example, 20% after an increase of 1% is 20.2%, and the profitability which was 5%, after the reduction of 20.46% is 3.977%.

5. CONCLUSIONS AND RECCOMENDATIONS

Based on the performed analysis of the relationship of debt and profitability measured by the rate of return on assets (ROA) and the rate of return on equity (ROE), it can be concluded that the models that quantify this relationship showed consistency, and as such can be used to reach

a conclusion about the existence of link between these variables in the case of joint stock companies in Montenegro, which are listed in the A and B list of the Montenegro Stock Exchange. The research has shown that there is a negative impact of debt (leverage) on the profitability of joint stock companies measured by ROA and ROE ratios, by which the hypotheses are proven. The increase in debt is more reflected on the decrease in return on equity, which is a confirmation of the theoretical point of view. Due to the increase in financing costs, the net result, as return on equity is significantly reduced.

According to the existence of three groups of the research results on the relationships of indebtedness and profitability (positive impact, negative and the lack of impact), the impact in the case of joint stock companies in Montenegro can be classified in the group of negative impacts. It should be concluded that there were numerous reasons for contradictions of the results of empirical studies, which are primarily reflected in a different analysis samples (different countries, industries, the sample size, the size of companies, periods of analysis, etc). Also, especially for measuring profitability, different instruments, such as ROA, ROE, ROI, Tobin's Q, the operating profit, EBIT are used. The final reason is also reflected in different methodologies for determining this relationship.

The authors of this paper also point out the shortcomings of the conducted research, which in the coming period could be reduced due to the increase of the sample, inclusion of other legal forms of companies, introduction of new variables to create multiple model, as well as increase of the time horizon of the analysis.

LITERATURE:

1. Baum, C.F., Schafer D., Talavera, O. (2006). The effects of short-term liabilities on profitability: a comparison of German and US firms, Boston College Working Papers in Economics 636, Boston College Department of Economics.
2. Berger A., Bonacrossi, E. (2006). Capital structure and firm performance: A new approach to testing agency theory and an application to the banking industry, *Journal of Banking and Finance Vol. 30.,* (pp. 1065-1102)
3. Brealey, R.A, Myers, S.C. (2003). Principles of corporate finance, Boston: McGraw-Hill Irwin
4. Ehrhardt, M.C., Brigham, E.F. (2003) Corporate finance: A focused approach, Mason, Thomson, 1st Edition
5. Eriotis, N., Franguoli Z., Neokosmides, Z. (2002). Profit margin and capital structure: an empirical relationship, *The Journal of Applied Business Research Vol. 18.,* (pp. 85-89)
6. Fama E., French K. (1998). Taxes, financing decisions, and firm value, *Journal of Finance, Vol. 53.,* (pp. 819-843)
7. Goddard, J. , Tavakoli, M., Wilson, J. (2005). Determinants of profitability in European manufacturing and services: Evidence from a dynamic panel data, *Applied Financial Economics Vol. 15.,* (pp. 1269-282)
8. Harris, M., Raviv, A. (1991). The theory of capital structure, *Journal of Finance, The Amercian Finance Association,* Vol. 46., (pp. 297-355)
9. Hung, C. Y, Albert, C.P.C, Eddie, H.C.M, (2002). Capital structure and profitability of the property and construction sectors in Hong Kong, *Journal of Property Investment and Finance,* Vol.20. (pp. 434-453)
10. Jensen, M., Meckling, W. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure, *Journal of Financial Economics Vol. 3,* (pp. 305-360)

11. Johannes, H., Dhanraj, K. (2007). Unlocking shareholder value by moving closer to the optimal capital structure, Accountancy SA: Accounting and Tax Predictions, (pp.28-32)

12. Kebewar, M. (2012). The effect of debt on corporate profitability – evidence from French service sector, *MPRA Paper 42446, University Library of Munich, Germany*

13. Kester, W. (1986). Capital and ownership structure: A comparison of United States and Japanies manufacturing corporations, *Financial Management,* Vol.15., (pp. 5-16)

14. Kunt, A., Maksimovic, V. (2001). Capital structures in developing countries, The Journal of Finance, The Amercian Finance Association, Vol. 56, (pp. 87-130)

15. Long, M., Malitz I. (1986). The investment financing Nexus: Some empirical evidence, *Midland Corporate Finance Journal*, Vol.3 (pp. 53-59)

16. Majumdar, S., Chhibber, P. (1999). Capital structure and perforamnce: Evidence from transition economy on an aspect of corporate governance, Public Choice Vol. 98, (pp. 287-305)

17. Margaritis D., Psillaki M. (2010). Capital structure, equity ownership and firm performance, *Journal of Banking and Finance, Vol. 34.,* (pp. 621-632)

18. Margaritis, D., Psillaki, M. (2007). Capital structure and firm efficiency, *Journal of Business Finance and Accounting Vol. 34.,* (pp. 1447-1469)

19. Messbacher, U. (2004). Does capital influence firms value?, University of Ulster

20. Miller, M.H. (1977). Debt and tax, *Journal of Finance Vol.32, Papers and Proceedings of the Thirty-Fifth Annual Meeting of the American Finance Association, Atlantic City, New Jersey,* pp. (261-275)

21. Modigliani, F., Miller, M.H. (1958). The cost of capital, corporate finance and the theory of investment, *American Economic Review Vol. 48,* (pp. 267-297)

22. Modigliani, F., Miller, M.H. (1963). A reply and corporation income taxes and the Cost of capital, *American Economic Review Vol. 53,* (pp. 433-443)

23. Myers, S. C. (1984). The search for optimal capital structure, *Midland Corporate Finance Journal Vol 1.,* (pp. 6-16)

24. Myers, S.C., Majluf, N.S. (1984). Corporate financing and investment decisions when firms have information that investors do not have, *Journal of Financial Economics Vol. 13,* (pp. 187-221)

25. Rajan, R., Zingales, L. (1995). What do we know about capital structure?, *Journal of Finance*, *The Amercian Finance Association,* Vol. 50., (pp. 1421-1460)

26. Rao, N.V., Al-Yahyaee, K.H.M, Syed, L.A.M. (2007). Capital structure and financial performance: evidence from Oman, *Indian Journal of Economics and Business Vol. 7.,* (pp. 1-14)

27. Ross, S. (1977). The determination of financial structure: The incentive-signalling approach, The Bell Journal of Economics, Vol. 8 (pp. 23-40)

28. Shyam-Sunder, L., Myers, S.C. (1999). Testing static tradeoff against pecking order models of capital structure, *Journal of Financial Economics,* Vol. 51., (pp. 219—244)

29. Zeitun, R., Tian, G. (2007). Capital structure and corporate performance evidence from Jordan, *Australasian Accounting Business and Finance Journal Vol.1.,* (pp. 40-53)

Appendix following on the next page

APPENDIX

Table 6: Data calculated from financial statements of joint-stock companies in Montenegro (Continues on the next page)

No	Year	Q	DEBT	ROA	ROE
1	2010	Q1	0,178300	0,002968	0,003576
1	2010	Q2	0,175880	0,023010	0,027190
1	2010	Q3	0,174830	0,032272	0,038420
1	2010	Q4	0,182861	0,039090	0,041427
1	2011	Q1	0,145914	0,003398	0,003537
1	2011	Q2	0,160998	0,013008	0,014435
1	2011	Q3	0,163485	0,020595	0,022451
1	2011	Q4	0,164843	0,019433	0,021644
1	2012	Q1	0,158808	0,014371	0,017919
1	2012	Q2	0,160998	0,013008	0,014435
1	2012	Q3	0,175129	0,029616	0,035904
1	2012	Q4	0,168818	0,028294	0,043701
1	2013	Q1	0,171508	0,003409	0,005726
1	2013	Q2	0,181816	0,003404	0,006055
1	2013	Q3	0,183691	0,011627	0,016171
1	2013	Q4	0,201874	0,018987	0,017699
1	2014	Q1	0,195099	0,023050	0,028379
1	2014	Q2	0,229089	0,039119	0,046153
1	2014	Q3	0,222080	0,056742	0,070599
1	2014	Q4	0,234307	0,058056	0,070283
1	2015	Q1	0,224715	0,011236	0,011657
1	2015	Q2	0,218179	0,013167	0,013766
1	2015	Q3	0,214663	0,019866	0,022524
2	2010	Q1	0,174431	0,008901	0,001375
2	2010	Q2	0,184396	0,010145	0,010077
2	2010	Q3	0,215047	0,012115	0,012082
2	2010	Q4	0,188508	0,027262	0,026564
2	2011	Q1	0,177730	0,002401	0,000225
2	2011	Q2	0,186034	0,013019	0,010609
2	2011	Q3	0,197537	0,017053	0,013391
2	2011	Q4	0,196587	0,046383	0,032484
2	2012	Q1	0,194682	0,003635	0,000205
2	2012	Q2	0,203963	0,003124	0,011490
2	2012	Q3	0,210249	0,003879	0,013109
2	2012	Q4	0,215478	0,032193	0,035451
2	2013	Q1	0,211648	-0,013352	-0,019931
2	2013	Q2	0,203244	0,002961	-0,005626
2	2013	Q3	0,215306	0,013988	0,007811
2	2013	Q4	0,221128	0,024535	0,015342
2	2014	Q1	0,214466	-0,004685	-0,007981
2	2014	Q2	0,220354	-0,015151	-0,027644
2	2014	Q3	0,216862	-0,004260	-0,018761
2	2014	Q4	0,218124	0,021766	0,010850
2	2015	Q1	0,202427	-0,003326	-0,005967
2	2015	Q2	0,214971	-0,035683	-0,050183
2	2015	Q3	0,198524	0,008070	0,001957
3	2010	Q1	0,232360	0,011813	0,013270
3	2010	Q2	0,230667	0,038200	0,043792
3	2010	Q3	0,228949	0,055070	0,063091
3	2010	Q4	0,223999	0,068453	0,065492
3	2011	Q1	0,227865	0,016540	0,017658
3	2011	Q2	0,215192	0,033082	0,031088
3	2011	Q3	0,206503	0,040079	0,042434
3	2011	Q4	0,221178	0,028229	0,009047
3	2012	Q1	0,238737	-0,020306	-0,027290
3	2012	Q2	0,268684	-0,056451	-0,060173

3	2012	Q3	0,252442	-0,057253	-0,079103
3	2012	Q4	0,277122	-0,083034	-0,121802
3	2013	Q1	0,297569	-0,020030	-0,028969
3	2013	Q2	0,307397	-0,017034	-0,027242
3	2013	Q3	0,299926	-0,007779	-0,016288
3	2013	Q4	0,286997	-0,010035	-0,010275
3	2014	Q1	0,290467	0,018084	0,005498
3	2014	Q2	0,299652	-0,005962	-0,007599
3	2014	Q3	0,295168	-0,007948	-0,086619
3	2014	Q4	0,306645	-0,016892	-0,112734
3	2015	Q1	0,305574	0,003921	0,006239
3	2015	Q2	0,285931	0,028777	0,023697
3	2015	Q3	0,284480	0,027214	0,031779
4	2010	Q1	0,281981	-0,016030	-0,021215
4	2010	Q2	0,312196	0,007442	0,012895
4	2010	Q3	0,240489	-0,008826	-0,015988
4	2010	Q4	0,281981	-0,064120	-0,084859
4	2011	Q1	0,412051	-0,010782	-0,023057
4	2011	Q2	0,423904	-0,019513	-0,046315
4	2011	Q3	0,425934	-0,000157	0,018295
4	2011	Q4	0,329909	-0,053927	-0,104718
4	2012	Q1	0,330156	-0,010814	-0,019870
4	2012	Q2	0,317937	0,017018	0,020693
4	2012	Q3	0,343900	0,046092	-0,018466
4	2012	Q4	0,268142	-0,058458	-0,084318
4	2013	Q1	0,272418	-0,012917	-0,019411
4	2013	Q2	0,315313	-0,017953	-0,029226
4	2013	Q3	0,323405	-0,015761	-0,032157
4	2013	Q4	0,455490	-0,028640	-0,062563
4	2014	Q1	0,494366	-0,007206	-0,016125
4	2014	Q2	0,504915	-0,020487	-0,043316
4	2014	Q3	0,526243	-0,040989	-0,092713
4	2014	Q4	0,572266	-0,061985	-0,213222
4	2015	Q1	0,569545	-0,021481	-0,051804
4	2015	Q2	0,570737	-0,030338	-0,072783
4	2015	Q3	0,576572	-0,019515	-0,054187
5	2010	Q1	0,099486	-0,000081	-0,000135
5	2010	Q2	0,094677	0,006409	0,006847
5	2010	Q3	0,093997	0,011890	0,012440
5	2010	Q4	0,099428	0,029232	0,025399
5	2011	Q1	0,099724	-0,001496	-0,001823
5	2011	Q2	0,073849	0,004941	0,004659
5	2011	Q3	0,075060	0,009325	0,008889
5	2011	Q4	0,093740	0,007893	0,002717
5	2012	Q1	0,095296	0,005638	0,006055
5	2012	Q2	0,095376	0,004192	0,004415
5	2012	Q3	0,094154	0,001335	-0,000098
5	2012	Q4	0,111357	0,002110	-0,003677
5	2013	Q1	0,117157	-0,000559	-0,000639
5	2013	Q2	0,119294	0,001467	0,000213
5	2013	Q3	0,119478	0,007005	0,005748
5	2013	Q4	0,110825	0,008181	0,004516
5	2014	Q1	0,112355	0,001016	0,000431
5	2014	Q2	0,110542	0,000227	-0,001166
5	2014	Q3	0,107713	0,005181	0,003740
5	2014	Q4	0,106384	0,006461	0,002418
5	2015	Q1	0,104675	0,001052	0,000582
5	2015	Q2	0,103589	0,006946	0,006484
5	2015	Q3	0,103199	0,011054	0,010504

FAST FOOD CONSUMPTION HABITS OF YOUNG PEOPLE

Derya Ozturk
Assistant Professor Dr, Department of Business Administration, Ordu University Ünye
Faculty of Economics and Administrative Sciences, ORDU, TURKEY
deryaozturk@odu.edu.tr

Ebru Onurlubas
Assistant Professor Dr, Department of International Trade, Keşan Yusuf Çapraz School of
Applied Sciences, Trakya University, TRAKYA, TURKEY
ebruonurlubas@trakya.edu.tr

ABSTRACT

This study has been applied to 400 students studying at the Faculty of   Economics and Administrative Sciences in Ordu University in order to determine their fast-food consumption habits. According to the results of the research, it has been determined that a clear majority of the young (84%) consumes fast-food and this ratio is higher among female students. Students prefer consuming fast food 0-3 times a week (51,2%) and in their lunch times(52,7%). Students mainly prefer soft drinks (80,7%) and/or tea (71,1%) as beverages along their fast food meals. Among the main reasons why students prefer fast-food are that they study at school (65,2%), fast-food products are delicious (64,3%) and cheap (63,0%). It has been determined that although a great majority of the participants (61,3%) think that fast-food consumption habit has negative effects on human health, only 23,8% of them think of taking precautions against these negative effects of fast food consumption in the future.
Within the scope of this research, Chi-square teest has been used in order to understand whether there is a significant relation between fast-food consumption habits of students and the independent variables of gender; residence and monthly income. According to the results gained, whereas there is not a difference between the gender of students and their fast-food consumption habits, significant differences have been found between fast-food consumption habits of the students ad their residence, hometown, and monthly income.
Keywords: The young, Fast-food, Consumption Habits, Ünye

1. INTRODUCTION

The quick development of technology, urbanization and social changes have affected the feeding habits of human beings. The reasons such as changing social structure, the changes in consumption habits, intercultural interaction, accelerating pace of life, crowded cities, the changes in the family structure and the dynamic structure of work life are the factors that affect and change the consumption types (Cuneo, 1998: 47; Madran, 1999: 321-328). Besides, the facts that the consumers have no time to cook and they do not want to cook have caused the consumption of convenience food to spread. Fast-food consumption, which is one of the habits of convenience food consumption, expresses the type of food which is prepared and served very quickly. In other words, it is quick and ready-to-serve food (Merdol, 1994). As well as being a definition of urban food culture, fast convenience food is also a system which has occurred as a result of people's race against time. Fast-food, which is the consumption style of industrial societies, has become more widespread with globalization. Fast-food consumption is becoming more and more widespread among children, youngsters and especially university students. University students are one of the risky groups that have nutrition problems. Childhood and youth have specific importance, as they are the times when people gain the habits of healthy lifestyle and diet. Along with the university education, the facts that young people move away

from their family environment, they become open to external effects, and they have their own free decisions start a new period in their eating habits. Specific features of this period are economic problems, difficulties that are caused by the adjustment efforts to the new established order, interaction with lots of people from different age groups and gender and being open to external effects along with the learning process. The young people can display different health habits such as smoking, doing sports, dieting constantly and drinking alcohol during this period (Özyazıcıoğlu et al., 2009: 34-40; Garibağaoğlu et al., 2006: 173-80).

A great majority of higher education students study away from their families and this causes difficulties in their eating styles, housing, educational costs, social standing, recreation of free time and health. Especially feeding is a problem all by itself for the students who stay in dormitories (Işıksoluğu, 1986: 55-69; Sağlam & Yürükçü, 1996: 16-23). The fact that fast-food products are easily consumed, delicious and attracting increases the consumption among young people however, fast-food products are rich in energy, cholesterol and saturated fat, whereas it is very poor in protein, pomace, vitamin and mineral. Especially consuming these kinds of food much can let cardiovascular diseases occur during adulthood (Şanlıer & Ersoy, 2005). Furthermore, Fast food products such as hamburgers are considered to be unhealthy way of eating as they have low nutritional value and high rate of calories, unsaturated fatty acids of animal origin and overconsumption of them can increase the risk of having diseases such as blood pressure, osteoporosis and obesity and they include food additives such as preservatives and colors (Erdem & Uzakgider, 2011).

Fast-food products which are mainly preferred to be consumed by student groups are prepared and served in eating places near university campuses and around. The demand of students for these products especially during break times is satisfied by this way. In this study the fast food consumption habits and states of the students studying at the Faculty of Economics and Administrative Sciences in Ordu University in Ünye have been examined. Besides, the results whether there is a significant relation between fast-food consumption habits of students and the independent variables of gender; residence, home town and monthly income or not have been presented. This study which targets to determine the state of fast-food consumption has been found important in terms of contributing the related departments of universities to take preventive actions about the issue as well as presenting the situation on how fast food consumption is perceived and applied by the students.

2. THE MATERIAL AND METHOD
The students in Ordu University Ünye Faculty of Economics and Administrative Sciences in 2016 and the data from the surveys conducted are the main material of the research. There are 2580 students in the faculty in total. The most commonly used in practice and put in place the necessary values in the sampling formula shown below, were studied to calculate the sample size will provide the research data (Akbulut & Yıldız, 1999). The sample size was determined using below Equation 1.

$$n = NPQZ^2 / [(N-1) d^2 + PQZ^2 \quad (1)$$

Where 'n' was sample size; 'N' was the number of students in target population (2580); 'P' was the probability of fast food consumers among students (50% or hypothetical); 'Q' was the probability of fast-food non-consumers among students (1-P); Z was the Z value (e.g. 1.96 for 95% confidence level); and d was tolerance (0.05). Finally sample size was found to be 335 according to the population. Nevertheless, sample sizes were completed to 400 in case of any invalid questionnaire. The students were selected by using random sampling method.

Chi-square (χ^2) analysis is used between two discontinuous variables (non-parametric, nominal or ordinal scale variables) in order to determine the significance of the relationship. Chi-square

test is a test which is frequently used to determine whether there is a systematic relationship between cross tabulation frequency based variables (Malhotra, 2004).

Chi-square analysis, the formula of which is presented below, has been used to determine whether there is a relationship between gender, residence place, hometown region, monthly income and accommodation of the participating students and fast-food consumption states of them (Gujarati, 1995; Mirer, 1995):

$$\chi^2 = \sum_{i=1}^{k} \frac{(Q_i - E_i)^2}{E_i}$$

χ^2 : Chi-square value, Q_i : Observed frequency value, E_i : Expected frequency value

3. FINDINGS

The distribution of the participants according to demographics is presented in Table 1. According to this, 45,8% of the participants are male students and 54,2% are female students. It has been observed that the age of the students is mainly between 19 – 23 (91,6%) 25,0% of the participants study at the department of Business Administration, 31,3% study at Economics, 26,4% study at Labour Economy and Industrial Relations and 17,3% study at Public Administration. It has been observed that while the monthly incomes of 41,2% of the participating students are between 501 – 1000 TL, 32,7% of the incomes are between 0 – 500 TL, 21,8% are between 1001 – 2000 TL and 4,3% are 2001 TL and above. When the results about the place of residence of the students are examined, it has been determined that 47,0% of the students share a flat with their friends, 40,2% of them stay in dormitories and 12,8% stay with their families. It has been observed that a great majority of the participating students (55%) are from Black Sea Region and besides there are students who come from the regions of Marmara (12,3%), Central Anatolia (11,8%), Mediterranean (7,2%), Eastern Anatolia (6,8%), Aegean (5,7%) and Southeastern Anatolia (1,2%). The reason why the students are mainly from Black Sea Region can be explained by the fact that the university is located in that region.

Table 1: The Distribution of the Participants According to Their Demographics

Gender	n	%	Place of Residence	n	%
Male	183	45,8	Flat Sharing with Friends	188	47,0
Female	217	54,2	Dormitory	161	40,2
Degree			With Family	51	12,8
Business Administration	100	25,0	**Region of Hometown**		
Economics	125	31,3	Black Sea	220	55,0
Labor Economy and Industrial Relations	106	26,4	Marmara	49	12,3
Public Administration	69	17,3	Central Anatolia	47	11,8
Income			Aegean	23	5,7
0-500 TL	131	32,7	Mediterranean	29	7,2
501-1000 TL	165	41,2	Eastern Anatolia	27	6,8
1001-20000 TL	87	21,8	Southeastern Anatolia	5	1,2
2001 TL and above	17	4,3			

46,2% of the participating students have stated that they have their breakfast at home, 43,8% have their breakfast at dormitory refectory, 9,5% have at school's cafeteria and 0,5% have at cafeteria. 38,3% of the participating students have been determined to eat their lunches at the school's canteen, 26,4% eat at the school's refectory, 18,7% eat at the dormitory refectory, 11,2% eat at home and 5,4% eat in a cafeteria. As for the dinners, 35,8% of the participants have stated that they eat their dinners at school's canteen, 28,8% eat at school's refectory, 15,6% eat at dormitory refectory, 13,2% of them eat at home and 6,6% eat in a cafeteria. In a study conducted by Özdoğan et al.., (2012), it was determined that morning (78,5%) and evening meals (89,0%) of the students are mainly consumed in dormitory and their midday

meals are mainly consumed in school canteen(38,0%). In the study, it has been determined that a great majority of the participating students (84%) consume fast-food and this ratio is higher in female students (Figure 1). It has been found that this ratio is 87,7% among undergraduate and postgraduate students in Çukurova University (Özdinç, 2004: 74); It is 64,8% among the students who study at Hacettepe, Başkent and Gazi Universities (Korkmaz, 2005: 31); it is 93,8% among the students who stay in Ankara Security Directorate Halls of Residence and it is 88,43% among the students who study at Çukurova University (Özçiçek et al., 2002: 87-93). 51,2% of the students who study at the faculty of Economics and Administrative Sciences in Ünye consume fast-food 0 – 3 times a week, 24,4% of them consume 4 – 6 times a week, 5,1% consume 7 – 9 times a week, 1,5% consumes 10 times or more a week. 17,8% of the participants in the study have not expressed an opinion on the topic. Students have answered the question "In which meals do you generally prefer consuming fast food?" by selecting more than one option. According to this, 8,3% of the students prefer consuming fast food at breakfasts, 52,7% prefer fast food at lunches and 45,8% prefer at dinners. In a study conducted in Isparta among 144 students whose ages average is 21,3, it was declared that 52,8% and 74,3% of the students respectively consume home-food in their lunches and dinners and 75,7% consume fast-food as snacks. (Kişioğlu et al., 2002: 615-616). Within the scope of this study, the reasons why the students consume fast-food in the meal they have stated are because of the inducement of their friends in the ratio of 58,0%, 52,1% of them have stated that the reason is that because the food at school is not delicious, 47,3% have stated the reason as short lesson hours, 45,5% have stated as short lunch times, and 39,9% have stated that they have a strong habit of eating (more than one option have been chosen).

While consuming fast-food 80,7% of the students have stated that they have fizzy soft drinks (coke etc.) along with their meals, 71,1% have tea, 68,2% have fruit juice, 65,2% have instant coffee, 53,6% have water, 38,4% have sparkling water, 38,7% have powdered drinks, 37,8% have ayran and 33,3% have soup along with the meals. 8,0% of the students have stated that they do not consume any drinks along with their fast-food meals (more than one option have been chosen). Özgen (1998) stated that 68,0% of the students consume fizzy drinks, 31,2% consume fruit juice, 41,1% consume ayran/milk, 61,9% consume tea, 46,9% consume instant coffee and 17,7% consume hot chocolate along with their fast-food meals.
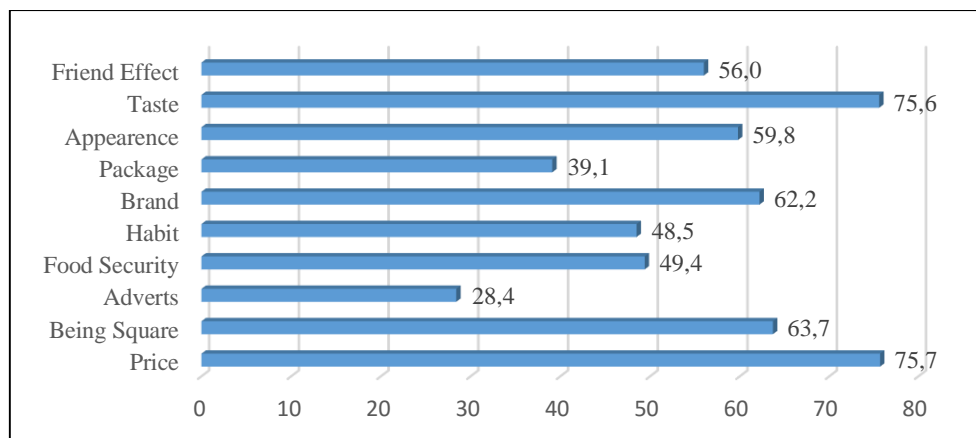

Figure 1: Factors That Are Taken Into Consideration
While Choosing Fast-Food Products (%)

It has been observed that the participating students take more than one factor into consideration while choosing fast-food products. It is observed that a great majority of the students (75,7%) take the price into consideration while choosing fast-food products. This is respectively

followed by the taste of the product, being a square meal, brand of the product, appearance of the product, food security, habits, package of the product and adverts of the product (Figure 1).
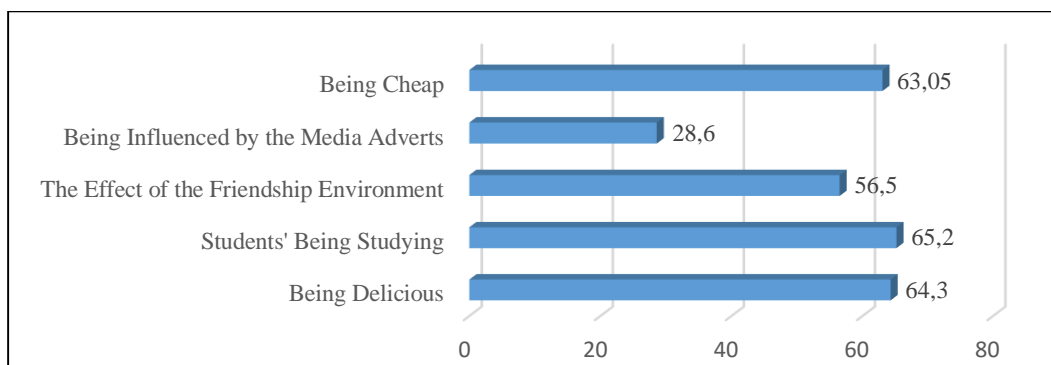

Figure 2: The Main Reasons To Prefer Fast-food Consumption (%)

The reasons why students prefer consuming fast-food products in their daily lives are: firstly because they study at university (65,2%), and then respectively because the products are delicious (64,3%), the products are cheap (63,0%), they are influenced by their friends (56,5%), and they are influenced by the media adverts (28,6%) (more than one option have been chosen) (Figure 2). In a research conducted by Özdinç (2004), the reasons why students consume fast-food products were listed as that preparing these products does not take a lot of time (44,5%), consuming these products does not take a lot of time (33,9%), they are delicious (30%), the prices of these products are affordable (19,6%), they are easy to keep (2,8%), and they are healthy (2%)

Whereas a great majority of the participating students (61,3%) think that fast-food consumption habit is harmful, 23,0% have stated that they consider these products positive, and 7,4% have stated that these products are absolute must for them. 8,3% of the participants have not given an opinion.
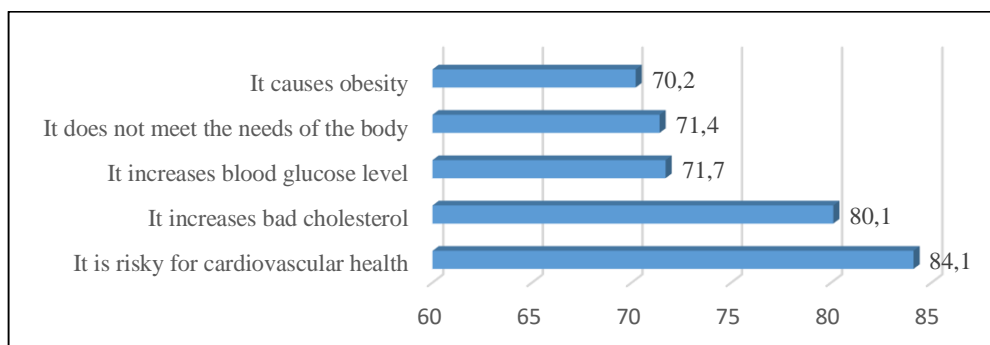

Figure 3: Negative Effects of Fast-food Products on Human Health (%)

The thoughts of the participating students on the negative effects of fast-food products on human health have been requested and the responses in Figure 3 have been received. The students have replied on the negative effects of fast-food products on human health by choosing more than one option and stated that it is risky for cardiovascular health(%84,1), it increases bad cholesterol(%80,1), it increases blood glucose level(%71,7), and it causes obesity(%70,2). Whereas it is obvious that fast-food consumption style causes obesity, it has been determined that 54,4% of the students have not taken any precautions against obesity so far, while 30,1% of the students have been determined to have taken precautions about the topic before. The remaining 15,5% of students have not stated any thoughts on this topic. Ressler stated that

many people tries various diet methods particularly in order to be liked as well as many other factors during the time of university education (Ressler, 1998). Kaneko found that 84% of the 17-year-old girls describe themselves as "overweight" and "obese" and 32% of the girls who have 90% standard body weight try different methods to lose weight (Kaneko et al., 1999). Whereas it is obvious that fast-food consumption style has negative effects on human health, it has been observed that 55,4% of the students still do not think of taking precautions against the problem in the future. It has been observed that only 23,8% of the students think of taking precautions against the negative effects of fast-food consumption, 20,8% of them avoid commenting on the topic. The participating students has been asked: "How do your parents evaluate the fast-food consumption?". 79,8% of them have replied this question as "they think negatively", 3,9% have replied as "they think positively" and 16,3% of them replied as "I do not have an idea". Finally the participants have been asked the question "When we consider fast food consumption style as a threat, what do you think of the level of this threat?". 34,8% of them have replied this question as "it is a significant risk", 28,3% have replied as "it is absolutely a harmful situation" 24,7,3% of them replied as "it is partially harmful" and 8.0% have replied as "I do not consider it as a threat". 4,2% of them have not given an opinion.

Table 2: Chi-square Analysis of Fast-Food Consumption of the Students According to Gender

Gender			Do you have the habit of eating fast-food?		Total
			Yes	No	
	Male	Frequency	149	34	183
		%	81,4	18,6	100,0
	Female	Frequency	187	30	217
		%	86,2	13,8	100,0
Total		Frequency	336	64	400
		%	84,0	16,0	100,0
P Value: 0,196 $\chi 2$: 1,670 Df: 1 $p > 0.05$ nonsignificant hypothesis H_0 is accepted,					

H_0= There is not a difference between fast-food consumption habits of the students and gender.
H_1= There is a difference between fast-food consumption habits of the students and gender.

It has been determined that there is not a difference between fast-food consumption habits of the students and their gender (Table 2). In the study conducted by Korkmaz (2005), on the other hand, it was determined that there is a relation between fast-food consumption style of the students and their gender and female students have fast-food consumption habit more when compared to male students.

Table 3: Chi-square Analysis of Fast-Food Consumption of the Students According to Residence

Fast Food Consumption		Place of Residence				Total
		In a Flat Shared with Friends	In Dormitory	With the Family		
Yes	Frequency	182	148	6	336	
	%	54,2	44,0	1,8	100,0	
No	Frequency	6	13	45	64	
	%	9,4	20,3	70,3	100,0	
Total	Frequency	188	161	51	400	
	%	47,0	40,2	12,8	100,0	
P Value: 0,000 $\chi 2$: 228,475 Df: 2 $p < 0.05$ significant hypothesis H_1 is accepted						

H_0= There is not a difference between fast-food consumption habits of the students and their place of residence

H_1= There is a difference between fast-food consumption habits of the students and their place of residence

According to the results of the Chi-square analysis, it has been determined that there are differences between fast-food consumption habits of the students and their place of residence. It has been determined that whereas the students who share a flat with other students consume fast-food products the most, the ones who stay with their families consume the least (Table 3).

Table 4: Determining the Fast-Food Consumption of the Students According to Their Region of Hometown via Chi-square Analysis

			Do you have the habit of eating fast-food?		Total
			Yes	No	
The Region You Live	Black Sea	Frequency	191	29	220
		%	86,8	13,2	100,0
	Marmara	Frequency	41	8	49
		%	83,7	16,3	100,0
	Central Anatolia	Frequency	41	6	47
		%	87,2	12,8	100,0
	Aegean	Frequency	21	2	23
		%	91,3	8,7	100,0
	Mediterranean	Frequency	26	3	29
		%	89,7	10,3	100,0
	Eastern Anatolia	Frequency	15	12	27
		%	55,6	44,4	100,0
	Southeastern Anatolia	Frequency	1	4	5
		%	20,0	80,0	100,0
Total		Frequency	336	64	400
		%	84,0	16,0	100,0
P Value: 0,000 $\chi 2 : 34,765$ Df: 6 p< 0.05 significant hypothesis H_1 is accepted					

H_0= There is not a difference between fast-food consumption habits of the students and their region of hometown
H_1= There is a difference between fast-food consumption habits of the students and their region of hometown

According to the results of the analysis, it has been determined that there is a difference between fast-food consumption habits of the students and their region of hometown. It has been observed that fast-food consumption habits in Eastern and Southeastern Anatolia are less when compared to the regions of Black Sea, Marmara, Central Anatolia, Aegean, and Mediterranean (Table 4).

Table 5: Chi-square Analysis of Fast-Food Consumption of the Students According to Their Monthly Income

			Do you have the habit of eating fast-food?		Total
			Yes	No	
Monthly incomes of students	0-500TL	Frequency	101	30	131
		%	77,1	22,9	100,0
	501-1000TL	Frequency	139	26	165
		%	84,2	15,8	100,0
	1001-2000TL	Frequency	79	8	87
		%	90,8	9,2	100,0
	2001 TL and above	Frequency	17	0	17
		%	100,0	0,0	100,0
Total		Frequency	336	64	400
		%	84,0	16,0	100,0
P Value: 0,000 $\chi 2 : 34,765$ Df: 6 p< 0.05 significant hypothesis H_1 is accepted					

H_0= There is not a difference between fast-food consumption habits of the students and their monthly income

H_1= There is a difference between fast-food consumption habits of the students and their monthly income

According to the results of the Chi-square analysis, it has been determined that there are differences between fast-food consumption habits of the students and their monthly income. It is observed that as their level of income increases, fast-food consumption increases, as well. It has been determined that the students who consume fast-food products the most are the ones who have an income of 2001 TL and above (Table 5). In their study, Öncü et al (2007) found out that incomes, marital statuses, genders and educational statuses of the consumers have significant differences in terms of fast-food consumption preferences.

4. CONCLUSION

According to the results of this study which has been conducted to determine the fast-food consumption habits of the students, there are 400 students 54,2% of which are females and 45,8% are males. It has been observed that the age of the students is mainly between 19 – 23 and their monthly incomes are mainly between 501- 1000 TL. Furthermore, it has been determined that a great majority of the participating students come from the cities in Black Sea region and they share a flat with their friends, Students have their breakfasts at home and their lunches and dinners at the school canteen. As a result it was found that 84% of young people consume fast food. These students are mainly consumed 0-3 times a week and lunch in their products. This type of feeding behavior causes the young people not to meet their growth and development needs well enough. It affects their health negatively, as well. Thus the young people need to be informed about the negative effects of fast-food consumption and this consumption habit needs to be decreased. Being influenced by their friends and the fact that the food at school's refectory is not good are among the most important reasons why they mainly consume fast-food products at their lunches. It has been observed that along with their fast-food meals, students mainly prefer beverages such as fizzy drinks (coke), tea, fruit juice and instant coffee.

It has been determined that a great majority of the participating students consider the price of the product while choosing the fast food products. When more than one option are taken into consideration among the reasons why students prefer fast-food in their daily lives, it has been observed that the most significant factor is the fact that they study. This is respectively followed by the facts that the products are delicious, they are cheap and the students are influenced by their friends. A great majority of the participating students think that fast-food consumption habits are harmful. The most significant harms of fast-food consumption can be listed as that it threatens cardiovascular health, it increases bad cholesterol, it increases the level of blood glucose and it causes obesity. Whereas it is obvious that fast-food consumption habit causes obesity, it has been determined that more than half of the students have not taken any precautions against obesity so far. Additionally, although it is obvious that fast-food consumption behavior has negative effects on human health, it has been observed that a great majority of the students still do not think of taking precautions against the problem in the future. These kinds of thoughts of young people cause anxiety that it can affect their developments and healthy lifestyles. Within this scope, all the individuals, particularly young people, need to be informed about healthy diet and doing sports.

The results of this study have shown that the feeding habits of the students are not as it is required. In order to improve this situation, the students should be provided with trainings and various activities about adequate and balanced nourishment by considering the life conditions.

This can ensure the students to change their wrong attitudes and behaviors, to enhance the quality of life and decrease the health problems which are likely to occur in the future. Additionally, along with more studies on this topic, the nourishment problems of the students can be examined thoroughly.

LITERATURE

1. Akbulut, Ö., Yıldız, N. (1999). İstatistik Analizlerde Temel Formüller ve Tablolar, Aktif Yayınevi, Erzurum.
2. Cuneo, A. (1998). "DDB Wins Makeover Bid From Heins", Advertising Age, 69 (33),47.
3. Erdem, T.N., Uzakgider, N. (2011). Fast-Food Tüketim Tarzının Aile Fonksiyonlarına Etkisi: Eskişehir Örneği, Sosyoloji Alanı Orta Öğretim Öğrencileri Arası Araştırma Projeleri Yarışması, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu, Bursa.
4. Garibağaoğlu, M., Budak, N., Öner, N., Sağlam, Ö., Nişli, K. (2006). Üç Farklı Üniversitede Eğitim Gören Kız Öğrencilerin Beslenme Durumları ve Vücut Ağırlıklarının Değerlendirilmesi, Sağlık Bilimleri Dergisi, 15(3) 173-80
5. Gujarati, D.N. (1995). Basic Econometrics. 3rd Edition, McGraw - Hill, Inc., New York.
6. Işıksoluğu, M.(1986). Yüksek Öğrenim Yapan Kız Öğrencilerin Beslenme Durumu ve Buna Beslenme Eğitiminin Etkisi. Beslenme ve Diyet Dergisi 15, 55-69.
7. Kaneko, K., Kiriike, N., Ikenaga, K., Miyawaki, D., Yamagami, S. (1999). Weight and Shape Concerns and Dieting Behaviours Among Pre-Adolescents and Adolescents in Japan. Psychiatry Clin Neurosci. 53(3):365-71
8. Kişioğlu A.N., Öztürk, M., Demirel, R., Doğan, M., Uskun, E. (2002). Isparta İl Merkezi'ndeki Cafelere Giden Öğrencilerin Okul, Beslenme, Uyku Durumları ve Sigara ile Alkol Alışkanlıkları Üzerine Bir Çalışma. 8. Ulusal Halk Sağlığı Kongresi Diyarbakır, 615-616
9. Korkmaz, S. (2005). Fast Food (Hızlı Yemek) Pazarında Rekabetçi Stratejilerin Etkinliği: Üniversite Gençliğinin Tercihlerinin Analizi. Ticaret ve Turizm Eğitim Fakültesi Dergisi, 2: 22-39.
10. Madran, C. (1999). "Türk Tüketicisinin Gıda Tüketim Davranışları ve Türkiye Dondurulmuş Gıda Pazarında Tüketici Davranışları Üzerine Bir İnceleme", 4.Ulusal Pazarlama Kongresi, (18-20 Kasım, Antakya/Hatay), 321-328.
11. Malhotra, N. K. (2004) Marketing research: an applied orientation, 4th edition, Prentice-Hall International, London.
12. Mirer, T.W. (1995). Economic Statistics and Econometrics. 3 rd Edition, Prentice Hall, Inc., New Jersey
13. Öncü, M. A., Çatı, K., Özbay, G. (2007). "Hızlı Yiyecek İşletmelerinin Tercihinde Etkili Olan Faktörler, Dokuz Eylül Üniversitesi, Sosyal Bilimler Enstitüsü Dergisi, Cilt 9, Sayı: 1, 2007, 317-336.
14. Özçiçek, C., Akbay, A.O., Özel, R., Usal, G. (2002). Türkiye'de Üniversite Gençliğinin Fast Food Tüketim Tercihleri: Çukurova Üniversitesi Örneği. Harran Üniversitesi Ziraat Fakültesi Dergisi, 6(1-2): 87-93.
15. Özdinç, İ. Y. (2004). "Üniversite Öğrencilerinin Fast-Food Tüketim Alışkanlıkları ve Tüketim Noktası Tercihlerini Etkileyen Faktörler", Anatolia Turizm Araştırmaları Dergisi, Cil:15 Sayı:1, ss:71-79.
16. Özdoğan, Y., Yardımcı, H., Özçelik, A.Ö. (2012). Yurtta Kalan Üniversite Öğrencilerinin Beslenme Alışkanlıkları. Karadeniz (Black Sea-Черное Море), 4(15): 139-149.

17. Özgen, Ö., Gönen, E. (1989). Consumer Behaviour of Children in Primary School Age. Journal Of Consumer Studies and Home Economics, 13, 175-187.

18. Özyazıcıoğlu, N., Gökdere, Ç. H., Buran, G., Ayverdi, D.(2009). Uludağ Üniversitesi Sağlık Yüksekokulu Öğrencilerinde Beslenme Alışkanlıkları, Atatürk Üniversitesi Hemşirelik Yüksekokulu Dergisi, 12(2):34-40

19. Ressler, A. (1998). A Body to Die For: Eating Disorders and Body-İmage Distortion in Women. International Journal of Fertil Womens Medicine, 43, 133-38.

20. Sağlam, F., Yürükçü, S. (1996). Ankara Üniversitesi Eğitim Bilimleri Fakültesi Yüksek Okul Öğrencilerinin Besin Tüketim Durumu, Beslenme Alışkanlıkları ve Beslenme Bilgi Düzeylerinin Saptanması. Beslenme ve Diyet Dergi s i 25-2: 16-23.

21. Şanlıer, N., Ersoy, Y. (2005). Anne ve Çocuk İçin Beslenme Prensipleri. İstanbul: Morpa Kültür Yayınları.

COMPARATIVE ANALYSIS OF EMPLOYMENT TENDENCIES IN THE CIS COUNTRIES

Dilmurod Nasimov
Department of Finance and Accounting, Faculty of Management and Economics,
Tomas Bata University in Zlin, Czech Rebpulic
Faculty of Social Economics, Samarkand State University, Uzbekistan
uzdilmurod@yahoo.com

ABSTRACT

The abstract gathers information on the labour markets of the Commonwealth of Independent States member countries available by 2014 and draws recommendations based on comparison to developed countries. Comparative analysis of tendencies of employment in the Commonwealth of Independent States member countries is a main objective of the research. Studies of the current situation in labour markets that have an impact on formation of tendencies of employment in the member countries is also carried out. Official statistical data of the Interstate Statistical Committee of the Commonwealth of Independent States, Eurostat, OECD iLibrary have been chosen as a methodological base of research. As a result, of the research on the basis of the revealed problems of functioning of the labour markets in the Commonwealth of Independent States member countries we developed recommendations for effective employment of the population and to further transformation of labour markets of the developing countries according to the experience of developed countries.
Keywords: *Commonwealth of Independent States, flexible employment, labour market, labour resources, unemployment.*

1. INTRODUCTION

Modern social and economic situation allows to observe structural, functional and component disproportions in territorial development which predetermine corresponding deformations in system of population employment of the (inadequacy of shifts in outputs and employment rate of the population in real sector of economy; excess employment in basic industries compared to insufficient number of the professionals necessary for intensive development of the science-intensive industries; distribution of the registered and hidden unemployment among highly educated professionals; existence of unregulated employment within growth of additional demand for qualified personnel). Measures to address the imbalance and disproportion have to be considered as the main reserve of capacity-building of productive employment of the population and could be carried out through the transformation of the efficient population to the sphere of the official sector of the economy.

The most of the aforesaid disproportions concern to countries of Commonwealth of Independent States (CIS). 11 of 15 former republics of the USSR became members of the Commonwealth (except three Baltic States – Latvia, Lithuania, and Estonia which became members of the European Union in 2004 and Georgia which left of the CIS in 2009).

2. THEORETICAL FRAMEWORK

Problems of formation and development of labour market in the CIS countries, employment, unemployment, migration, quality of labour and labour motivation are widely researched in works of scientists of the CIS countries. These works include empirical research, detailed analysis of various elements and interrelations of labour markets, tendencies of development in modern conditions, actual problems of theory and practice.

Integration processes in the CIS, factors and prospects of formation of the common labour market are being developed now by specialists of Executive Committee of the CIS, inter-parliamentary Assembly, the Ministry of affairs of cooperation with the CIS, Institutes of Economy of the member countries.

In the CIS region labour market as one of the elements of market economy comprehensively studied in works of Bulanov B.C. (2010), Volgin N.A. (2010), Kotljar A.Je. (1998), Maslova I.S. (2012), Odegov Ju.G. (2012), Abdurahmanov K.H. (2011) and others. After soviet period they proved the need of the integrated approach to studying of problems of the labour market, essence and features of formation of the labour market, ways and methods of increasing employment specifics for a transition period.

According to research results of Yoon, Y. R., Reilly, B., Krstic, G., & Bernabe, S. (2003) in the CIS countries with low-income level, informal activity is extensive, and for most countries the informal employment rates exceed the formal rates. We should also note that the informal sector became an actually independent segment of the labour market and has a noticeable impact on a condition of employment of the population and social and economic situation in general. Development of informal sector has to be directed to formal one. Measures for stimulation of registration of informal companies, governmental support of formal self-employment and family business and other measures are also necessary.

The existence of long-term unemployment and youth unemployment give cause for concern. High poverty levels lead, in some of the CIS countries concerned, to large labour migration outflows (Hansen E., Nesporova A., Picot G. & Rychly L. 2015).

It has to be noted that the data on registered unemployment and vacancies do not reflect the real economic magnitude of unemployment and vacancies, mainly due to the low rates of registration with the employment services by the unemployed (Lyubova M., 2009).

Extensive unemployment and underemployment, much of which is hidden; ineffective systems of labour relations and social protection; large mismatches between the labour market skills supplied and the skills demanded by new market economies; inadequate official labour market data (Pavlova, O., & Rohozynsky, O., 2005).

With an indisputable value of the done researches in this sphere matters of integration of labour market, the creation of the Common Economic Space, the main ways and mechanisms of creation of common labour market within multilateral cooperation and many other aspects of this problem still remain to be studied nowadays. Among them, in particular, research of the employment tendencies in the CIS countries in modern conditions, and ways of multilateral cooperation of the CIS countries in a matter of employment are very important nowadays. All these circumstances predetermine actuality of our research.

3. RESULTS

Demographic structure of the population reflects the situation in the labour market. According to statistical data at the beginning of 2015 population in the CIS countries reached 282 million people that is about 4% of the world's population (Interstate Statistical Committee of the Commonwealth of Independent States, 2015). About 70% are of all population of CIS countries are working-age population (Figure 1).

The highest share of population among CIS countries is in Russia, Ukraine and Uzbekistan. The least populated country is Armenia. During the last years population in most of the CIS countries increased, except for Armenia, Belarus, Moldova and Ukraine *(Population and social indicators of the CIS and other countries of the world 2011-2014, 2015)*.

The population share at the age of 15-64 years considerably differs between member countries, varying from 60% in Turkmenistan and Tajikistan to 74% in Moldova and 72% in Azerbaijan and Russia. However that tendency of change of able-bodied population in medium-term

prospect is different. If in Belarus, Moldova, Russia and in Ukraine it is going to reduce, in Azerbaijan, Kazakhstan and, especially, in Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan will increase rapidly. Working-age population in Armenia, according to estimates, will not change.
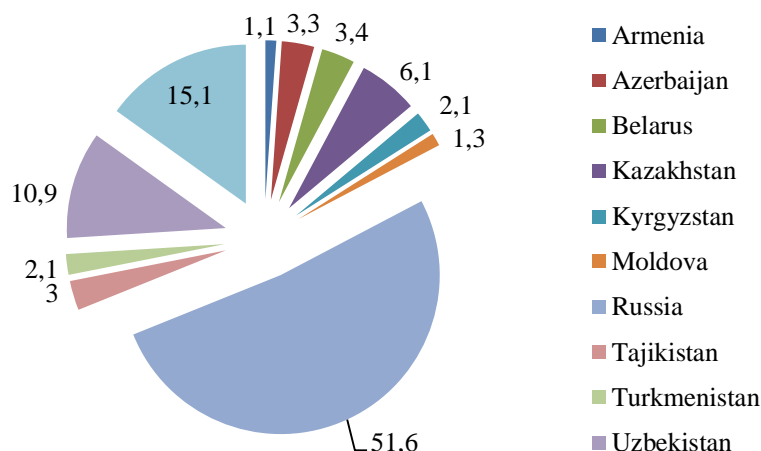

*Figure 1: CIS countries (share in total population, %) (Population and social indicators of the CIS and other countries of the world 2011-2014 (2015). Interstate Statistical Committee of the Commonwealth of Independent States) * CIS countries – resident population at the beginning of 2015, EU-28 and other countries – 2014*

Comparison of the age distribution of the population of three countries in which the highest reduction of able-bodied population is expected is very similar. First of all, considerable deformations of age structure as a result of demographic waves (more numerous number of generations born in second half of the 1950th and the beginning of the 1960th, and later in the second half of the 1980th) and lower "crest" of the last wave (the basis of the age pyramid – number of birth in recent years). Excluding influence of migration and inevitable losses because of mortality, population at the age of 15-64 in 15 years will be reduced in Ukraine from 31,8 to 29,1 million people (by 8,7%), in Belarus – with 6,7 to 6,1 million people (for 8,0%), in Russia – with 101,4 to 94,0 million people (for 7,3%) .

The age structure of the population of Azerbaijan, Armenia and Moldova also considerably deformed by demographic waves, but the number of the generations which were born in the 1950-1960th is less. And aforesaid countries faced a more significant increase in birth rate in 1980th. The birth rate within the last 15 years in Moldova grew moderately, more quickly in Armenia and, especially, in Azerbaijan.

As a result, Excluding influence of migration and inevitable losses because of mortality, the population at the age of 15-64 in 15 years will increase in Azerbaijan from 6805 to 7463 thousand (for 9,7%), and in Moldova will decrease from 2631 to 2487 thousand (-5,5%). The population of able-bodied will grow in Armenia during the next five years and then will reduce. In 15 years it will increase (excluding mortality and zero net migration) by 0.2% and reach 2126 against 2121 in 2014 (Shcherbakova E., 2015).

The age structure of the Central Asian countries population is significantly less deformed by demographic waves due to high birth rate. And though sharp decrease of birth rate in the 1990th which was observed in all former countries of the USSR, also affected modern age structure of the population of Kazakhstan, Kyrgyzstan and Tajikistan, sequential increase of birth rate led to that the number of children under age of 5 significantly exceeds the number of young people of the age 20-24 and 25-29 (born in 1984-1993).

Excluding influence of migration and inevitable losses because of mortality, population at the age of 15-64 in 15 years will increase in Kazakhstan from 11,5 to 13,3 million (by 16%), in Kyrgyzstan – from 3,7 to 4,9 million (for 30%), in Tajikistan – from 5,1 to 7,2 million (for 42%).

By the estimated data the number of the able-bodied population (16-59 years) can increase by 14% - from 19,1 to 21,8 million people during the next ten years.

According to Interstate Statistical Committee of the CIS, the number of economically active population in the CIS was 135,9 million in 2014. In comparison with 2000 it increased by 7,1%, but in recent years, the gain of the number of the economically active population decreased. In 2013 compared to 2012 was observed growth in 0,2% but in 2014 compared to 2013 decreased by 0,44%.

Tendencies of change of a number of economically active population in the certain CIS countries were different. In Armenia, Belarus, Moldova, Russia and Ukraine was observed decrease. The most increase was observed in Uzbekistan, Azerbaijan and Tajikistan (table 1).

Table 1: Number of economically active population, thousand people (Monitoring of the state of national labour markets in the Commonwealth. Countries 2011-2014 (2015)

Countries	2010	2011	2012	2013	2014
Azerbaijan	4587,4	4626,1	4688,4	4757,8	4840,7
Armenia	1463,3	1440,9	1418,3	1388,4	1375,7
Belarus	4705,1	4722,7	4640,6	4601,8	4572,8
Kazakhstan	8610,7	8774,6	8981,9	9041,3	8962
Kyrgyzstan	2456,0	2490,1	2496,8	2468,7	2504,2
Moldova	1235,4	1257,5	1214,5	1235,8	1232,4
Russia	75478	75779	75676	75529	75428
Tajikistan	2280,3	2303	2347,1	2362,7	2382
Uzbekistan	12287	12542	12850	13163	13505,4
Ukraine	22052	22057	22012	21981	19921
Total CIS, mln.	135,2	136	136,3	136,5	135,9

Economic activity of the population of Moldova and Tajikistan nearly exceeds 40%, and in other CIS countries is ranging from 61% to 72%. The total level of the economically active population aged 15-64 in CIS countries is about 66% (Interstate Statistical Committee of the CIS, 2014).

According to Federal State Statistics Service of the Russian Federation (2014), about 35 million citizens able-aged population are economically inactive. They include people engaged in housekeeping, students and other unemployed citizens. The listed categories of the economically inactive population are potential labour forces who can enter the labour market in case of change of a situation. During recent years, the tendency of change of age structure of the economically active population in the majority of the CIS countries is the increase of the share of the senior age groups. In 2013, the share of persons at the age of 55 years and older among the economically active population of Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova and Russia were about 8 to 16%, whereas in 2000 – from 7 to 13%. The moderate economic growth and changes in economic forecasts affected employment situation on in the CIS countries. According to National Statistics Committee of the Republic of Belorussia (2014) since 2001 the stable tendency of growth of a number of the employment was observed in Ukraine, Azerbaijan, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Uzbekistan (table 2).

Table 2: Employed population 2000-2014, mln. (Monitoring of the state of national labour markets in the Commonwealth Countries 2011-2014, 2015)

	Azerbaijan	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tadjikistan	Ukraine	Uzbekistan
2000	3,9	1,3	4,4	6,2	1,8	1,5	65,1	1,7	20,2	9
2005	4,1	1,1	4,4	7,3	2,1	1,3	68,3	2,1	20,7	10,2
2010	4,3	1,2	4,7	8,1	2,2	1,1	69,9	2,2	20,3	11,6
2011	4,4	1,2	4,7	8,3	2,3	1,2	70,9	2,2	20,3	11,9
2012	4,4	1,2	4,6	8,5	2,3	1,1	71,5	2,3	20,4	12,2
2013	4,5	1,3	4,5	8,6	2,3	1,2	71,4	2,3	20,5	12,2
2014	4,6	1,1	4,6	8,5	2,3	1,2	71,5	2,3	18,1	12,2

Employment in Armenia and Belarus during the analyzed period practically didn't change, and in Moldova and Armenia decreased. In other countries, the number of employed population increased (except for its decrease in the last year in Ukraine as a result of destabilizing events). The share of employed among the economically active population of the CIS for 2005-2015 was higher than in the countries of the European Union and the Organization for Economic Cooperation and Development during 2009-2014 (figure 2).
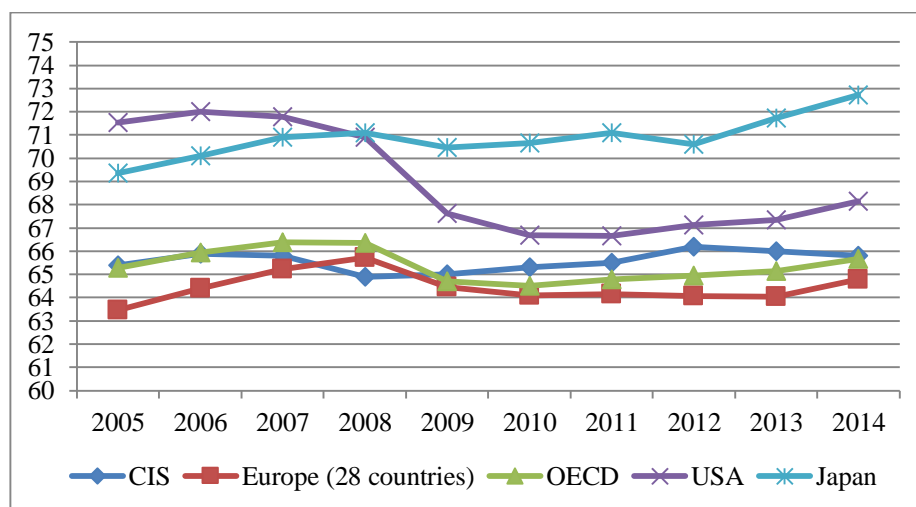
Figure 2: The level of employment of economically active population in CIS, EU-28, OECD, USA and Japan (OECD (2016), Employment rate (indicator). doi: 10.1787/1de68a9b-en (Accessed on 04 January 2016). The labour market in Commonwealth of Independent States in 201, 2014)

The share of employees among the total employed population in the CIS is about 60% but significantly differs among the member countries. This number exceeds 80% in Belarus, Russia, Ukraine, less than 60% in Armenia, Kyrgyzstan Tajikistan, Uzbekistan and only about 33% in Azerbaijan (Labour market in the Commonwealth countries in 2013, 2014).
The share of employees significantly increased in Kyrgyzstan and Kazakhstan compared to 2000 in 2014. This indicator decreased in Belarus, Tajikistan and Ukraine.

Most of the employees in the CIS countries are employed in the non-state sector. In 2014, the lowest rate remained in Belarus (59%) though considerably increased – by 16 points compared to 2000 (figure 3). The increase of a share of employed in the non-state sector was observed and in other CIS countries, the insignificant decrease was noted in Moldova and Kazakhstan.
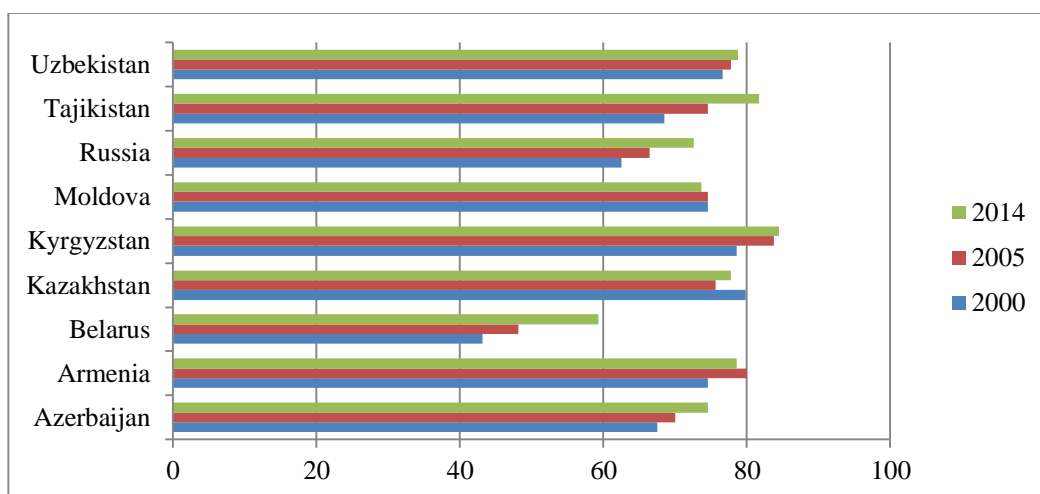

Figure 3: The share of employed in non-state sector, 2000, 2005 and 2014, % (Commonwealth of Independent States in 2014, 2015) * Tajikistan – 2012*

Services sector attracts most of the share of employed population in the CIS countries. Despite the rapid growth of a share of employment in a services sector (from 53% in 2000 to 61% in 2013), it remains lower, than in the European Union (73%) and the USA (81%). The share of employment in agriculture, hunting, forestry and in fishery decreased from 20% in 2000 to 15% in 2013, but still remains 10 times more, than in EU-28, the USA and Japan (figure 4).

Distribution of the employed population by spheres significantly differed within the CIS countries. The share of employment in a services sector is about 27% in Tajikistan to 65% in Russia, a share of employed in industry – from 4% in Tajikistan to 25% in Belarus, a share employed in agriculture, hunting and forestry and fishery – from 7% in Russia to 66% in Tajikistan.

Sales workers, car repair specialists and technicians constitute the main share of the employed population in the services sector, except for Tajikistan. Their share about among employed population is from 9,9% in Armenia to 22,3% in Ukraine. The share of the employed population in education varies from 7,7% in Kyrgyzstan to 10,8% occupied in Kazakhstan, a share of employed in health care and social services – from 3,5% in Kyrgyzstan to 7,9% in Russia.

The share of employed in the sphere of transport and communication is from 2,4% in Tajikistan to 9,5% in Russia in public administration, defense and insurance – from 1,4% in Tajikistan to 7,4% in Russia.

The share of employed in real estate services higher in Belarus (7,4%), financial activities – in Russia (2,2%), hotels and restaurants – in Kyrgyzstan (3,5%).

The employed population is mostly occupied in large and medium-sized enterprises. About 13% of the total number of the employed population work at small enterprises (including the micro enterprises with workers of up to 15 people) in the CIS countries on average. The most common areas of small business companies are manufacturing, construction and trade.
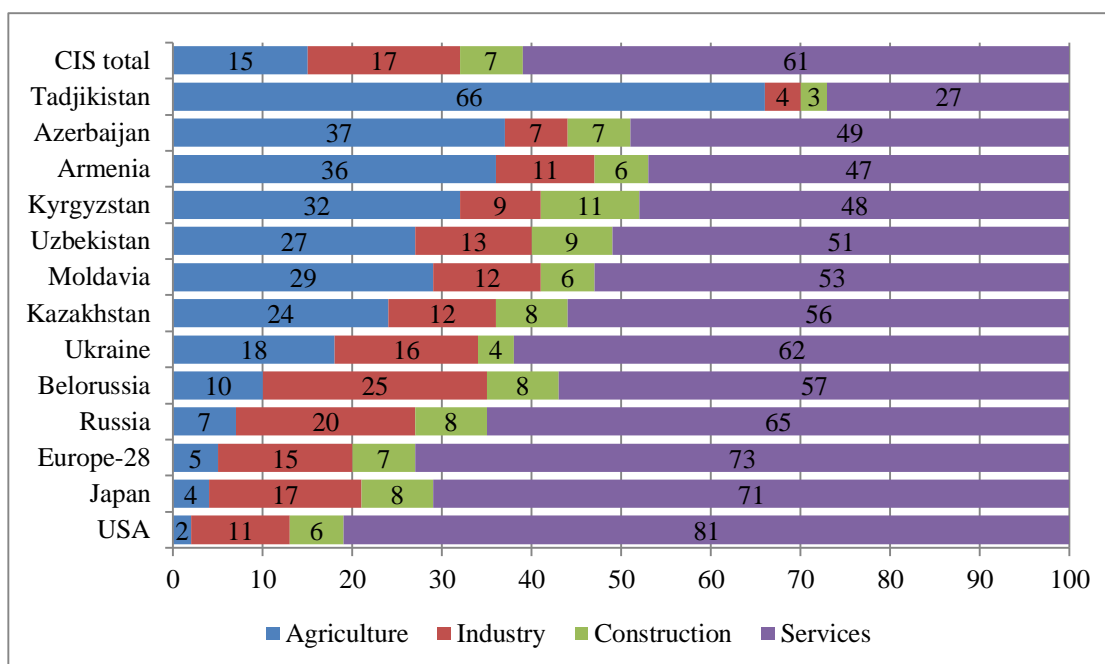
*Figure 4: Distribution of the employed population of the CIS, EU-28, USA and Japan on main types of economic activities, 2013 *, % (Labour market in Commonwealth of Independent States in 2013, 2014) * Tajikistan – 2012*

The share of employed in industry (mainly manufacturing) in a total number of employed in small enterprises is 26% in Belarus, 30% in Kyrgyzstan, from 15 to 21% in Azerbaijan, Armenia, Kazakhstan, Moldova, Russia, Tajikistan and Ukraine.

The share of the employed population in small and micro-enterprises in CIS is about 13% of the total population employed in industry, this data is lower compared to European Union (EU-28) which is one-third of the population employed in the industry.

The share of employed in construction is ranging from 10 to 20% of employees in small enterprises in Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Ukraine, in Armenia and Moldova - about 6-7%.

The number of employed population in construction in the CIS constitute about 25% of the total population employed in small enterprises, whereas in the EU-28 - nearly 75%.

The share of trade and repair services in a number of the population employed in small enterprises in Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan and Ukraine is from 17 to 29%, in Azerbaijan, Armenia and Belarus - from 31 to 39%. In the CIS about 25% of the population is employed in small businesses, whereas in the EU-28 - 60%.

According to the Interstate Statistical Committee of the CIS, every fifth employment in the CIS is informal. Employed in the informal sector mainly account for activities as agriculture, manufacturing, construction, transport and trade. Employment in the informal sector of the rural population in 2013 was 32% of the total employed in the rural areas and 16% of the total employed in the urban areas. Men dominate among those employed in the informal sector (particularly in construction and transport). Women employed in the informal sector are mainly in the service sector, particularly in trade.

The total number of unemployed in the CIS, according to its definition by International Labour Organization (ILO) in 2014 constituted 6.2%. The highest unemployment rate during 2005-2013 was observed in 2009 - 8% (figure 5). During this period, the unemployment rate in the CIS was lower than in the European Union (EU-28), as well as in the countries of the OECD and in the US during 2009-2013.

Unemployment rate significantly differs by CIS countries. In 2014, the lowest indicator was in Moldova - 4%, Uzbekistan - 5%, Azerbaijan, Kazakhstan and Russia. The highest unemployment rate was in Kyrgyzstan, - 8.3%, Ukraine 9.3 and Armenia about of 18%.
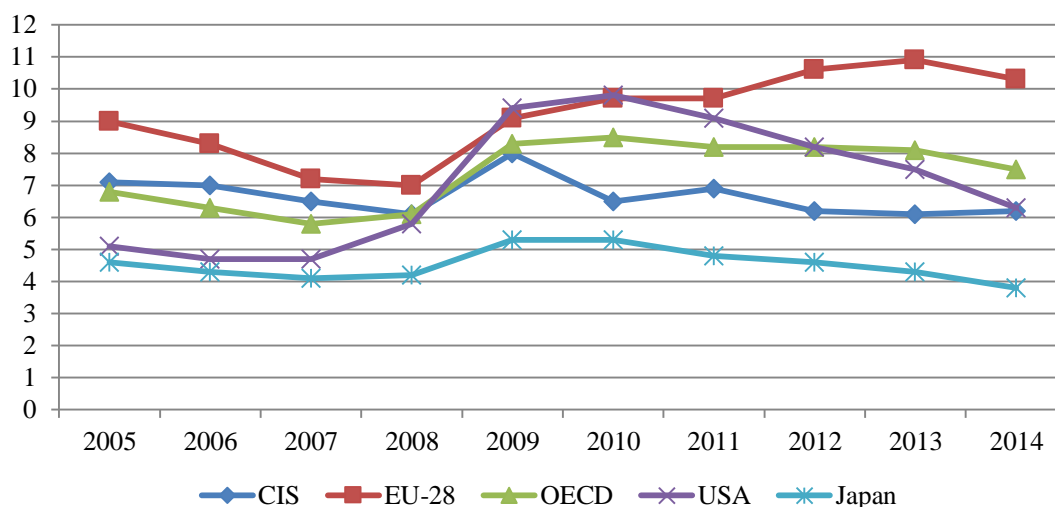

Figure 5: Unemployment rate in the CIS, EU-28, OECD, USA and Japan, 2005-2014,
% (Labour market in Commonwealth of Independent States in 2014, 2015.
OECD (2014), "Unemployment rate" (indicator)
DOI: http://dx.doi.org/10.1787/997c8750-en (Accessed on 09 January 2016))

For the completeness of our analysis, it is also necessary to consider the share of the disabled population in member countries. So, the number of pensioners to the number of able-bodied population is very high in Ukraine – 287, in Russia – 283 and in Belarus – 265 people. The smallest indicator is in Tajikistan – 76 people (Chernikova, 2014).

About 30% of the unemployed population within the CIS belong to the category of long-term unemployment. The unemployed who are looking for work over a year (12 months), in 2013 constituted 29% of the number of total unemployment, among men - 28%, women – 31%. Among the CIS countries the share of long-term unemployment varies from 12% in Kazakhstan to 67% in Azerbaijan. In the majority of the CIS countries main part of the unemployed search for the workplace for several months (no more than 6 months) (*Labour market in Commonwealth of Independent States in 2013, 2014*).

The share of long-term unemployment remains steady around 29.5% in the CIS. According to results of 2014 among CIS countries the high level of unemployment was observed in Ukraine, Tajikistan and Turkmenistan, and low level in Kazakhstan and Belarus.

Informal employment remains widespread in most developing countries, although regional variations are sizeable. In Eastern Europe, CIS countries and a few advanced economies, informal employment still account for over 20 percent of total employment (International labour organisation, 2014). This indicator is lower than in the CIS countries compared to some Central American South-East Asian countries but it still required to continue taking action for moving it to formal employment opportunities.

A noticeable influence on the situation in the labour markets of the CIS countries has migration process. According to official sources of the Federal State Statistics Service of the Russian Federation the main migratory flows in the territory of the CIS countries were directed to the Russian Federation.

If we consider by country, the main incoming flows of migrants in the Russian Federation are from Ukraine and Uzbekistan. The leading part of the population leaving from Russian Federation is going to Uzbekistan (Russian Federation Federal State Statistics Service, 2014).

It is necessary to consider that the official statistics does not reflect real situation because of the existence of illegal migration.

For the analyzed period of 15 years, labour markets of CIS member countries faced essential changes. As a result, of our analyzes, we can construct a ranking of the CIS member countries on a situation in the sphere of employment of the population. Relatively Better indicators are in Belarus and Kazakhstan, and the lowest – Moldova, Tajikistan and Ukraine.

4. SUMMARY AND CONCLUSIONS

The ensuring growth of solvent demand for the qualified labour, an intensive update of the existing and creating new productive workplaces is considered as the priority direction in an increase of employment rates of the population. Thus, the share of the branches capable dynamically react to market changes and to generate additional labour demand must be high in the structure of the gross domestic product.

In this regard actions for realization of productive employment of the population in the CIS countries are recommended to be applied on regional level and include following actions:

- close relations between labour markets of the CIS member states and integration of local labour markets on a regional level;
- balancing of supply and demand in local and regional level;
- development and implementation of the regional programs of the creation of workplaces;
- planned reduction technologically and obsolete workplaces;
- modernization and ensuring the necessary quantity of modern workplaces at the operating enterprises;
- vocational guidance and effective use of a manpower;
- creation of a favorable climate for the development of business within integration of CIS countries and rise in investment activities to the technological modernisation of the production process;
- involvement of the unemployed population to temporary and seasonal jobs, paid public works, creation of additional workplaces for temporary employment.

LITERATURE:

1. Abdurahmanov K.H., & Zokirova N.K. and others (2011). *Labour market: textbook* (Vol. 2). 576.
2. Belorussia and CIS, 2001-2013 (20140). National Statistical Committee of the Republic of Belarus. Retrieved 2015, from belstat.gov.by/homep/ru/indicators/main2.php
3. Bulanov, B. S., & Volgin, N. A. (2010). *Labour market: textbook* (Vol. 3). 479.
4. Chernikova, A. G. (2014). Quality and standards of living in the CIS countries: Statistics mirror. *Science and Education: Economy and Economy; Business; Rights and Management*, 52(9), 28-36.
5. *Commonwealth of Independent States in 2014* (2015). Interstate Statistical Committee of the Commonwealth of Independent States. Statistical yearbook. 631.
6. Federal State Statistics Service of the Russian Federation. (2014). Retrieved 2016, from http://www.gks.ru/
7. *Global employment trends 2014: Risk of a jobless recovery?* (2014). Geneva: ILO.

8. Hansen E., Nesporova A., Picot G. & Rychly L. (2015). *Challenges to Labour Market Governance in Selected CIS Countries.* Background paper prepared for the High-Level Tripartite Seminar on Labour Administration and Public Employment Services Cyprus, 17-18 October.

9. Kotljar, A Je. (1998). The concept of the labour market. *Voprosy Ekonomiki,* (1), 33-41.

10. *Labour market in Commonwealth of Independent States in 2013* (541(10)), (2014). Statistical yearbook. Interstate Statistical Committee of the Commonwealth of Independent States.

11. *Labour markets in Commonwealth countries in 2014* (546(3)). (2014). Statistical yearbook. Interstate Statistical Committee of the Commonwealth of Independent States.

12. Lubyova, M. (2009). *Labour market institutions and policies in the CIS: Post-Transition Outcomes*. Working Paper No. 3/2009, International Labour Organisation, Subregional Office for Eastern Europe and Central Asia.

13. Maslova, I. S. (2012). *Evolution of system and mechanisms of employment (1970-2010).* Russian academy of sciences, Institute of economics.

14. Monitoring of the state of national labour markets in the Commonwealth Countries 2011-2014 (2015). Statistical yearbook. Interstate Statistical Committee of the Commonwealth of Independent States.

15. *Number and migration of the population of Russian Federation in 2014* (2014). Russian Federation Federal State Statistics Service, 165.

16. Odegov, Ju. G. (2012). Personnel market and tendencies of its development. *Labour Market and Politician of Employment: State and Prospects of Development. II Social Forum.*

17. OECD (2016), Employment rate (indicator). doi: 10.1787/1de68a9b-en (Accessed on 04 January 2016)

18. OECD (2014), "Unemployment rate" (indicator).
DOI: http://dx.doi.org/10.1787/997c8750-en (Accessed on 09 January 2016)

19. Pavlova, O., & Rohozynsky, O. (2005). Labour markets in CIS countries. *CASE Studies and Analyses*, (311).

20. Population and social indicators of the CIS and other countries of the world 2011-2014. (2015). Interstate Statistical Committee of the Commonwealth of Independent States.

21. Population, employment and living conditions in the Commonwealth countries (2014). Interstate Statistical Committee of the Commonwealth of Independent States.

22. Shcherbakova E. (2015). "Labour markets of CIS countries 2013". *Demoscope weekly Institute of Demography at the National Research University "Higher School of Economics".* 629-630. http://demoscope.ru/weekly/2015/0629/barom01.php

23. Yoon, Y. R., Reilly, B., Krstic, G., & Bernabe, S. (2003, January). A study of informal labour market activity in the CIS-7. In *Lucerne Conference of the CIS-7 Initiative* (pp. 20-22).

ESTIMATING VALUE ADDED TAX GAP IN TURKEY

Ebru Canikalp
Cukurova University,Turkey
ecanikalp@cu.edu.tr

Ilter Unlukaplan
Cukurova University,Turkey
ikaplan@cu.edu.tr

Muhammed Celik
Uludağ University,Turkey
muhammedcelik@uludag.edu.tr

ABSTRACT
As an important issue in the fiscal structure of a country, tax gap is defined as the difference between tax burden that the taxpayer should face and the amount actually paid. In this study, tax gap was evaluated by the framework of the Value Added Tax. The reason behind this choice, i.e. Value Added Tax Gap (VAT Gap) is to make an effort to evaluate the efficiency of the tax administration, the compliance of the tax payers and the relationship between policy gap and the compliance gap. With this aim, VAT Gap and the various methods to calculate this gap were examined. Furthermore, based on the reports by the European Commision, VAT Gap in Turkey for 1993-2014 period were estimated and evaluated by employing topdown method.
Keywords: Compliance Gap, Policy Gap, VAT Gap

1. INTRODUCTION

Tax gap is defined as the difference between potential collectable tax revenue and the amount of that is actually collected. On a theoretical base, the state of negligence at collecting taxes, errors made in determining the tax base, tax avoidance and tax evasion, incomplete statements, tax allowances and exemptions constitute the factors behind the tax gap. Several studies aimed to explain the factors determine the magnitude of the tax gap. Plumpley (2005) examines incomplete statements, Giles (1999) focuses on informal economy and Reckon (2009) investigates tax allowances, exemptions and tax expenditures to explain the tax gap.

Although the tax gap concept is a common and popular subject either in academics or in the public finance administration process, many studies and researches are being conducted. "Her Majesty's Revenue and Customs" (HMRC) and Thackray (2012) have been making estimations for the VAT tax gap in United Kingdom. Australian Taxation Office pursues regular tax gap estimation in Australian Economy. Several governmental institutions, Ministries of Finance and European Commision estimate tax gap for the European Union countries. IMF regularly estimates tax gap for the Southern African countries. In Turkey, many arguments that support the prediction that tax evasion leads to increasing tax gap have been powered. The motivations behind this study are that the tax evasion is not a sufficient indicator to explain tax gap and the lack of such estimations by governmental institutions in Turkey.

VAT tax gap has a big importance to assess informal economy, tax consciousness of citizens and tax morale. Recently, many studies have been taking place in the public finance literature devoted to measure the efficiency of the VAT. Measuring revenue ratio of VAT does not indicate a perfect compliance in taxation. Contrariwise, combining this ratio with a measure called political productivity and compliance productivity lead to estimate tax gap precisely. According to this calculations, tax gap rises as the tax morale and tax consciousness are

relatively low. In addition, tax cuts in the VAT rates, tax exemptions and active reactions initiated from psychological reasons increase the gap between real and potential tax revenue. Revenue ratio of VAT and other indicators can be estimated by compliance gap and policy gap (CSERCB, 2013, p. 20).

In this study, we will focus on VAT Tax Gap, defined as the difference between accrued amount of the VAT Tax revenue and the amount that the taxpayer should pay on a theoretical basis (Zidkova, 2014, p.514). Within this framework, the main object of this paper is to calculate VAT tax gap in Turkey by decomposing into compliance gap and policy gap. The paper is organized as follows: section 2 is devoted to explain the compliance gap and policy gap. Section 3 gives an overview of methods to calculate tax gap, section 4 includes revenue performance of VAT and VAT gap in Turkey for 1993-2014 Period. Section 5 concludes.

2. COMPLIANCE GAP AND POLICY GAP

Compliance gap is stated as the difference between the amount that the taxpayer should pay on an ideal basis and the actual tax payment, caused by the taxpayer's application to tax loopholes or tax evasion with illegal ways. Tax evasion and incomplete statements, known as "lost economy", leads to collecting tax revenue under the amount envisaged in the law and leads to tax gap.

Thackray and Ueda (2014, p.13), examine compliance gap under two different concepts: Allocation gap and tax base gap. Allocation gap is gauged by audits, investigation of tax base gap, VAT tax base and VAT tax refund. Instead of using uncollected amount of tax, allocation gap is calculated by comparing potential tax payments with total value of tax revenue. Tax base gap, also labeled as "unexplained gap" in the literature, is defined as the difference between total compliance gap and allocation gap.

Policy gap is defined as the gap in the tax collections, generated by the differentiation of VAT rate among different countries. Keen (2013, p. 3), decompose policy gap into two different gap concepts: Rate differentiation and exemptions. Imposing lower VAT tax rates than the standard VAT rate or zero tax rate for the essential goods and services indicate rate differentiation while exempting specified people from taxation constitutes exemption gap.

Rate differentiation causes several political decisions like tax exemptions and allowances. It also generates a certain situation in which taxpayers faces with tax evasion and avoidance, thereby causing a gap in tax collection. As shown by equation 1, it indicates a difference between potential and actual VAT collections, namely compliance gap. Compliance gap is expressed as a percent of VAT collections or GDP (CSERCB 2013, p. 21).

VAT Compliance Gap : (Potential Collectible VAT - VAT Collections) / VAT Collections (1)

After measuring compliance gap, policy gap is derived by certain steps. Policy gap is the ratio VAT payments without exemptions, allowances and reduced rates to actual VAT collections. Equation 2 summarizes this calculation process (CSERCB, 2013, s. 35):

Policy Gap: (VAT Collections – VAT Compliance Gap) / (1- VAT Compliance GAP) (2)

Agha and Houghton (1996) aimed to analyze the relationship between compliance gap and policy gap. They focused on three hypothesis and reach following results:

    1.Higher VAT rate can be associated with low level of VAT compliance

    2. High VAT rate has negative effects on the level of VAT compliance

    3.Increasing VAT compliance is linked with legislation be in force for a long time.

Moreover, countries with lower population are expected to have a high level of VAT compliance. Keen and Smith (2007, p. 11) examined the relationship between these two decomposed gaps for the high level income countries. In their studies, high VAT rate causes tax fraud and evasion as it encourages informal activities. In case of rate differentiation in VAT, taxpayers consider the reduced tax rate and look for the ways for the tax fraud and evasion. They also stress that tax exemption and allowances used for overcome the technical problems for allocating and using tax as a fiscal tool and can be defined as efficient tools for preventing tax fraud and evasion.

As inferred from equation 1 and 2, compliance gap and the policy gap are not independent from each other. The relationship between these two gap definitions is obvious. Tax exemptions, allowances, reductions in tax rate and tax threshold are the factors that contributes to policy gap in a positive manner. Increase in policy gap, arising from legal arrangements, causes a decrease in compliance gap. Tax exemptions and deductions discourage taxpayer for tax exemptions and tax frauds and finally foster them to reach tax compliance level. On the other hand, this approach may cause taxpayers to examine the loopholes in the tax system thereby giving rise to policy gap.

3. METHODS TO CALCULATE TAX GAP

Almost in all economies, taxation has two important dimensions. It is considered to be a fiscal burden for the taxpayers as well as causing to the emergence of the tax compliance problems. Although, the effects of the frequency of the tax amnesty conducted in the country, not to treat taxes as liability, corruption in tax morale and the political decisions are well known, the magnitude of these effect has to be questioned. This situation generates some questions like "Does the tax administration working effectively?", "What is the contribution of tax policy to tax revenue?", "What is the level of tax compliance and tax morale of the taxpayers?". As a reply to these questions, a comparison, including the calculation of VAT tax revenue, compliance gap and policy gap, should be made. In the literature, two basic approaches are known for calculating tax gap: "top-down method", based macroeconomic data and "bottom-up method" based on microeconomic data.

3.1 Top-Down method

As a method to calculate tax gap, top-down approach employs macroeconomic methods. Top-down approach is based on a theoretical calculation of the tax base used to estimate the tax liability. By ensuring compliance with the essence of the law and provided documents theoretical liabilities are taken from all individuals (IFPTMFSR 2012, p. 3). Top-down approach is also known as "Indirect method" as it utilizes tax return records and data other than the connections. According to the top-down approach, tax gap is the difference between the theoretical tax liabilities and the total tax revenue. As mentioned before, the cause of this difference is examined under the two main groups of compliance gap and the policy gap.
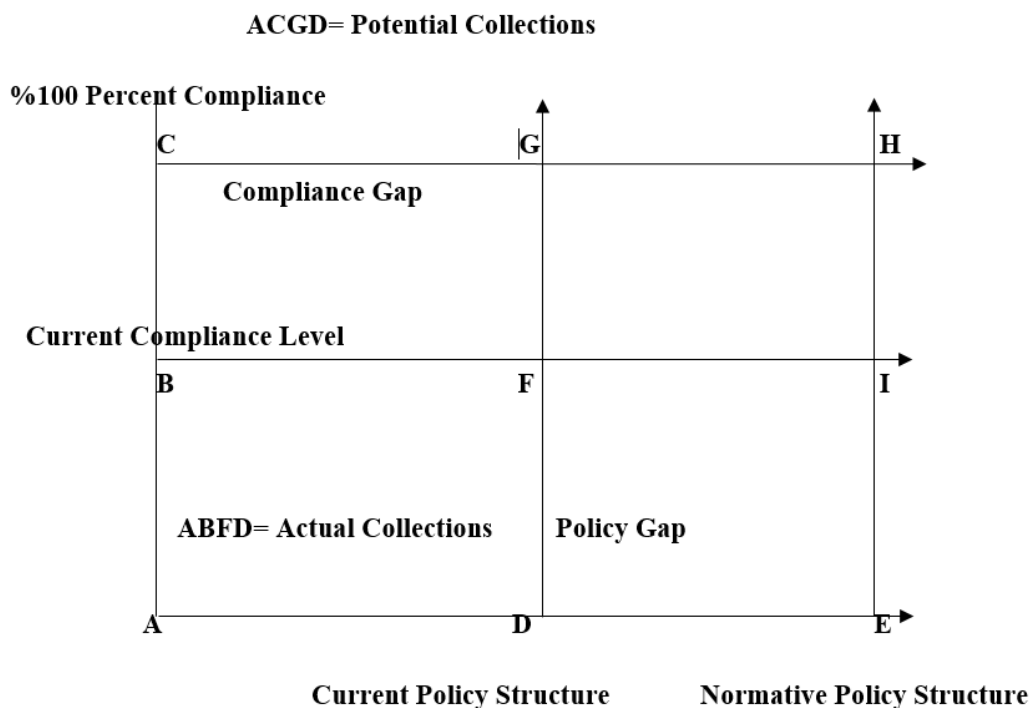
Figure following on the next page

Figure 1. Calculating Tax Gap (Presentation Hutton from Fiscalis Tax Gap Project Group)

Within the framework of top-down approach, potential collectable VAT revenue and collected VAT revenue are compared. Then, based on national income accounts and other statistical resources, several computations are made. As shown by figure 1, ACDG are stands for potential collectable VAT revenue and ABFD for the collected VAT revenue. If one subtracts the collected VAT revenue (ABFD) from the potential collectable VAT revenue (ACDG), compliance gap is found (ACDG-ABFD). With the top-down approach, policy gap is calculated in three steps. First, the ratio of the collected VAT revenue (ABFD) to potential collectable VAT revenue (ACGD) is calculated. Then, ACGD area, the sum of collected VAT revenue and compliance gap (ACGD) is subtracted from full potential area (ACHE). The final step includes multiplying the ratio calculated in step 1 with the difference obtained in step 2. (DFIE) *(Presentation Hutton from Fiscalis Tax Gap Project Group, p.16-17).*

To conduct an effective analysis of the tax gap, Toro *et al* (2013) discourse five canons: Collection of tax base from independent sources, accuracy of the statistical data, being consistency and comprehensive and detailed data. The disadvantage of the top-down method, which is based on macroeconomic foundations, is arised from the fact that it does not assure household or firm's tax gap at microeconomic level when reaching to total tax gap. Accordingly, when examining tax gap choice between micro or macro level is a crucial selection (IFPTMFSR, 2012).

3.2 Bottom-Up Method

Alternative method to calculate tax gap is "bottom up" approach. This method reaches to "taxable income", while the top-down method does not. However, it is longer and and more comprehensive than the top-down method. In this approach, tax gap is calculated by households and firms' micro data. Within this method, gathered results are applied to all taxpayer groups, the population of a country and firms with the same characteristics (IFPTMFSR, 2012, p. 10). In other words, with the bottom up approach, total tax gap is calculated from the tax gap

components. The most commonly used components in the microeconomic approach are the data matching, risk analysis and the stochastic researches. (Thackray, 2012, p. 12).

- *Data matching*: Controlling the information and data from different resources for the determination of undeclared assets and income.
- *Risk analysis*: The analysis of the big businesses' potential losses stems from tax risk and tax avoidance by the tax experts.
- *Stochastic researches*: Evaluating the results derived from the controlling the information obtained from the randomly selected assessments.

Bottom up approach, as in the top down method, ensures only an indefinite estimate of the total tax gap while it has some important advantages comprising functional and beneficial information. Detailed tax gap analysis, requisite for the bottom up approach, provides prioritization of compliance resources to maximize collected tax revenue.(Rubin, 2011, p. 111). Bottom up approach provides more information of tax gap than the top down method. As the operational information is weakened as a result of deterioration in the tax governance, nearly all countries use prepared information and causing the top down method to give more accurate information. (Keen, 2013, p. 18). Therefore, it can be said that bottom up approach is a rough estimation of underreported income. Because, bad governance quality generates doubt of the accuracy, consistency and independence of the obtained data and obstructs to reach clear information on tax gap.

4. REVENUE PERFORMANCE OF VAT AND VAT GAP IN TURKEY FOR 1993-2014 PERIOD

In this part of the study, VAT gap, policy gap and compliance gap in Turkey were calculated by using top down -based on macroeconomic approach- method for 1993-2014 period. The reason behind this selection is the ease of collecting data on tax liability and tax revenue in Turkey. In addition, Turkey, as a country with a low level of quality of governance, as the bottom up method arouses suspicion about firms' underreported earnings and informal data, this method was not preferred.

Used data in this tudy, VAT revenue and VAT rate from OECD Tax Revenue Statistics, GDP and consumer spending from Annual National Accounts, accured tax and collected tax from Turkish Revenue Administration are taken.

Table following on the next page

Years	Compliance Gap/VTTL	Compliance Gap/GDP	Policy Gap
1993	0,26	0,008	0,48
1994	0,27	0,009	0,55
1995	0,28	0,010	0,37
1996	0,28	0,011	0,43
1997	0,27	0,011	0,45
1998	0,28	0,011	0,42
1999	0,31	0,012	0,40
2000	0,29	0,014	0,44
2001	0,31	0,016	0,44
2002	0,20	0,012	0,48
2003	0,17	0,010	0,46
2004	0,16	0,010	0,39
2005	0,19	0,011	0,37
2006	0,08	0,005	0,39
2007	0,10	0,007	0,36
2008	0,11	0,007	0,35
2009	0,14	0,009	0,33
2010	0,16	0,011	0,39
2011	0,18	0,013	0,42
2012	0,17	0,012	0,40
2013	0,17	0,013	0,44
2014	0,20	0,015	0,41

Table 1: VAT Revenue Performance Indicators and Tax Gap Data in Turkey (1993–2014)
(Authors' Calculations)

Figure 2, visualizes the Table 1's calculations of compliance gap and policy gap in Turkey. In the figure, it is observed that policy gap is greater than the compliance gap in the all periods. Within this framework, it is possible to state that forgoned tax collections resulted from exemptions, deductions and rate differentiations are greater than the loss caused by informal economy.
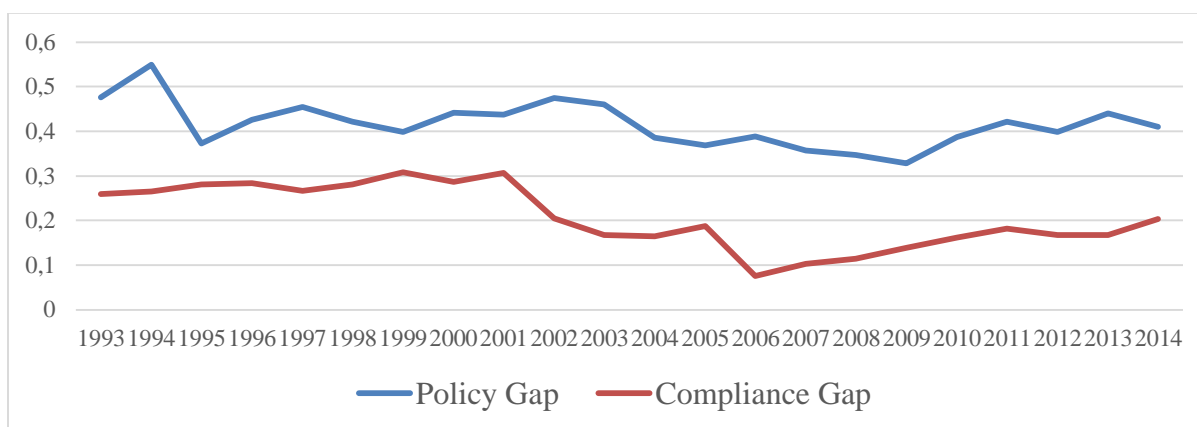

Figure 2: Policy Gap and Compliance Gap in Turkey (1993-2014)

In 1995, VAT rate in Turkey was increased from 10% to 15%, causing a fall in the policy gap. Despite that, increasing VAT rate to 17% caused a rise in policy gap. This situation can be linked to tax refund with the Law No. 4369 in 2000, exceeding the specified amount to taxpayers, in case of the delivery and discharge of goods and services with reduced tax rate. This decision can be said to have an effect on the increase of the policy gap. The introduction of the Special Consumption Tax In 2002, abolishing 26% and 40% tax rates and assigning 18% the standard rate and conducting reduced VAT rate system caused an increase in policy gap.

The frequency of the tax amnesties in Turkey causes policy gap as well as compliance gap for the taxpayers. Since 2003, four tax amnesties have been observed. Moreover, taxpayers' expectations of tax amnesties cause increase in tax gap. By examining previous tax amnesties, the elimination of tax penalties and late fees have been on duty, leaving tax base unchanged. Nevertheless, the main reason for the formation of the tax gap is taxpayers' expectations for recurrent tax amnesties and the perception of taxpayer in which he will have benefit from the tax deductions, thereby causing a corruption in tax morale.

To our knowledge, in Turkey, Ministry of Finance, Treasury Undersecretary and other associated institutions have not conducted statistical analyses for tax gap. The lack of these studies can be regarded as the justification of policy gap and compliance gap in Turkey. In addition to taxpayers' compliance, compliance gap indicates the performance of the tax administration. Absence of the tax gap calculations causes disappearancy of the deterrent effect on taxpayers and prevents laiding out the operating performance in the tax offices. As in other countries, calculation of tax gap by governmental institutions and decomposing tax gap into policy gap and compliance gap will improve tax gap as well as the efficiency of the tax administration and will contribute to the significance of the policies to be followed within this framework.

Considering the sum of compliance and the policy gap in Turkey, table 1 indicates that this value ranges between 46% and 75%. Based on the tax gap data, Silvani and Bear (1997) divide the countries into four categories[1]. In accordance to calculations, Turkey find itself in the group of "countries with inefficient tax policy". In this study, countries in this group face with the lack of financial resources, qualified and trained personnel, processes that reduce efficiency, absence of the deterrent mechanisms preventing compliance gap, lack of efficient taxpayer service, inefficiency of the tax administration, the weakness of the tax administration in tax collecting and the problem of corruption. Calculations in our study support the foresight that these problems exist in Turkey.

Efficient execution of the VAT requires a unique, standard rate implication. Exact measurement of the VAT performance is not an easy job. Consequently, the term of "performance" should be stated clearly and VAT gap should entirely be scoped out. Considering the essence of VAT, OECD (2008) defines this tax as a broad based and flat tax. It is also stated that, VAT is neither a redistributive nor a tax with social purposes. That's why, exceptions and exemptions are out of the VAT's scope. (OECD, 2008, p. 66). In this wise, fiscal function of the VAT, ensuring the correspondence between tax administration and taxpayers have been pointed out for the sake of to implement flat VAT rate. Considering the redistributive function of the government and modern taxation principles, implementing a flat VAT rate is not an easy job.

---

[1] 1.group: Tax gap is ≤ 10%, countries with efficient tax administration
2. group: Tax gap is ≥ 10%, ≤ 20% countries with partially efficient tax administration
3.group: Tax gap is ≥ 20%, ≤ 40%, countries with partially inefficient tax administration
4.group: Tax gap is ≥ 40%, countries with inefficient tax administration

VAT Revenue Ratio = VAT Revenue / (Consumption- VAT Revenue) * VAT Rate   (3)

As stated by equation 1, VAT Revenue Ratio ranges from 0 to 1. As it approaches to 1, VAT is said be collected in an efficient manner and there is a perfect correspondence between tax administration and taxpayers, while 0 denotes negative situation policy gap and compliance gap (Çelikkaya, 2011, p. 117). Figure 3, exhibits VAT Revenue Ratio in Turkey for 1993-2014 period.
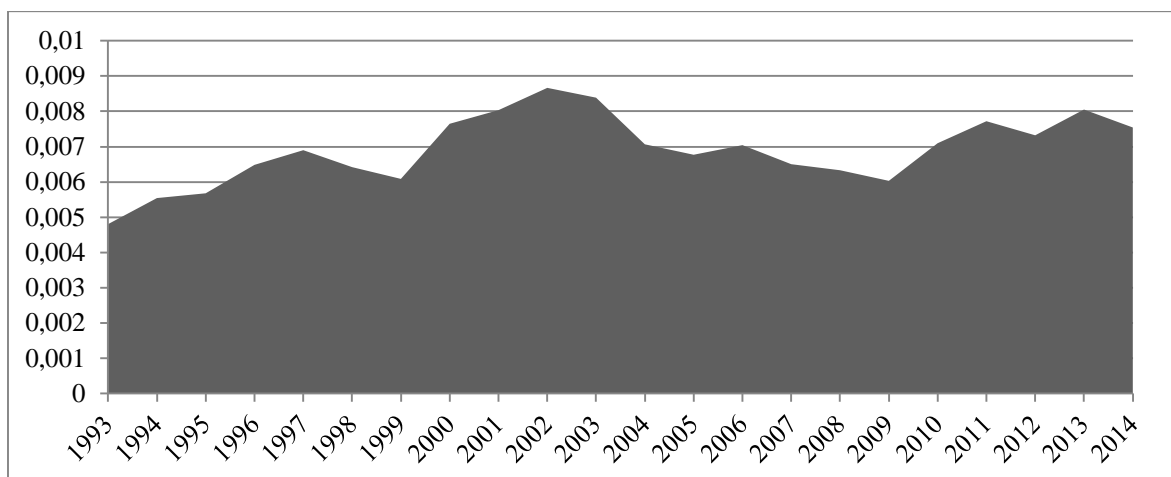

Figure 3. VAT Revenue Ratio in Turkey (1993-2014) (Authors' Calculations)

VAT Revenue Ratio in Turkey ranges from 0,004 and 0,009. These values can be attributed to the excess value of the base gap, as a component of the compliance gap, affecting from the high level of the tax exemptions, deductions and tax evasion.

5. SUMMARY AND CONCLUDING REMARKS
Firstly, VAT gap which gain importance recently in the literature should be calculated by various governmental institutions to avoid VAT gap. After that, the cause of gap should be determined and search for solutions.
One of the important steps to reduce VAT gap is a legal legitimate which has been in force for a long time and avoid frequent changes in legislation. Without rate difference, clear and understandable legislation for VAT are crucial for taxpayers and tax administration to reduce taxpayer's compliance costs.
To ensure voluntary compliance for VAT, the frequency of expected tax amnesties should be adjusted so as to reduce the compliance gap. Investigating psychology of taxpayer and tax consciousness can be treated as effective policies against compliance gap.
In political approach, politicians see individual as a vote. To maximize vote, politicians use exemptions as deductions as political tools. This situation creates policy gap and it can be solved by efficient reform of the tax system. Gemmel and Hasseldine (2012) expressed that, the measure to be taken improves the tax system influence consumption pattern and it can affect policy gap directly or indirectly, so it provides processing of the control mechanism.
Electronic billing and simplification of VAT procedures for small business increase the compliance for VAT. However, tax penalties should persuade taxpayers who fraud document, do not pay VAT and seek ways to tax evasion.

LITERATURE
1. Agha, A. and Haughton, J. (1996). Designing VAT Systems: Some Efficiency Considerations. *Review of Economics and Statistics,* 303-308.
2. Center for Social and Economic Research and Central Planning Bureau.- CSERCPB (2013). *Study to quantify and analyse the VAT Gap in the EU-27 Member States.* Warsaw: European Commission, TAXUD.
3. Çelikkaya, A., (2011*). Examining the Structural Evaluation of VAT and Its Last Harmonization Efforts in OECD Countries, *Sosyo Ekonomi.* 14(14), 111-126.
4. Gemmell, N., and Hasseldine, J., (2012). The Tax Gap*: A Methodological Review. Working Paper Series 2435, Victoria University of Wellington, Chair in Public Finance.
5. Giles, D. E. (1999). Measuring the Hidden Economy: Implications for Econometric Modelling. *The Economic Journal*, 109/456, 370-380.
6. Institute for Financial Policy The Ministry of Finance of the Slovak Republic – IFPTMFSR (2012). *The Estimate of the Value Added Tax Revenue Loss.*
7. Fiscalis Tax Gap Project Group (2016). *The Concept of Tax Gaps Report* on *VAT Gap Estimations.* (FPG/041). Brussels, March.
8. Keen, M. (2013). The Anatomy of the VAT. *IMF Working Paper*, WP/13/111. IMF.
9. Keen, M., and Smith, S. (2007). VAT Fraud and Evasion: What Do We Know, and What Can be Done?. *IMF Working Paper*, WP/07/31. IMF.
10. Plumley, A. (2005). Preliminary Update of the Tax Year 2001 Individual Income Tax Underreporting Gap Estimates. *Recent Research on Tax Administration and Compliance: Proceedings of the 2005 IRS Research Conference,* Statistics of Income, Internal Revenue Service , 15-25.
11. Reckon. (2009). *Study to Quantify and Analyse the VAT Gap in the EU-25 Member States.* London: DG Taxation and Customs Union.
12. Rubin, M. (2011). The Practicality of the Top-Down Approach To Estimating the Direct Tax Gap. *Her Majesty's Revenue and Customs* , 109-127.
13. Silvani, C., and Baer, K. (1997). *Designing a Tax Administration Reform Strategy: Experiences and Guidelines.* Washington D.C.: IMF Fiscal Affairs Department. WP/97/30
14. Thackray, M., and Ueda J. (2014). *Report of The Findings From The Revenue Administration Gap Analysis Program - The Value-Added Tax Gap In Estonia.* IMF, Report No. 14/133.
15. Thackray, M. (2012). The UK Tax Gap. HM Revenue & Customs, January.
16. Toro, J., Ogata, K., Hutton, E., and Caner, S. (2013). *Assesment of HMRC's Tax Gap Analysis.* IMF, Fiscal Affairs Department, Country Report No. 13/314.
17. Turkish Revenue Administration Website (2015), 10.10.2014 from http://www.gib.gov.tr/fileadmin/user_upload/VI/GBG1.html.
18. OECD (2008), Consumption Tax Trends.
19. OECD Tax Revenue Statistics Website (2015), 10.10.2014 from http://stats.oecd.org/index.aspx?DataSetCode=REV.
20. OECD Annual National Accounts Website (2015), 10.10.2014 from http://stats.oecd.org/Index.aspx?DataSetCode=SNA_TABLE1.
21. Zidkova, H., (2014). Determinants of Vat Gap In EU, *Prague Economic Papers*, 4, s.514-530.

KNOWLEDGE LEVELS OF THE CONSUMERS ABOUT ECO-FRIENDLY PRODUCTS IN EDIRNE - KESAN DISTRICT SAMPLE

Ebru Onurlubas

Trakya University,Kesan Yusuf Capraz School of Applied Sciences,Department of International Trade,Edirne,Turkey
ebruonurlubas@trakya.edu.tr

ABSTRACT
The consumption behaviors which covary with globalization create negative effects for the environment. The increasing environmental consciousness of the consumers have caused their environmental concerns to raise in time. Thus, the consumers have been trying to change their purchasing behaviors and they show a tendency to purchase eco-friendly products more. Within this scope, the relations between the consumers' acquaintance with eco-friendly products and their behaviors of purchasing eco-friendly products according to their demographics have been examined. The data that were used in the study have been obtained from face to face interviews with 143 families in Keşan district of Edirne. In the research, it has been determined that 59;4% of the consumers are acquainted with eco-friendly products and 35,7% of them purchase eco-friendly products. In the Chi-square analysis, a significant relation has been determined between age, education, occupation, marital status and acquaintance with green products. Additionally, a significant relation has been found between age, education, income and purchasing of green products, as well.
Keywords: *Consumer, eco-friendly product, level of knowledge, purchasing*

1. METHODOLOGY
The main material of the study is formed by the questionnaires conducted in Keşan district of Edirne in 2015. The population of Keşan Central District in 2015 was determined as 66 533 (Anonim, 2015)

$$\frac{N * p * q}{(N - 1) * D + (p * q)} \qquad (1)$$

N= Population (66 553)
p=0,5
q=0,5
D=(e/z)^2 (0, 0819/1,96)^2
D= Error rate (0,0017460455)
z= Statistics value (1,96 and 95% confidence interval)
n=143 (Number of participants)

The sample size has been determined as 143 as a result of the calculation made with error margin of 0,0819 and confidence interval of 95%. 143 questionnaires were distributed randomly.

1.1.Research Models
In Research Model 1 of this study, the aim is to determine whether the consumers' knowledge status of eco-friendly products is different according to demographics or not. In Research Model 2, the aim is to determine whether the consumers' status of purchasing eco-friendly products is different according to demographics or not.
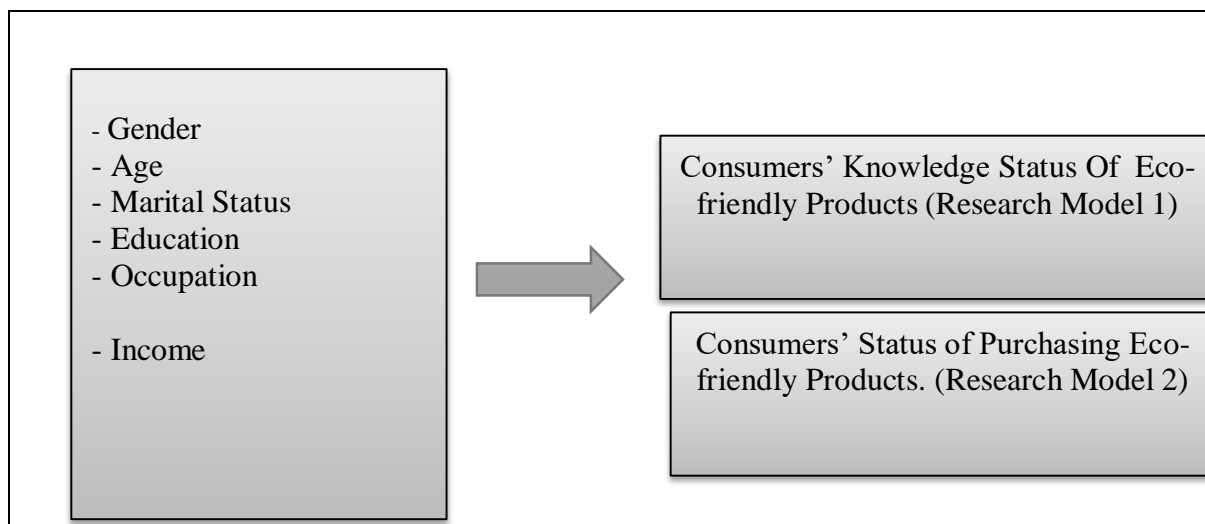
The main hypotheses according to Research Model 1 are as below;

H_1= There is a significant relation between gender and consumers' knowledge status of eco-friendly product.

H_2= There is a significant relation between age and consumers' knowledge status of eco-friendly product.

H_3= There is a significant relation between marital status and consumers' knowledge status of eco-friendly product.

H_4= There is a significant relation between educational status and consumers' knowledge status of eco-friendly product.

H_5= There is a significant relation between occupation and consumers' knowledge status of eco-friendly product.

H_6= There is a significant relation between income and consumers' knowledge status of eco-friendly product.

The main hypotheses according to Research Model 2 are as below;

H_1= There is a significant relation between consumers' gender and their status of purchasing cco-friendly products.

H_2= There is a significant relation between consumers' age and their status of purchasing cco-friendly products.

H_3= There is a significant relation between consumers' marital status and their status of purchasing cco-friendly products.

H_4= There is a significant relation between consumers' educational status and their status of purchasing cco-friendly products.

H_5= There is a significant relation between consumers' occupation and their status of purchasing cco-friendly products.

H_6= There is a significant relation between consumers' income and their status of purchasing cco-friendly products.

1.2.Analysis of the Data

Chi-square analysis has been used in order to test if there is a stastical relation between the demographics of the consumers and their knowledge status of eco-friendly products and their status of purchasing eco-friendly products.

The formula of the Chi-square is as below (Gujarati, 1995; Mirer, 1995): In the formula;

$$\chi^2 = \sum_{i=1}^{k} \frac{(Q_i - E_i)^2}{E_I}$$

χ^2 : Chi-square value, Q_i : Observed value of frequency, E_i : Expected value of frequency

2. INTRODUCTION

Consumers have recently realized that using natural resources is limited and there are more precise realities about these resources than it is thought (Ay & Ecevit 2005). This has caused the emergence of the concepts of ecological product and ecological consumer. Eco-friendly products or in other words green products are the products that are produced by ecocredential production methods, that are enduring, non-toxic and recyclable (Emgin & Türk, 2004:9). Green consumers are considered to be the consumers who are sensitive to environmental issues. Precisely, they are the consumers who avoid the products and services which are harmful to people's health; which can be harmful to the citizens of one's own country and the other other countries by causing unnecessary energy consumption, pollution and waste through the processes of pre-production, during production and post production and which pose a threat to the environment (Elkington, 1994; Çabuk et al., 2008).

The facts that green consumers have recently emerged and the sensivity towards environmental problems have arisen, seeing eco-consciousness in the market more have caused important results in terms of organizational activities. Decreasing environmental problems to a minimum level requires the companies to change the functions of their organization – primarily production, purchasing and marketing activities – and their corporate cultures radically (McDaniel & Rylander, 1993: 6). The organizations which have social consciousness and social responsibility have gained a heavy image in the eyes of consumers (Varinli, 2000:15). This has led the emergence of the concept of eco-friendly product marketing. In other words, it is called green marketing. Green marketing is also named as social marketing, ecological marketing, environmental marketing and sustainable marketing (Soonthonsmai, 2001:18; Camorro & Banegil,2005:11; Chamorro et al.,2007). Polonsky described green or ecological marketing as; " it contains all the activities that meet the requests and needs of the consumers and while meeting these requests and needs, it is important that minimum harm is given to the natural environment" (Polonsky, 1994:46). This marketing perception projects that the product needs to be green from the stage of packaging to the stage of being waste after the date of expiry and for this purpose, it gives priority to informative signs and annotations for consumers in the presentation stage of the product or service (Düren, 2000: 209-210).

The damages for the environment and limited natural resources are lowered by using eco-friendly products. Therefore, the aim is to determine the consumers' knowledge and purchasing statuses of eco-friendly products in relation to their demographics of the consumers in Keşan central district of Edirne.

3.THE RESEARCH AND THE FINDINGS

It is observed that 45,5% of the participants are females and 54,5% are males. It has been determined that 25,9% of the participants are aged between 18 – 25; 13,3% are between 26 – 30; 21,7% are between 31– 40; 21,7% are between 41 – 50; 9,1% are between 51 – 60; 8,4% are aged 61 and above. 58,0% of the consumers are married, 36,4% are single and 5,6% are divorced.

According to the results of their educational statuses, it has been determined that 1,4% of the participants are illiterate, 2,8% are literate, 21,0% are primary school graduates, 11,9% are secondary school graduates, 27,3% are associate's degree, 32,9% have bachelor's degree and 2,8% have master's degree.

When the average monthly incomes of the families are examined, it is observed that 9,1% of the participants have an income of 1000 TL and below, 14,7% have between 1001 – 1500 TL, 23,1% have between 1501 – 2000 TL, 28,0% have between 2001 – 2500 TL, 17,5% have between 2501 – 3500 TL and 7,7% have 3501 TL and above. When the professions of the participants are examined, it has been determined that 12,6% are civil servants, 27,3% are workers, 8,4% are self-employed, 14,7% are housewives, 5,6% are retired and tradesmen/businessmen 31,5% are private sector employees.

Table 1: Consumers' Knowledge Status of Eco-friendly Product According to Their Demographical Features
(Continues on the next page)

		Knowledge Status of Eco-friendly Product			
		Cognizant of eco-friendly products		Miscognizant of eco-friendly products	
		Frequency	%	Frequency	%
Gender	Male	43	55,1	35	44,9
	Female	41	63,1	24	36,9
P: 0.336 χ^2: 0.924 Df:: 1 $p > 0.05$ nonsignificant					
Age	18-25	34	91,9	3	8,1
	26-30	13	68,4	6	31,6
	31-40	22	71,0	9	29,0
	41-50	9	29,0	22	71,0
	51-60	3	23,1	10	76,9
	61 and above	3	25,0	9	75,0
P: 0,00 χ^2: 43,173 Df:: 5 $p < 0.05$ significant					
Marital status	Married	44	84,6	8	15,4
	Single	40	48,2	43	51,8
	Divorced	0	0,0	8	100
P: 0,00 χ^2: 29,564 Df: 2 $p < 0.05$ significant					
Educational status	literate	0	0,0	2	100
	illiterate	0	0,0	4	100
	Primary school graduates	0	0,0	30	100
	Secondary school graduates	4	23,5	13	76,5
	Associate's degree	29	74,4	10	25,6
	Bachelor's degree	47	100	0	0,0
	Master's degree	4	100	0	0,0
P: 0,00 χ^2: 99,698 Df: 6 $p < 0.05$ significant					

Occupation	Civil servant	11	61,1	7	38,9
	Worker	16	41,0	23	59,0
	Self-employed	7	58,3	5	41,7
	Housewife	7	33,3	14	66,7
	Retired	6	75,0	2	25,0
	Private sector employee	37	82,2	8	17,8
P: 0,01 χ2 : 21,796 Df: 5 p< 0.05 significant					
Monthly income	0-1000	6	46,2	7	53,8
	1001-1500	10	47,6	11	52,4
	1501-2000	21	63,6	12	36,4
	2001-2500	24	60,0	16	40,0
	2501-3500	16	64,0	9	36,0
	35001 and above	7	63,6	4	36,4
P: 0, 751 χ² : 2,668 Df: 5 p > 0,05 nonsignificant					

According to Chi-square analysis, whereas there is not a significant relation between gender and knowledge status of eco-friendly products , a significant relation has been determined between the knowledge status of eco-friendly products and age, marital status, educational status and profession.

Table following on the next page

Table 2: Consumers' Status of Purchasing Eco-friendly Products According to Their Demographical Features

		Purchasing Status of Eco-friendly Products			
		Purchases eco-friendly products		**Does not purchase eco-friendly products**	
		Frekans	%	Frekans	%
Gender	**Male**	30	38,5	48	61,5
	Female	21	32,3	44	67,7
P: 0.444 χ^2 : 0,585 **Df:** 1 **p > 0,05 nonsignificant**					
Age	18-25	15	40,5	22	59,5
	26-30	12	63,2	7	36,8
	31-40	9	29	22	71
	41-50	10	32,3	21	67,7
	51-60	4	30,8	9	69,2
	61 and above	1	8,3	11	91,7
P: 0,04 χ^2 : 11,436 **Df:** 5 **p< 0,05 significant**					
Marital status	Married	19	37,3	35,9	33
	Single	29	56,9	58,7	54
	Divorced	3	5,9	5,4	5
P: 0,976 χ^2 : 0,048 **Df:**2 **p > 0,05 nonsignificant**					
Educational status	literate	1	50,0	1	50,0
	illiterate	2	50,0	2	50,0
	Primary school graduates	3	10,0	27	90,0
	Secondary school graduates	7	41,2	10	58,8
	Associate's degree	15	38,5	24	61,5
	Bachelor's degree	20	42,6	027	57,4
	Master's degree	3	75,0	1	25
P: 0,04 χ^2 : 13,177 **Df:**6 **p< 0.05 significant**					
Occupation	Civil servant	9	17,6	9	9,8
	Worker	12	23,5	27	29,3
	Self-employed	5	9,8	7	7,6
	Housewife	4	7,8	17	18,5
	Retired	3	5,9	5	5,4
	Private sector employee	18	35,3	27	29,3
P: 0,402 χ^2:5,115 **Df:**5 **p > 0,05 nonsignificant**					
Monthly income	0-1000	0	0	13	100
	1001-1500	1	4,8	20	95,2
	1501-2000	2	6,1	31	93,9
	2001-2500	24	60	16	40
	2501-3500	16	64	9	36
	35001 and above	8	72,7	3	27,3
P: 0,00 χ^2 : 54,209 **Df:**5 **p< 0.05 significant**					

According to Chi-square analysis, a significant relation has been determined between the purchasing status of eco-friendly products and age, educational status and income.

In the study, the question" What does eco-friendly product mean to you?" has been asked to the 84 consumers who are cognizant of eco-friendly products. According to the answers, it has been determined that 58% of the participants think of it as the recyclable product, 57,3% think as the product which does not consume natural resources, 46,9% think as green or eco-friendly product, 49,0% think as the product which does not pollute the earth.

The question "Which of the definitions below are the features of eco-friendly product?" has been asked to the 84 consumers who are cognizant of eco-friendly products. 59,4% of the consumers have stated that the products are designed to be recycled and reused, 55,9% have stated that they do not cause pollution, 53,1% have stated that they do not harm human health. 42,7% have stated that they have the ability to lower global environmental problems, 41,3% have stated that they are energy-saver.

*Table 3: Consumers' Knowledge Status of The Signs of Eco-friendly Products * (%)*

| 18,9 | 31,5 | 58,0 | 32,9 | 22,4 | 35,7 | 15,4 |

*As the participants answered more than one option the total exceeds 100 (Cognizant People)

In order to determine whether the 51 consumers who buy eco-friendly product know the signs of these products or not, the signs of eco-friendly products in Table 3 have been shown to them and it has been determined that 58,0% of them know the recyclable sign.

When the consumers were asked: "How would you behave when purchasing the products, if you realize that they have negative effects on environment and harmful?", 55,8% have stated that they would buy less, 35,6% have stated that they would stop buying and 8,6% have stated that they would go on buying the same products. Thus, it can be concluded that consumers are sensitive about the products that affect the environment negatively.

It has been determined that out of the participant consumers who have stated that they could pay more for the eco-friendly products, 22,2% have stated that they could pay 1-5% more than the normal price, 28,8% have stated that they could pay 6-10% more, 10,7% have stated that they could pay 11-15% more, 14,6% have stated that they could pay 16-20% more, 12,7% have stated that they could pay 21-30% more and 11,0% of them have stated that they could pay 30% and above more.

4.CONCLUSION

54,5% of the participants in the survey are males and 45,5% are females. Araştırmaya katılan kişilerin %54,5 erkek, %45,5'i kadındır. It has been determined that 59,4% of the participant consumers know eco-friendly products and 35,7% of the participants purchase eco-friendly products.

It has been shown that young people know about eco-friendly products more. This can be explained by the reason that they use technological communication tools more and especially by using the internet they are quickly informed about the innovations. It has been determined that married people are more cognizant of eco-friendly products, too. This can be explained by the reason that married people feel responsible to their wives/husbands and children and so they do more research on these issues in order to avoid the possible environmental problems in the future. As the educational level increases the level of consciousness increases, too. We can see in this survey that as the educational level increases, the knowledge status of eco-friendly

products increases to the top. A significant relation has also been determined between the knowledge status and profession and it has been determined that private sector workers know the products the most.

In the survey, it has been shown that young people purchase eco-friendly products more. The reason for this could be that young people use technology and communication tools more commonly. Due to the fact that the educational level has increased and so the level of consciousness increased, too, the purchasing habits of people have changed accordingly. We can see that the peole with higher levels of education purchase the products more due to their high consciousness of environment.

As the level of income of the consumers increases, they purchase eco-friendly products more. It is a known fact that the prices of eco-friendly products are higher than the other products due to their high production costs. The high prices of eco-friendly products prevent the consumers with lower incomes from buying these products. Therefore, people with high incomes can buy these products more.

It has been determined that consumers mostly (58%) consider eco-friendly products as the products which are recyclable. Furthermore, it has been determined that they mostly think eco-friendly products are designed to be recycled and reused. When the participants are shown the signs of eco-friendly products, it was determined that most of them can recognize the recyclable sign. It has been determined that most of the consumers can pay 6-10% more at most.

The rising consciousness of the consumers towards the environment increases the purchasing ratio of eco-friendly products. Therefore, it is assumed that in order to have a corner on the market, organizations need to develop their production plans by considering the environmental sensitivity of the consumers.

LITERATURE:
1. Anonim, 2015. http://edirne.yerelnet.org.tr/il_ilce_nufus.php?iladi=ED%DDRNE
2. Arıkan, R., 2007. Araştırma Teknikleri ve Rapor Hazırlama. 6.baskı, ISBN:975-8784-35-8, Ankara.
3. Ay, Canan ve Ecevit, Zümrüt (2005). "Çevre Bilinçli Tüketiciler". Akdeniz İ.İ.B.F. Dergisi, 10, 238-263
4. Çabuk, S., Nakıboğlu, B., Keleş, C. (2008). "Tüketicilerin Yeşil (Ürün) Satın Alma Davranışlarının Sosyo-Demografik Değişkenler Açısından İncelenmesi", Ç. Ü. Sosyal Bilimler Enstitüsü Dergisi, 17 (1), 85-102.
5. Düren, Zeynep (2000). 2000'li Yıllarda Yönetim, İstanbul: Alfa/Aktüel Kitabevi, s. 209.
6. EMGİN, Övgü ve TÜRK, Zehra (Haziran 2004). Yeşil Pazarlama (Green Marketing). Mevzuat Dergisi, Yıl: 7, Sayı: 78
7. Elkington, J. (1994). "Toward the Sustainable Corporation: Win-Win-Win Business Strategies for Sustainable Development." California Management Review, 36, 90–100.
8. Gujarati DN (1995). Basic Econometrics. 3 Edition, McGraw - Hill, Inc., New York
9. McDonagh, P. ve Prothero, A. (1992). "Producing Environmentally Acceptable Cosmetics? The Impact of Environmentalism on the United Kingdom Cosmetics and Toiletries Industry", Journal of Marketing Management, 8(2): 149
10. McDaniel, S. W. ve Rylander, D. H. (1993). "Strategic Green Marketing", Journal of Consumer Marketing, 10(3): 4-10.

11. Mirer TW (1995). Economic Statistics and Econometrics. 3 Edition, Prentice Hall, Inc., New Jersey

12. Peattie, Ken (2001). "Towards Sustainability: The Third Age of Green Marketing". The Marketing Review, 2, 129-146

13. Polonsky, M. Jay (1994). "Green Marketing Regulations in the US and Australia: The Australian Checklist". Greener Management International, Vol: 5, 44-53.

14. Tek, Ö. B. (1997). Pazarlama İlkeleri –Global Yönetimsel Yaklaşım , Cem Ofset Matbaacılık, A.Ş.,İzmir.

15. Varinli, İ.(2000). Pazarlama Ahlakı ve Kayseri'de Küçük ve Orta Ölçekli İşletme Yöneticilerinin Pazarlama Ahlakına İlişkin Değerlendirmeleri Kayseri Ticaret Odası Yayınları, Yayın No:15, s.179.

THE CHANGING LANDSCAPE OF VOLUNTARY PENSIONS IN THE CEE REGION

Edyta Marcinkiewicz
Lodz University of Technology, Poland
edyta.marcinkiewicz@p.lodz.pl

ABSTRACT

The main aim of this paper is to assess the significance of voluntary pensions in selected CEE countries and to discuss the changes in the role of the third pillar. The study provides insight into the recent reforms and implemented solutions with respect to the supplementary pension schemes in Bulgaria, the Czech Republic, Croatia, Hungary, Poland, Romania and Slovenia. The empirical study analyses the development of voluntary private pension plans in these countries in the time span between 1998 and 2015 using statistical data on the assets of the third pillar pension plans, the contributions paid and the membership.
Keywords: CEE countries, pension system, third pillar, voluntary pensions

1 INTRODUCTION

The last two decades have seen significant pension reforms in many European countries. These were driven by the unfavourable demographics that resulted in strong fiscal pressure on public pension systems based on the PAYG formula. But it seems that the most fundamental changes during that time affected pension systems in Central and Eastern European countries. They inherited purely PAYG pension systems from the communist era. But shortly after the political transformation at the beginning of the 1990s, it became obvious that the old pension systems were not sustainable and they would not withstand the burden of aging populations. As a result, in the late 1990s most of the CEE countries implemented a three-pillar pension model, promoted by the World Bank. It enhances the role of privately managed funds, both mandatory and voluntary, that constitute the second and the third pillar in a multi-pillar pension system. Compared to other European countries, the CEE countries formed a very distinctive group in this respect, their pension system designs resembled more those in Latin America than in Europe. However, the financial crisis in 2008 very strongly affected pension systems in the region. Among various measures taken to overcome this problem such as raising the retirement age, reducing benefits from the first pillar or elimination of the early retirement option, in some countries of the CEE region a retreat from previously introduced reforms was observed (see e.g. Milos and Milos, 2012; Chybalski, 2011; Aslund, 2012; Hinrichs, 2015 for a review). These originated from two main factors. First, the crisis created an additional pressure on public finances and in order to support the publicly managed part of pension system, the role of the second pillar was reduced in favour of the first pillar. Second, it caused severe drops in the value of assets allocated in private pension funds. As a result, pre-funding as a method of financing retirement was put into doubt. For example, in Poland the role of the second pillar was drastically reduced and in Hungary it was practically nationalized, whereas some countries such as Estonia, Latvia, Lithuania and Slovakia decided to cut the contribution rates assigned to the second pillar.

The recent reforms in the CEE countries reducing the role of second funded pillar, together with the information policy on the projected low replacement rates from the public system, can be a driver for boosting additional, voluntary retirement savings. On the other hand, the reforms, especially in Hungary and Poland, were a visible manifestation of the political risk affecting funded pensions, which changed the perception of the assets collected in the second pillar as

the property of the plan members – it became obvious that they were privately managed, yet not private. As a consequence, the public trust into the third pillar might also have been weakened. However, there is no doubt, that in order to maintain their standard of living in retirement, the current working generation needs to save additionally on a voluntary basis. Berk et al (2013) argue that the current pension systems in the CEE countries are not capable of ensuring adequate pension benefits in the future. They show that specifically mandatory private pension plans are not able to sufficiently supplement retirement income, thus there is a strong need to promote additional saving plans and to promote financial literacy among the working population. A study by Pienkowska-Kamieniecka (2013) also supports the view that in the CEE countries the main factor in the relatively low interest in the voluntary pension scheme is insufficient economic and financial education in these societies.

This study provides an insight into voluntary pensions in the seven CEE countries: Bulgaria, the Czech Republic, Croatia, Hungary, Poland, Romania and Slovenia. The topic of voluntary pensions has not been sufficiently explored in previous studies, as the main body of literature on multi-pillar pension systems is focused on the first and the second pillar. Especially in regard to the international comparisons in terms of quantitative analyses, there is a gap in the current literature. This paper presents statistical data on the assets of the third pillar pension plans, the contributions paid to the voluntary pension plans and the membership. The main aim of the analysis is to assess the role of the supplementary savings collected on a voluntary basis in the CEE region, especially with respect to the recent changes in the mandatory private pensions. One can formulate the hypothesis that in view of the resemblance between the second and the third pillars in terms of financing vehicles and similar kinds of risk, they can exist more like substitutes than complements. Thus, the question arises whether reduction of the role of the second pillar in Poland and Hungary has been accompanied by an increase in voluntary pension savings. Is the situation in these two countries different from the other CEE countries studied, where the post-crisis reforms did not directly affect the second pillar? Do all voluntary pension schemes analysed share a common pattern in terms of development dynamics? To answer these questions, empirical research is conducted. This makes it possible to capture the dynamics of the voluntary savings by incorporating data from years 1998-2015.

2 VOLUNTARY PENSIONS IN SELECTED CEE COUNTRIES

This section includes short descriptions of the voluntary pension schemes in the seven CEE countries, namely Bulgaria, the Czech Republic, Croatia, Hungary, Poland, Romania and Slovenia. Additionally, to present the relationship between the second and third pillar more comprehensively, information on the institutional settings as well as recent changes in the mandatory and voluntary private plans is provided. Table 1 shows the calendar of the implementation of the key reforms that affected the second and the third pillar development in the countries studied. In all cases, the solutions within the voluntary system were implemented at the same time, or even earlier than with respect to the second pillar. Consequently, new voluntary pension products were added. From the group of the studied countries, in Hungary and Poland the interference of policy-makers in the second pillar in the post-crisis period was the most influential and resulted in its closure or serious impairment. The Czech Republic attempted to create the second pillar in 2013, which later was considered to be a failure. However, this pillar was not meant to be mandatory, but voluntarily chosen as an option within the contribution to the mandatory system.

Table 1: Key reforms of private pensions in the CEE countries (own elaboration)

Country	Pillar II – mandatory private		Pillar III – voluntary private	
Bulgaria	2002	Universal pension funds, Professional pension funds	2002	Voluntary pension funds
			2007	Supplementary voluntary pension funds with occupational schemes
Czech Rep.	2013	Retirement funds (voluntary pillar II)	1994	Voluntary pension funds (from 2013 converted into Transformed funds)
	2015	Liquidation of pillar II	2013	Participating funds
Croatia	2002	Mandatory pension funds	2002	Open-ended voluntary pension funds, Close-ended voluntary pension funds
Hungary	1998	Mandatory privately managed pension funds	1994	Voluntary pension fund
	2010	Nationalization of mandatory pension funds	2006	Retirement Saving Account
			2007	Occupational pension funds
Poland	1999	Open pension funds	1999	Occupational pension schemes
	2011	Lowering contribution to OPF	2004	Individual Retirement Accounts
	2014	Nationalization of 50% of OPF assets, participation in OPF no longer mandatory	2012	Individual Retirement Savings Account
Romania	2007	Privately administrated pension funds	2007	Voluntary pension fund
	2009	Contribution rate frozen at 2%		
Slovenia	2000	Mandatory occupational plans for hazardous professions, voluntary for others	2000	Voluntary occupational and personal plans
	2004	Expansion of the coverage of mandatory occupational plans to the public sector		

2.1. Bulgaria

Bulgaria set up a multi-pillar pension system in 2002. The mandatory private part is based on the universal pension funds compulsory for all employed (and self-employed) persons born in 1960 or later, and the complementary professional pension funds compulsory for employees working under difficult and hazardous conditions. The third pillar comprises voluntary pension funds, which are of a personal type, but also employers may pay contributions on a voluntary basis. Both employees' and employers' contributions are subject to tax deductions, and the amount of the contribution is not legally restricted. There are also supplementary voluntary pension funds with occupational schemes introduced in 2007, based mainly on the employer's contribution, but they are of minor relevance in terms of coverage and assets. All four types of funds operating in the second and in the third pillar of the Bulgarian pension system are managed by the licensed pension insurance companies.

2.2. Czech Republic

The pension system in the Czech Republic differs the most from the systems in the other CEE countries, as it never had a mandatory second pillar. In 1994, voluntary pension funds were

introduced in the form of personal plans. There is a modest minimum monthly contribution stipulated by the contract between the pension fund managing institution and the fund member. The state also matches the contribution, and the employers can also contribute to the personal plan of the employee. In 2013, the existing voluntary pension funds were converted into "Transformed funds", and they were no longer allowed to accept new entrants. At the same time, in the third pillar "Participating funds" were established, and additionally the new funds ("Retirement funds") were placed in the second pillar. The participation in the latter scheme was voluntary, but part of the mandatory contribution was designated to this pillar (plus an additional employee contribution). However, the second pillar has never gained much interest, and it is currently in the process of termination.

2.3. Croatia

The reform restructuring the pension system in Croatia according to the World Bank multi pillar model was started in 1998, but the new regulations on the second and the third pillar were implemented in 2002. The mandatory private pensions consist of individual accounts in pension funds administered by the mandatory pension fund management companies (OMFs). The pension management companies also administer the voluntary funds, both open-ended personal (ODMFs) and close-ended occupational (ZDMFs) funds. The contribution to the third-pillar plan is not limited, but in the occupational scheme it can be shared between the employer and employee. Participants in voluntary schemes obtain an annual state subsidy along with tax deductions.

2.4. Hungary

The multi-pillar design of the pension system in Hungary in its complete form was established in 1998; however, the voluntary funds were introduced four years earlier. The predominant saving schemes in the third pillar are based on personal pension plans in pension funds. The legislative changes in 2007 also enabled the creation of occupational pension funds, but in practice the first OPF started in 2011. Contributions to the voluntary pension funds can be paid both by the employers and by employees, regularly or irregularly. In 2006, the Retirement Saving Account (NYESZ) was introduced. This is a kind of voluntary personal plan offered by banks in the form of a pension product with a wider investment choice. Additionally, pension insurance products are also subject to tax deductions. In 2010, the assets accumulated in the second pillar were practically nationalised and the mandatory funds lost 97% of their members in favour of the PAYG system, as participation was no longer mandatory.

2.5. Poland

In the course of the reform of the Polish pension system implemented in 1999, alongside with the PAYG public scheme, the second pillar and the third pillar began operation. Initially, voluntary savings for retirement within the pension system were available only in the occupational pension schemes (PPE). However, in 2004 personal pension plans called Individual Retirement Accounts (IKE) were established, and in 2012 another personal scheme called the Individual Retirement Savings Account (IKZE) was started. PPE plans are set up by employers on a voluntary basis, but their contributions to the plan are basic. An employee can additionally contribute to a PPE, but it is not obligatory. Occupational pension plans can take the form of a pension insurance contract, an employee pension fund or an investment fund. IKE and IKZE accounts offer a wide variety of choices to plan members in terms of financial vehicles. They can be offered as various savings products provided by investment funds, brokers, insurance companies, banks and general pension companies (PTE).

The second pillar is based on individual accounts in the open pension funds (OFE) managed by the general pension companies (PTE). Up to 2011, the contribution rate to the OFE amounted to 7.3%, but in 2011 this was reduced to 2.3%. In 2014 some significant reforms took place that affected the second pillar, namely government bonds (over a half of OFE assets) were transferred to the first pillar, and the membership in the OFE was no longer mandatory – an agent could decide whether to share his or her mandatory contribution between the first and the second pillar or to contribute solely to the first pillar.

2.6. Romania

Romania is one of the last countries from the CEE region that adopted the multi-pillar pension system. It was in 2007, about a decade after private pensions were introduced in countries such as Poland, Hungary or the Czech Republic. Thus, the Romanian pillars II and III are relatively less developed in terms of maturity. The second pillar relies on the pension funds administered by private institutions. Participation is mandatory for employees and the self-employed aged up to 35 as of January 1, 2008. Simultaneously with the second pillar, the third pillar was introduced. Contrary to the mandatory funded pillar based on personal scheme, the voluntary pillar was established in the form of occupational plans. Establishment of an occupational plan is voluntary for employers, just as membership is voluntary for employees. Occupational plans can be administered only by an authorised entity such as a pension company, an investment administration company or an insurance company. The plan regulations specify the amount of the contribution (up to 15% of the gross wage) as well as whether the contribution is shared between the employer and the employee. In 2012, a guarantee fund to protect the second and the third pillar savings was created.

2.7. Slovenia

Slovenia substantially reformed its pension system in 2000. According to the new regulations, the occupational pension plans became mandatory for hazardous professions, the banking sector and the public sector (from 2004). Private sector workers can join the second pillar on a voluntary basis, as do employers. The plans can be administered by mutual pension funds, pension companies, insurance companies and the state owned company called Kapitalska Druzba (the only provider of the mandatory supplementary pension plans). There are also personal pension plans within the third pillar, however the coverage is much lower than in the occupational plans due to the lower tax relief.

3 EMPIRICAL RESULTS

The empirical analysis provides detailed data on voluntary pension plans implemented in the selected CEE countries. Statistical data are collected from various sources comprising local pension fund associations, financial supervising agencies or other regulatory institutions. The list of sources is as follows: Financial Supervision Commission (FSC, Bulgaria), Croatian Financial Services Supervisory Agency (HANFA, Croatia), The Association of Pension Funds of the Czech Republic (APS CR, Czech Rep.), The Magyar Nemzeti Bank (MNB, Hungary), Financial Supervision Authority (KNF, Poland), The Romanian Pension Funds' Association (APAPR, Romania), Securities Market Agency (ATVP, Slovenia), Insurance Supervision Agency (AZN, Slovenia), Ministry of Labour, Family, Social Affairs and Equal Opportunities (MDDSZ, Slovenia) and Eurostat (EU-LFS dataset, National accounts dataset). When merging the data on different types of voluntary plans within one pension system the figures sometimes may be understated, as the data from the very early stage of implementation of particular pension plans have not always been provided. However, the scale of these data gaps can be regarded as negligible.

Figure 1 shows the dynamics of the number of third pillar members in the countries studied. To enable comparisons, membership is expressed as percentage points in reference to the number of employed persons. Note however, that the values could not be identified with voluntary pension coverage, because in some countries the regulations implemented allow for participation in more than one pension plan. So the number of pension plans can exceed the number of employed persons. However, the reference to the number of employed people instead of to the total working age population accounts for the differences in the employment rates across countries. Although in most of the personal plans an employment contract is not required for participation in the third pillar, the unemployed persons are only very rarely active members of the voluntary pension plans. In some plans, members' accounts could be inactive (they are not credited with contributions) whereas in others, members' activity, in terms of the frequency of contributions, is stipulated by law. This is especially the case of these occupational plans, where the arrangements guarantee that the employer as well as the employee contribute to the voluntary plan on a regular basis.
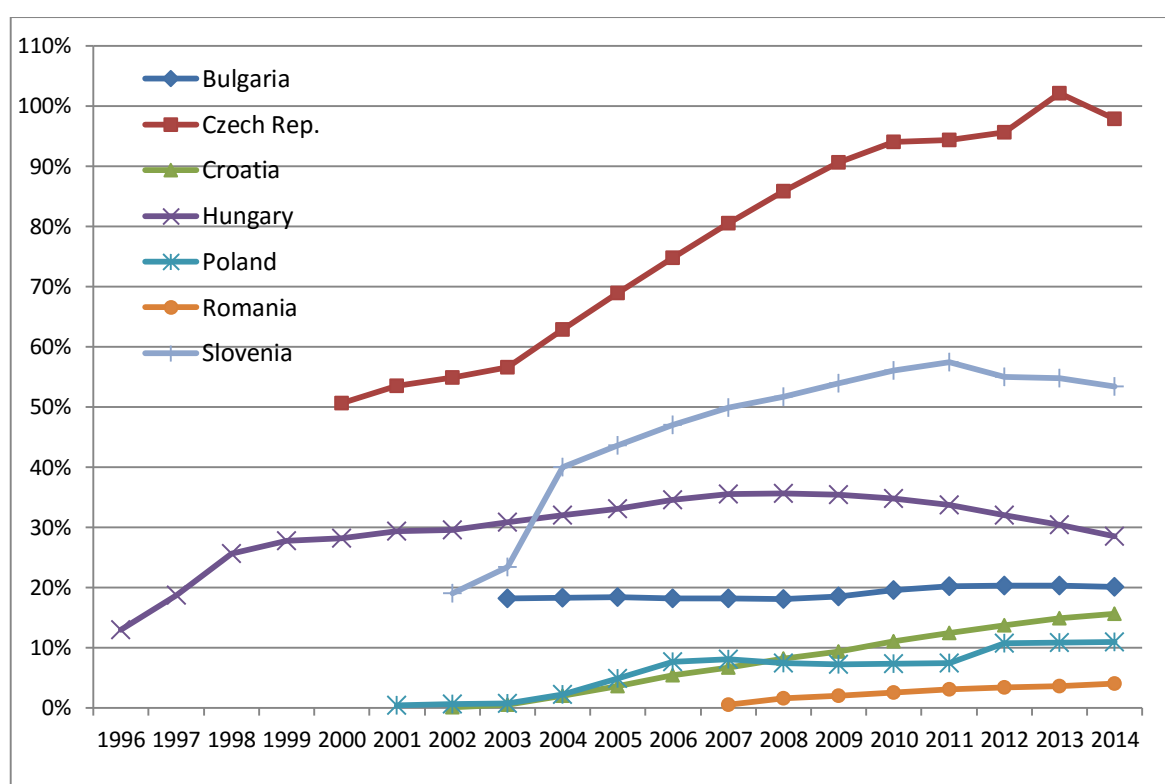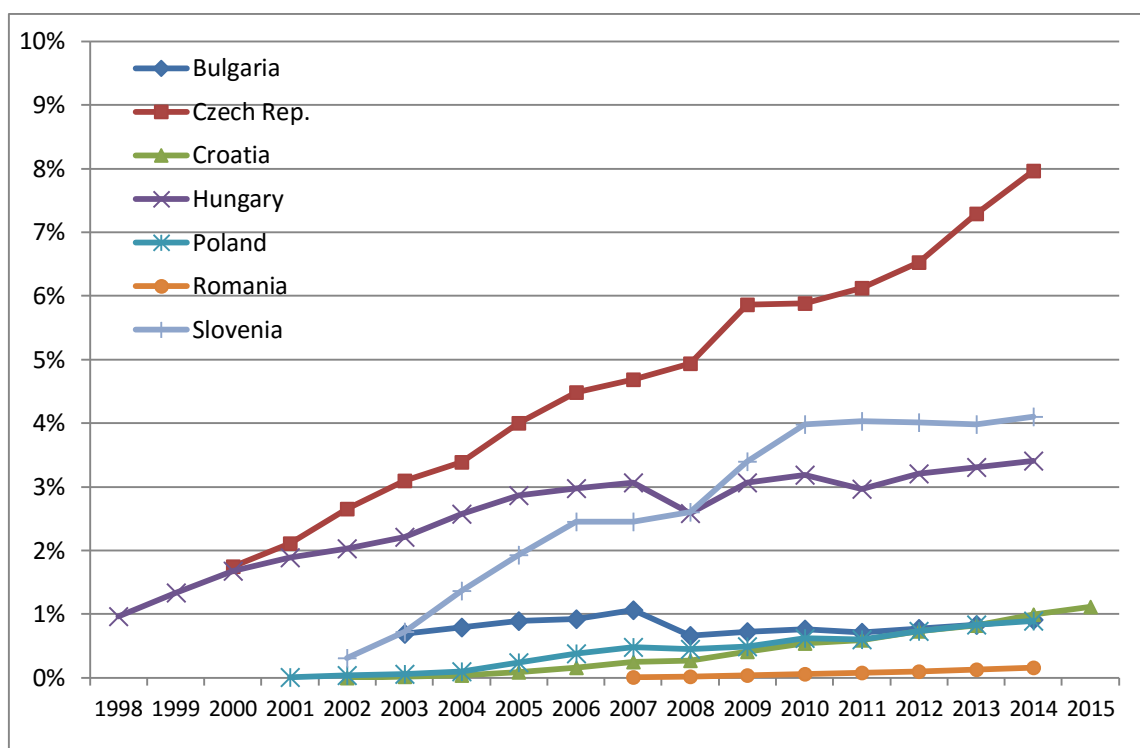

Note: The data do not include NYESZ accounts (Hungary) .

Figure 1: Number of pension plans members as a share of the number of employed persons (own processing based on FSC, HANFA, APS CR, MNB, KNF, APAPR, MDDSZ, Eurostat)

As presented in Figure 1, the highest participation rate is recorded for the Czech Republic. In this respect, it is an unquestionable leader among not only other CEE countries, but among all countries with voluntary personal pension plans. Such a high level of participation is usually attainable only in the systems with occupational pension plans with the auto-enrolment solution. A relatively high membership rate is also recorded for Hungary and Slovenia. Nonetheless, in both countries it is tending to decrease, as it reached its peak in 2008 in Hungary and in 2011 in Slovenia. In the rest of the countries studied, a similar pattern is observed, that is, the number of third pillar participants is slowly increasing.

The current relevance of third pillar savings can also be assessed by comparing the assets managed by the private sector operating in the third pillar of the pension system. Figure 2 presents the tendencies in this respect. In the Czech Republic, the assets amount to almost 8% of GDP. Although in 2000 the assets in reference to GDP were equal in the Czech Republic and Hungary, in the latter the increase in assets was significantly slower over the next 15 years. Bulgaria experienced the greatest decline in third pillar assets in 2007, and although in absolute numbers its assets are now much higher than before 2007, in relation to GDP they are still smaller. In countries such as Croatia, Poland and Romania, accumulated voluntary pension savings are growing steadily, however the reference to the GDP shows that they are still of minor importance to the whole economy.

Note: The data do not include NYESZ accounts (Hungary) and pension plans provided by Insurance Companies (Slovenia)

Figure 2: The assets in the third pillar as a share of GDP (own processing based on FSC, HANFA, APS CR, MNB, KNF, APAPR, ATVP, AZN, Eurostat)

The structure of the private voluntary pension plans and its dynamics between 2009 and 2014 is illustrated in Figure 3. Hungary was excluded from this part of the analysis, as the data provided by the MNB could not be divided into occupational and personal plans. But in Hungary the majority of third pillar participants are members of personal plans. It is also impossible to distinguish between collective and individual pension plans in Slovenia. However, individual agreements are much less popular than collective ones, as in 2014 only 18 thousand people in Slovenia participated in pension plans on an individual basis[1]. The personal plans prevail in Bulgaria and the Czech Republic. In Poland and Romania, where occupational plans are predominant in terms of assets, there is also the lowest third pillar participation rate. Over the 5-year period studied, the changes in the structure of assets were not significant.

---

[1] Data provided by MDDSZ.

Nonetheless, the greatest dynamics were observed for Poland. The first personal plans in Poland were introduced 5 years after occupational plans, but the new kinds of personal account – more favourable for individuals in terms of tax relief - were launched 13 years after the foundation of the third pillar. So the potential for significant changes in the pension assets structure in Poland is considerable.
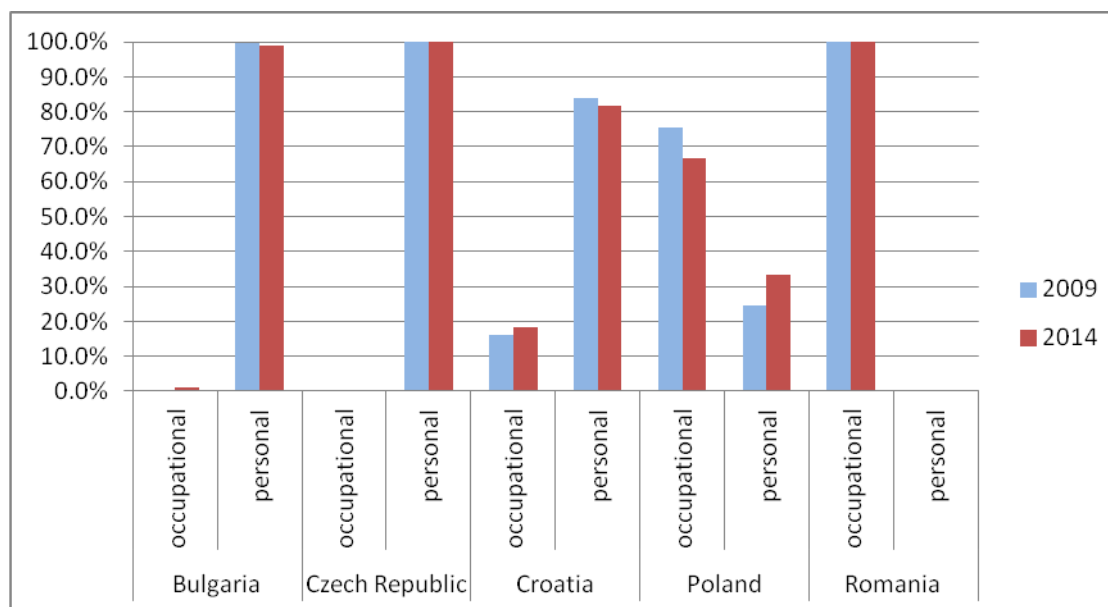

Figure 3: The share of the assets in the occupational and personal pension plans in the third pillar (own processing based on FSC, HANFA, APS CR, KNF, APAPR)

Figure 4 presents the changes that took place between the years 1998 and 2015 in terms of the contributions paid each year to the voluntary pension plans. It better illustrates the popularity of the third pillar than does coverage, as it accounts for both the number of participants as well as the contribution rate. For all of the countries studied except for Romania, which started its third pillar in 2007, immediately after the crisis began, contributions to the voluntary systems dropped to some extent. Bulgaria and the Czech Republic experienced the greatest decrease. In the Czech Republic in 2013, when the third pillar was reorganised, revenues to the voluntary plans also significantly rose. In Croatia, Hungary, Poland and Romania, the more or less steadily growing trend of contributions is observed, except for a minor disturbance in 2007. The only country that recorded declines in contributions after 2012 is Slovenia.

Figure following on the next page
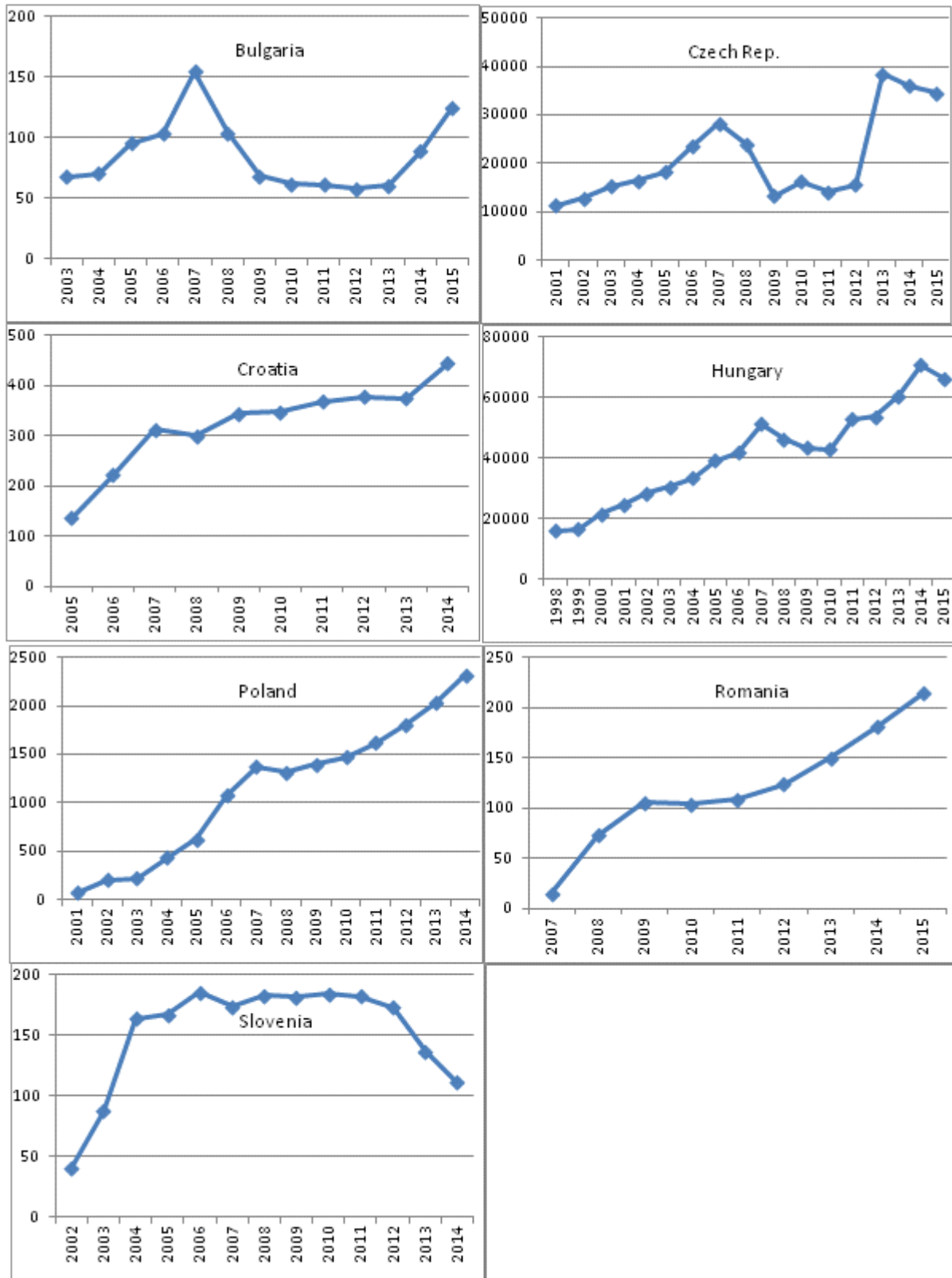
Note: The data do not include NYESZ accounts (Hungary) and pension plans provided by Insurance Companies (Slovenia)

Figure 4: Annual gross contributions to the voluntary plans in mln of national currency (own processing based on FSC, HANFA, APS CR, MNB, KNF, APAPR, ATVP, AZN)

4 CONCLUSION

The similarity and relative homogeneity of the pension systems in the CEE countries facilitate comparisons and conclusions. Some of the countries studied experienced a reduction in the second pillar, some did not, but all of them had to reduce the generosity of their public pension systems. The empirical study by Marcinkiewicz (2015) on the coverage and modelled replacement rates in the OECD countries shows that the third pillar is very rarely a meaningful complement to the second pillar; more often it plays a greater role in the pension systems where the second pillar does not exist, and moreover, the lower generosity of the public pension systems fosters the third pillar development. This study shows that in the countries studied, voluntary pensions play an important role only in the Czech Republic. This country has never introduced a mandatory second pillar, unlike the most of the CEE states. It also provides relatively modest benefits in terms of adequacy from the public system. It is also symptomatic that in Slovenia the voluntary pension plans are quite well developed in terms of coverage and assets. In this country the second pillar is not mandatory for all, but only for certain sectors. The regulatory changes seriously diminishing the role of the second pillar in Poland and Hungary do not seem to have a significant impact on boosting voluntary pension savings. However, these reforms took place relatively recently, in 2010 in Hungary and in 2011 and 2014 in Poland, so the effects may occur, but in the future, over the next several years.

The results of this study allow formulation of some conclusions regarding common trends. First, they show that the voluntary pillar in most of the countries studied was hit by the crisis, but mainly in terms of smaller revenues, not of membership or assets. Contributions in all of the countries decreased significantly after 2007, to regain its dynamics shortly thereafter (except for Slovenia). Second, the third pillar is the most developed in terms of assets and participation in Hungary and the Czech Republic, which are the countries with strongly prevailing personal plans, but also in Slovenia, where occupational plans are predominant. Thus, the design of voluntary pillar in this respect does not seem to matter. Note however, that in most cases, employers can also contribute to personal plans. Third, almost in all of the countries examined, there is a steady growth of the voluntary pension sector; however, the differences in its development in particular countries are quite large. Without a closer look at the situation in each country separately, one can only speculate what the reasons behind these differences are. This, however, requires in-depth qualitative and quantitative analyses of the socio-economic conditions in each country, which is beyond the scope of this study.

LITERATURE:
1. Aslund, A. (2012). Lessons from Reforms in Central and Eastern Europe in the Wake of the Global Financial Crisis. Working Paper Series 12-7. Washington DC: Peterson Institute for International Economics.
2. Berk, A.S., Cok, M., Kosak, M., Sambt, J. (2013). CEE Transition from PAYG to Private Pensions: Income Gaps and Asset Allocation. *Czech Journal of Economics and Finance (Finance a uver)*, vol. 63, no.4 (p. 360-381). Prague: Charles University Prague.
3. Chybalski F. (2011). The Resilience of Pension Systems in the CEE Countries to Financial and Economic Crisis: the Need for Higher Diversification, in S. Polouček, D. Stavárek, *Lessons Learned from the Financial Crisis*: *Proceedings of 13th International Conference on Finance and Banking* (p. 258-267). Karvina: Silesian University.

4. Hinrichs, K. (2015). In the wake of the crisis: Pension reforms in eight European countries, ZeS-Working Paper No. 01/2015. Bremen: Zentrum für Sozialpolitik.

5. Marcinkiewicz, E. (2015). *Do we really need voluntary pension schemes? The role of voluntariness in a pension system*. Retrieved 29.02.1016 from http://kz.woiz.pl.doit.pl/ c/media/pracownicy-zaklad-metod-ilosciowych-w-zarzadzaniu-edyta-marcinkiewicz/ marcinkiewicz_svoc2015.pdf

6. Milos, M.C., Milos, L.R. (2012).Pension funds and the financial crisis in the CEE countries. *Annals of Faculty of Economics*, vol. 1, no. 2 (p. 492-498). Oradea: University of Oradea.

7. Pienkowska-Kamieniecka, S. (2013). The role of additional pension plans in selected countries in Central and Eastern Europe. *Proceedings of the 5th International Conference The Economies of Balkan and Eastern Europe Countries in the changed Word* (p. 143-153). Kavala: Kavala Institute of Technology.

SOLUTIONS FOR ECONOMIC DEVELOPMENT IN RURAL REGIONS: THE CASE OF THE NORTHERN FREE STATE REGION

Daniel Francois Meyer
North-West University (NWU)
South Africa
daniel.meyer@nwu.ac.za

ABSTRACT
Globally more than 50% of the world population are urbanized. Rural regions, specifically in developing countries are in socio-economic decline. This research has the primary aim to analyse the state of rural development in South Africa. Rural development is defined as a process of sustainable development leading to significant improvement in quality of life for the total population in the region, and especially the poor. More than two-thirds of the world's poor population live in rural regions. South Africa has similar rural poverty statistics. Rural regions in this country have deteriorated over the last two decades due to a lack of sustainable support for these regions. The government has since 2010 prioritized rural development in an effort to intervene in poverty and poor service delivery, but the implementation of a comprehensive rural development strategy is still not integrated or successful. The research methodology included a theoretical review of rural development in South Africa, and a case study focusing on the Northern Free State region. The Methodology also included a qualitative assessment of the study region, indicating below average compliance with best practice principles. Requirements for successful rural development and best practice rural development guidelines were also formulated for the study region in reducing poverty and to stimulate development. Some of the research findings include the discovery that rural regions have the potential to be popular again for reasons such as a quality rural environment, technological "space shrinking" and food security. Rural development requires a strong and committed government: strategies should focus on specific labour intensive economic sectors, such as tourism and agro-processing which links to manufacturing. Of further significance is the development of indigenous knowledge as well as the protection and maintenance of rural towns as service centres.
Keywords: Best practice, Northern Free State region, poverty, rural development, solutions

1. INTRODUCTION

Rural development can be defined as the improvement of quality of life by developing capacities that promote community participation, health, education, food security, environmental protection and economic growth in order for community members to achieve their full potential in a rural setting. Rural development should include aspects such as human development, natural resources, economic growth, infrastructure and policy development (Centre for Sustainable Development, 2008, p. 4). A rural setting is an area that is dominated by agricultural activities and land uses, with low population densities and includes towns as service centres in a rural region (Meyer, 2013, p. 261).

According to the World Bank (2013, p. 2), the global rural population accounts for 47 percent of the total world population, while 70 percent of the global poor live in rural areas. Rapid urbanization is still taking place on a global scale and it is estimated that 200 000 people migrate from rural to urban areas on a daily basis (World Bank, 2014, p. 1). Despite large scale urbanisation, poverty remains to a large extent a rural problem (IFAD, 2011, p. 47). According to Khan (2001), the cause of rural poverty are complex and multidimensional which include culture, gender, markets, and public policy. According to the Central Intelligence Agency (CIA)

(2013, p. 1), the global urbanisation rate has been 1.97 percent per annum over the period 2010 to 2015. Approximately 10.5 percent of the earth's surface is still arable with only 1.15 percent of the surface is used for permanent agriculture crops. The role of agriculture continues to diminish globally and contributes only 6 percent of the global gross domestic product (GDP). Table 1 provides a summary of selected African and BRICS countries regarding levels of urbanisation. As indicated in the table, in South Africa only 38.0 percent of the total population resides in rural areas, with a relatively slow urbanisation rate of 1.2 percent compared to most of the countries as listed in the table.

Table 1: Levels of urbanisation of selected African and BRICS countries

Country	Level of urbanisation (% of total population)	Rate of urbanisation (2010 to 2015 as a %)
South Africa	62.0	1.21
Brazil	84.6	1.15
China	50.6	2.85
India	31.1	2.47
Russia	73.8	0.13
Angola	59.2	3.97
Botswana	61.7	2.07
Malawi	15.7	4.2
Mozambique	31.2	3.05
Namibia	38.4	3.14
Nigeria	49.6	3.75
Zambia	39.2	4.15
Zimbabwe	38.6	3.40
World average	52.1	1.97

Source: CIA, (2013).

According to the Department of Rural Development and Land Reform (DRDLR) (2015a, p. 2), the rural population in South Africa is growing at 0.1 percent per annum while the urban population is increasing at 2.1 percent per annum. The rural population in the country has been stagnating since 2001 at approximately 19.0 million people from a total population of approximately 50 million. The ratio of the rural population to the total population has decreased drastically over time. In 1960, the rural population contributed 53.4 percent of the total global population, but this diminished to 52.2 percent in 1970, 51.6 percent in 1980, 47.9 percent in 1990, 43.1 percent in 2000 and reached a low point of 38.0 percent in 2011. A total of 70 percent of the poor population, equalling 3.6 million households, reside in rural areas. In the last three State of the Nation Addresses (SONA), rural development has been placed high on government's developmental agenda with the implementation of the Comprehensive Rural Development Programme (CRDP) (Zuma, 2015, p. 2).

The coordinated implementation of rural development policy by all spheres of government is, however, not yet evident. A large percentage of the poor, and particularly of the black population, still lives in rural areas, in most cases in the former so-called "Homelands". These rural areas have limited access to services and basic needs such as education and are removed from economic activities and employment opportunities. Resources and opportunities are not evenly distributed, resulting in relatively low levels of quality of life, especially in rural areas (Molefe, 1996, p. 22). On a global scale, government policies favour urban areas rather than rural ones. Rural-urban migration will continue while public spending is biased towards urban users. Services such as infrastructure, social services, education and transport are inadequate in rural areas if compared to urban regions (Herrich and Kindleberger, 1995, p. 49).

Rural region could gradually become more popular and popular again due to a global turn to sustainable development, globalisation and the need for a sense of belonging to a community (Education and Training Unit, 2012). Owing to the growing demand by an ever-burgeoning global population, the demands for water, food and other commodities are rapidly increasing (Food and Agriculture Organization of the US, 2011). The purpose of this research is to find best practice solutions for the study region regarding economic development and poverty.

2. LITERATURE REVIEW

According to Van Holst Pellekaan (1997, p. 11), rural development is a process leading to sustainable improvement in the quality of life of rural people, especially the poor. Such development can make a powerful contribution to the four critical goals of poverty reduction: wider shared growth and development within the rural region; household level access to basic needs; food security improvement as well as sustainable natural resource management. Stamoulis and Anriques, (2007, p. 5) support the above definition with their own designation of rural development as "development that benefits rural populations, where development is understood as the sustained improvement of the local population's standard of living or welfare". Todaro and Smith (2011, p. 417) states that rural development includes a broad spectrum of activities including agriculture, infrastructure development, and industrial development based on sustainable principles.

The rural poor lack basic needs and do not possess the means or ability to improve their quality of life due to social exclusion and poor governance (South African Human Rights Commission, 2014, p. 35). They have restricted land ownership, access to capital and employment opportunities to improve their quality of life (Kakumba and Nsingo, 2008, p. 108). In addressing these issues, rural development should be people-centred and community driven (Sewpaul, 1992, p. 23). According to the Presidency (2000, p. 2), rural development in South Africa is further defined as multi-dimensional and is a much broader concept than alleviation of poverty by means of social programmes. The process focuses on changing environments to enable an increase in the income levels of the poor, investment in local communities and contributions to the maintenance of social infrastructure. A successful rural development strategy should make people less poor, rather than comfortable in their poverty. The provision and maintenance of infrastructure, community facilities, economic development initiatives and strong institutional structures are basic requirements for rural development, which must lead to the reduction of poverty and include shared and inclusive growth. It must also lead to improved food security and improved resource management. Local rural communities need to be empowered to plan and shape their own destiny based on local knowledge. Non-agricultural sectors also ought to be strengthened in order to create a diversified rural economy (NPC, 2011a, p. 238).

According to the CRDP policy framework of 2009, no national legal definition exists for rural areas in South Africa, but the framework stated rural areas as "sparsely populated areas in which people farm or depend on natural resources, including villages and small towns that are dispersed throughout these areas" (Department of Rural Development and Land Reform, 2010, p. 11). Buxton (1976, p. 26) earlier defined a rural area as an area which lags behind in population densities, education facilities and power to control its own destiny. In addition, Bester (1994, p 1) characterises rural areas in South Africa as comprising traditional agricultural processes, with low income families, lack of finances and of technical skills as well as high percentages of poor people, of which a large proportion are black. Djukanovic and Mach (1975, p. 4) stated that rural communities could be characterised by the following criteria: economic stagnation and even decline; utilisation of outdated, traditional agricultural methods; limited of diversity and access regarding employment opportunities; poor quality of life due to limited security regarding the availability of goods, facilities and money (basic needs); isolation caused

by long distances and poor communication systems as well as poor environmental health conditions, such as a lack of clean water, proper sanitation and insufficient health facilities, all of which ultimately expose people to diseases and malnutrition. Lastly, rural sustainability is defined as a continuous search for development strategies to ensure the the maintenance and production of healthy rural communities regarding economics, socio-cultural, political and environmental values on the long run (Bryant and Granjon, 2009, p. 159).

Myrdal (1957, p. 15), a Swedish economist and Nobel Laureate, declared, "It is in the agricultural sector where the battle for long term economic development will be won or lost". The modern consensus is that agriculture must play a major role in economic development for developing countries and rural areas. Poor performance in the agricultural sector in developing countries is due to neglect of the sector by governments (Todaro and Smith, 2011, p. 417); this sector should be supported by non-agricultural sectors such as manufacturing and tourism. The rural "deepness" determines the level of dominance of the agricultural sector in the region, which is usually a specialised economy containing only a few economic sectors which have limited diversification. Rural regions suffer from limited agglomeration advantages, only a few economic activities and relatively small numbers of businesses with a restricted local market, resulting in low demand for locally produced products. However, rural areas generally have strong direct and personal relationships within communities if compared to large urban areas. A sense of belonging to a community exists, with high levels of social cohesion (Meyer, 2013, p. 58).

2.1. Requirements and solutions for rural development success

This section provides an analysis of possible requirements and solutions for successful rural development based on the literature review and the case study for the study region. Three of the main problems in the South African society, namely poverty, unemployment and inequality, are also evident the study region. Solutions to rural development must attempt to break the "vicious cycle of poverty" and replace it with a "virtuous cycle of wealth". The "vicious cycle of poverty" leads to a downward cycle of increased poverty and frustration for the poor, and especially the youth, in rural areas (NPC, 2011a, p. 29). The "virtuous cycle of wealth" on the other hand, as referred to in the National Development Plan (NDP), aspires to resolve this situation by improved leadership, improved community development, more active citizenship, entrepreneurial development, a capable and skilled government and rising living standards by providing economic opportunities to poor and isolated communities (IIED, 2000; Kakumba & Nsingo, 2008; National Planning Commission, 2011a & 2011b).

According to Khan (2001), the requirements for rural development include economic stability, competitive markets, public investments in physical and social infrastructure. Public policy should include access to land and credit, education and health, food security and public works programmes. The poor population could be supported by means of physical, human, infrastructure and institutional assets (Khan, 2001). According to De Satge (2010, p. 15), key issues for successful rural development include the involvement of local communities in the planning and implementation process, understanding local gaps in livelihoods, provision of basic needs, ensuring interventions with minimum input and maximum results for the majority of local people and optimisation of innovation and learning. According to IIED (2000), possible rural planning proposals for sustainable livelihoods could include decentralisation of planning decisions, funding and responsibility to local role players, promotion of people-focused and poverty-based planning, expansion of local capacity for LED, the inclusion of local knowledge in planning processes and decisions as well as the development of strong communication channels between officials, councillors, community development workers (CDWs) and the public (ward committees). De Satge (2010, p. 12) also listed more rural development strategies

for South Africa which include: invigorating land reform process/projects, addressing shortcomings in policy, supporting mixed farming and emerging farmers, streamlining ownership of productive units, ensuring that water and irrigation are available for farming projects, making certain access to capital is available, focusing on agro-food processing, developing incentive schemes, bolstering skills promotion and availability of mentors. Other strategies listed include infrastructure development, support and promotion of downstream industries, allowing for good market access, better availability of information as well as supporting and promoting the "second economy". Rural development and revitalisation of rural areas are complicated and difficult processes to achieve. The following key aspects, according to the IIED (2000), are listed:

Improved partnership formation

Improved rural/urban linkages regarding health services, employment, housing provision, planning of products and markets, educational facilities, and transportation

Improved participation in all strategic planning processes is needed by local rural communities

Planning based on up-to-date information

The roles of external funders and donors are important in building capacity and importing new methods to improve services and product development

Well-developed institutional sustainability and governance will assist in the promotion of rural development

Investment in education and skills development is a priority of rural development.

According to IFAD (2011, p. 142), of all the economic sectors, growth in the agricultural sector generates the greatest impact for rural people. A 1% growth in the gross domestic product (GDP) in a rural area, stemming from the agricultural sector, will result in a 2.5 times income increase for at least 30% of the rural population (Ligon & Sadoulet, 2007, p. 15). Key market factors necessary for successful rural development include: the formation of rural producer organisations, such as co-operatives, investment in infrastructure, availability of information and communication, financial services, regional and global linkages to local value chains, labour intensive opportunities, and public/private partnerships (IFAD, 2011, p. 145).

Entrepreneurship is also vital for economic development of rural regions (Africa Economic Analysis, 2005). Weak entrepreneurship in South Africa is a result of issues such as high levels of taxation and regulations, weak support structures, such as business development support services, little focus on the informal sector, poor access to credit and limited skills. Practical solutions for business and entrepreneurial development include the creation incubators, small business "estates" and clusters to improve security and visibility, improvement of business linkages and communication as well as improvement of the local business directory data base (Meyer-Stamer, 2003, p. 9).

Delius and Schirmer (2001, p. 4) reported that land reform and agricultural development policies as well as the capacity of provincial and local government officials are lacking. In addition, the alienation of farm land is a slow and expensive process in South Africa. The state should purchase land and transfer it to sustainable groups and individuals with ongoing support as part of a land reform policy. Agriculture should not be the central pillar of a rural development programme, but an integrative approach is required. The OECD (2006, p. 6) listed three key fields for public rural investments: firstly, the provision of quality public services including community facilities, secondly, the investment in promotion of rural innovation to create a competitive advantage regarding processes, institutional and government tools and lastly, the gearing of investment to the maximisation of rural-urban linkages.

Rural development requires the tackling of not only the economic interventions but also the social ones. Obstacles to such development from a social point of view include illiteracy, resulting in an inferiority complex in local individuals; customs and traditions, for example,

submission to traditional leaders and the inferior position of women in rural society; fostering dependency as residents become used to being given hand-outs and subsidies and cannot overcome that mind-set as well as apathy because they accept their impoverished position as a way of life (Molefe, 1996, p. 21; Netshitenzhe, 2011). Creating the rural poor's asset base is important for poverty reduction. Asset formation includes allocation of land and housing, improved access to basic services which meet needs, improvement of access to safety nets, improvement of local skills levels and lastly, creating economic opportunities through integrated housing development to reduce transport costs (Sibisi, 2009).

Finally, the United Nations (UNDP, 2012, p. 5) developed a rural model known as the "rural triple wins" model. This consists of three components: economic, social and sustainable development, the aim of which is to ensure that all three are included in any rural development strategy and projects. This will allow for inclusive growth, with new jobs resulting in improved quality of life for rural communities and supporting the green economy.

2.2. Best practice principles and solutions

This section provides a best practice analysis regarding rural development principles for the study area. For successful rural development, a multi-sector and a multi-dimensional development strategy is required. The strategy must integrate spatial, economic and social planning. The development of a rural region is dependent on factors such as population and market size, strategic locality, infrastructure, local leadership, good governance, economic diversity and the level of local entrepreneurship. Although rural development is a long term process, the importance of short term "quick win" projects should not be underestimated, to create confidence and momentum.

2.2.1. Role of government

Good governance in rural development includes the decentralisation of local decision making, skills development, the dissemination of information, formulation of measurable benchmarks such as targets and outcomes, as well as audits through monitoring and controlling actions. Government has a major role to play in rural development, but is only one of a range of role players. It alone cannot provide rural development salvation, but needs strong partnerships with the local community and business (Todaro and Smith, 2011, p. 450). Dynamic rural development occurs by means of increased coordination, as proven in the classic "Big Push" theory as formulated by Rosenstein-Roden (1943, p. 202). One of government's key roles in rural development is to create an enabling environment for the private sector and local communities to prosper and be successful. In this process government needs to remove barriers for development, show strong leadership and coordination with effective service delivery. Actions leading to an enabling supportive local environment include service and infrastructure capacity, provision of land and development zones, marketing, skills development, tax policies and incentives, access to finance, and research. Government also needs to step in if market forces fail; for example, through skills training and land development. For government to be successful in rural development, it needs to possess capacity and skills. Political stability and commitment is just as important as economic and social stability (Meyer, 2013, p. 24).

2.2.2. Local leadership and partnership formation

According to Galvin (1999, p. 88), local leadership is essential for rural development success. The term "local leadership" includes members of the "triangle" of local stakeholders: government, local communities and the private sector. Government leaders are expected to take the lead in coordination and facilitation, but other leaders from the community and business must also contribute. Under the term "local leadership", two other terms are also listed: "local

champions" and "local drivers". Local leaders and champions must work together as partners to maximise local resources and actions, the former making sure the local economy is driven and creating momentum. Local government must take quick and effective decisions to the benefit of the local community (Meyer, 2013, p. 285).

2.2.3. Spatial planning

Rural economic development planning must be integrated with spatial planning. Such integration will ensure the spatial and geographic grounding of economic activities at optimal localities within a region. Spatial planning is integrative in nature and aims to ensure integrated land use planning so as to address spatial imbalances of the past; it assists in the creation of enabling environments and improved economic rural-urban linkages through development corridors, ensures compact urban areas, supports active participation, safeguards sustainable environments with a sense of place and fosters viable local communities (NPC, 2011a; Meyer, 2013, p. 285).

2.2.4. Economic development and job creation

Inclusive economic development, leading to growth along with jobs, is required for any successful region. Jobs lead to improvement in the quality of life and to development. For rural economies to grow, more people must be employed and productivity increased through skills development and technological progress. As stated in the New Growth Path (NGP), economic sectors which have the potential for labour intensive job creation, known as "job driver" sectors, need to be supported. These sectors include manufacturing, mining, tourism, agriculture incorporating agro-processing, the "green economy" and retail (NPC, 2011b, p. 61). Although the agricultural sector is important for rural development, the non-agricultural sectors ought to be supported, which will lead to a more diversified economy. The agricultural sector must lead to agro-processing and eventually, industrial development. Strategies to develop the non-agricultural sectors include provision of improved transport, a focus on competitive advantages, strong rural-urban linkages, entrepreneurial development, incentives, infrastructure development, industrial cluster development and the improvement of an enabling economic environment (Meyer, 2013, p. 286).

2.2.5. Agriculture

In a rural region, agriculture is usually the dominant economic sector. It is labour intensive and has the potential to create jobs and play a key role in food security. Agricultural sub-sectors that require intensive labour include the sugar cane industry, citrus, cotton, apple, pear and vegetable production. According to the NDP, agricultural development includes agrarian transformation, land reform and environmental management (NPC, 2011a, p. 29). Agricultural interventions are required to improve productivity in the sector. Examples of such interventions include the provision of irrigation systems, hydroponic systems, fertiliser, training and mentorship as well as land, markets and product research. Emerging farmers and commercial farmers need to be protected and supported and in particular, require support in access to land, mentorship from commercial farmers, access to markets, skills development and finance. Lastly, urban agriculture in rural areas, also known as "food gardens", is important for food security, reduction of poverty, as well as provision of nutritional food and income to the rural poor. Further benefits of food gardens include skills training, improvement of livelihoods, the greening of areas, environmental management and waste management (Meyer, 2013, p. 286).

2.2.6. Tourism
The tourism sector, also labour intensive, provides for economic opportunities within a rural region and has been the salvation of a number of rural regions and towns. Tourism may be successful if the region is reasonably accessible and offers a naturally attractive environment. This is also an important rural economic sector because it assists in reducing poverty, in increasing food security, plays a role in linking the region to other regions and assists in protecting the local environment. In addition to these aspects, tourism also plays the following vital roles in a regional economy: it strengthens local supply chains, assists with SMME development, promotes local arts and crafts, job creation, formation of partnerships, the diversification of the regional destination, government must play a role as a major client and assist with the marketing of the region (Meyer and Meyer, 2015, p. 197; Thompson, 2007, p. 147).

2.2.7. Role of rural nodes
Rural nodes or towns act as service centres within a region, but also play a key role as catalysts for development of the region (Bryant and Granjon, 2009). Globally, rural towns have been neglected, but governments are now realising their importance in regional development. The development potential of a rural town depends on a number of factors which could be classified in a matrix to test their development potential by the main factors, listed here: locality, climate, geographical and environmental attractiveness, quality of soil and land, accessibility of town, quality of local government, level of economic diversity, extent of culture, social cohesion, level of entrepreneurship, availability of services, quality of spatial planning and the type of role played by the rural town in the region (Toerien, 2014, p. 43; Meyer, 2013, p. 287).

2.2.8. Rural-urban linkages
The successful development of a region depends on the strengths of the linkages between the nodes within the region and that between the rural areas and the said nodes. Urban and rural areas are intimately tied together in a synergetic way in such a way that urban sustainability is dependent of rural sustainability (Bryant and Granjon, 2009). External connections to other regions and nodes within other regions are also important and will assist in the strengthening of the economic base of the region. Linkages are not limited to economic connections alone, but also include social and cultural relationships. Rural policies to strengthen rural-urban bonds include industrial links, migration policies and rural urbanisation policies. Infrastructure development is a tool in the improvement of the linkages and integration of regions. The aims are to establish a regional economy with integrated nodes and rural areas linked with development corridors (Todaro and Smith, 2011, p. 337; Meyer, 2013, p. 287).

2.2.9. Local resource utilisation
Rural regions need to maximise the local and limited resources. Local ones include natural resources such as minerals and water, artificial ones such as local infrastructure and local human resources. The last-mentioned need to be improved by means of skills development. Skills training needs to be provided for locally required skills, including technical and business skills. As part of the establishment of a local enabling environment, a quality environment is important as it will attract people and businesses to the region. On the other hand, a poor environment will drive people away. Local SMME's, entrepreneurship and youth development should be encouraged (Meyer, 2013, p. 288).

2.2.10. Housing
The delivery of housing plays a major role in rural development. Rural housing projects should be regarded as flagship projects with a major impact on local receiving communities. Housing is one of the basic needs of poor communities and will provide decent shelter. Housing projects, if implemented effectively, must be a community driven and a benefitting process in the form of a "people's housing project" (PHP), for example. In this way a housing project will include skills development for local contractors. A community housing project will also contain a strong job creation component. Lastly, a housing project will ultimately lead to the improvement of quality of life of local communities (Meyer, 2013, p. 288).

2.2.11. Local community involvement and indigenous knowledge
It is essential that local rural communities take their destiny into their own hands. They must be part of local decision making, planning, implementation and ownership of projects and should be allowed access to ownership of projects, community facilities, housing and land. The quality and intensity of local community participation determine the level of rural development. As mentioned, rural communities display higher levels of community involvement and social cohesion than highly urbanised areas. This sense of community and belonging is one of the comparative advantages that cities do not generally have. An appealing community life could attract city dwellers. A strong and healthy rural community has to offer modern ITC, strong levels of entrepreneurship, availability of jobs, export sectors with a strong economic base, social cohesion, industrial specialisation, inter-firm collaboration and good governance. Because local rural communities know their area best, the indigenous knowledge needs to be taken into account in local planning processes. Residents of the region know and understand the local needs most thoroughly and also know the conditions best. Local indigenous knowledge may well add value in maximising local economic opportunities (Makhura, 2004, p. 39; Meyer, 2013, p. 289).

2.2.12. Basic needs and social-welfare
Rural development concerns not only economic development, but also the enhancement of the quality of life of the people living there. The provision of basic needs and social-welfare facilities forms the pro-poor component of rural development. The NDP states that quality services in rural areas are important if rural areas are to compete with cities. As part of any rural development strategy, a community development plan needs to be included, planning specific projects. If basic needs are not met, this keeps people trapped in poverty. However, local rural people can climb the ladder of social and economic success if basic needs are provided for. These include nutrition, health care, water, sanitation, shelter, education, skills, a sense of well-being and belonging, access to land and the ability to find work. The poor need to be protected from shocks, as the vulnerable section of the rural community, by means of the provision of a "safety net", which encompasses tools such as pensions, social grants, housing subsidy and access to services and finance (Meyer, 2013, p. 289).

3. RURAL DEVELOPMENT POLICY ANALYSIS IN SOUTH AFRICA
The current rural development policy in South Africa is the CRDP which was adopted 2009. The vision of the policy is to create vibrant, equitable and sustainable rural communities. Attempts at transformation of rural South Africa are made by means of three main components: agrarian transformation; strategic rural development and a land reform programme. More detailed aims of the policy are the redistribution of agricultural land, improved food security, meeting basic needs, skills development and creation of business opportunities, such as rural markets and agro-industries (DRDLR, 2015a, p. 2; DRDLR, 2015b, p. 4). Successes of the

policy are listed in the 2015 progress report of the DRDLR (2015a, p. 2) and highlights include the creation of 15 336 jobs, establishment of 3 258 food gardens, training of 3 819 people in rural development skills and the establishment of 464 rural cooperatives since 2009.

Some of the concepts of the CRDP are included in the National Development Plan (NDP) in Chapter 6 of the NDP. This chapter focus on rural development. The main focus areas of the NDP include opportunities in rural areas regarding social, economic and political aspects, creation of rural jobs linked to land reform and agriculture, ensuring quality service delivery, revitalisation of rural towns and improved rural governance (DRDLR, 2015b, p. 5). The strategic plan of the Department of Rural Development and Land Reform (DRDLR, 2015b, p. 31), has the following focus areas:

- Facilitation of rural livelihoods by promoting food security and poverty alleviation
- Infrastructure development
- Support rural enterprises and industries
- Job creation and skills development.

The job creation focus area of the CRDP is centred on three phases: the establishment of incubators to train people in business and technical skills; an entrepreneurial phase and a phase concentrating on the establishment of SMME businesses with markets (Heimann, 2010). The CRDP is a well formulated policy, but criticism could be levelled at the implementation phase. Rural development is a difficult process, competing with the natural economic flow of goods and services from rural to urban regions. Many national departments are involved in rural development, but none of them take the lead in policy formulation, implementation or coordination. Moreover, prevention of duplication is lacking. At the national level, the Minister of DRDLR is the political driver of the CRDP, but at the provincial level the leader is the provincial Premier (Meyer, 2013, p. 179). According to Hart and Jacobs (2013, p. 3), the programme has recorded little impact on local regions and the CRDP needs to be included in the implementation plan of the NDP to ensure integrated implementation. Ruhiiga (2013, p. 166) argues that the participation and local knowledge of rural communities in planning is still insufficient and many activities are implemented on an ad hoc basis, rather than being comprehensive and integrated. Government has allocated sufficient budget to rural development, but few successes are visible on the ground. Many CRDP sites have been implemented, but local knowledge, practices and livelihoods have not been incorporated into the local strategies.

4. CASE STUDY: THE NORTHERN FREE STATE REGION

This section consists of 2 parts, firstly a background with descriptive statistics and secondly an assessment testing compliance with best practice principles as identified. The Northern Free State region (also known as the Fezile Dabi region) was selected as the case study because the region could be classified as rural and manifests typical rural development problems with strong urban linkages. The region's northern boundary is the Vaal River and consists of the Fezile Dabi District Municipality with offices in Sasolburg, the Mafube Local Municipality with offices in Frankfort, the Metsimaholo Local Municipality with offices in Sasolburg, the Moqhaka Local Municipality with offices in Kroonstad and the Ngwathe Local Municipality with offices in Parys. All of the municipal structures employ LED officials responsible for rural development initiatives, but they possess limited capacity and experience, with unsuitable qualifications, leading to few rural development interventions. Outdated LED strategies exist with minimal implementation due to lack of funding, training and capacity. The focus of all of the local LED strategies falls on agriculture, tourism and manufacturing (Meyer, 2013, p. 181). Some key statistics for the region are listed in Table 2.

Table 2: Key Northern Free State regional statistics

Aspect	Information
Total population	500 994
Population growth, 2000 to 2013 per annum (%)	0.48
Population densities (people per sq. km)	23.6
% of rural population	19.1
HDI	0.58
Gini-Coefficient index	0.63
Dependency ratio	51.9
% of people living in poverty	33.9
Literacy rate (%)	74.4
Formal housing (%)	83.3
Unemployment rate (%)	33.9
Youth unemployment rate (%)	44.4
Employment contribution per main sector (%)	Agriculture: 15.3, Services including government and tourism: 25.5%, Manufacturing: 12.3%
Agricultural land (ha)	Grazing land 464 184 Dry land 388 155 Irrigated land 4 317
Tourism spending as % of GDP	3.4
Household property ownership (%)	85
Average household income (2012)	R 1404 per month ($122)
% of households with income less than R1000	42.8
Average household income assistance (2012)	R 721 per month ($63)
Household's perception of governments job creation efforts	Only 19% of households indicated that government does enough to create jobs while most households require assistance regarding training, facilities, land and co-op support.

Source: Global Insight Regional Explorer, (2014), Stats SA, (2012) and survey data (2012).

From Table 2, it is evident that population growth and densities are low. The total population resides in country settings consisting of rural towns, townships, informal settlements and farming areas with settlements. Social welfare aspects such as HDI, and dependency ratios, are high with 33.9% of all people living below the poverty line and 33.9% of economically active inhabitants being unemployed. The agricultural sector plays an important role in job creation, along with the services sector and tourism. Household income is relatively low: more than 42% of households have an income of less than R1000 per month or less than $2 per day. Although large scale low cost housing projects have been completed and rates of property ownership are high, people are still poor; only 19% of households indicated that government is doing enough to create jobs.

The region offers a number of development opportunities including tourism features such as the Vredefort Dome, the Vaal River and Vaal Dam, portions of high to medium potential agricultural land, good accessibility through a network of national and provincial roads (such as the N1 and N3 freeways) and some mineral resources such as coal, diamonds, granite and gold deposits. The region is located close to Gauteng Province with strong industrial development and economic linkages. On the other hand, the region also faces development constraints relating to isolated urban areas and large numbers of impoverished rural communities with scarce economic opportunities and linkages, housing backlogs, limited community facilities as well as poor maintenance and development of local infrastructure (Fezile Dabi District Municipality, 2011).

The region consists of two large rural towns, Kroonstad/Moakeng and Sasolburg/Zamdela, each with populations of between 85 000 to 100 000, the three medium sized rural towns of Parys/Tumahole, Frankfort/Namahadi and Heilbron/Phiritona housing populations of between

25 000 to 50 000 each and eight smaller rural towns with populations of between 7 500 to 35 000 people each (Stats SA, 2012). The economic linkages between nodes are poor and economic activities gravitate towards Sasolburg and Gauteng to the north rather than towards regional nodes in the region (Meyer, 2013). The District Municipality's vision as formulated in the IDP places its focus on municipal transformation, capacity development, improved basic service delivery, good governance, community participation and rural development through LED initiatives (Fezile Dabi District Municipality, 2013). The LED strategy for the District Municipality includes a number of rural development pillars such as regional and spatial integration, skills development and creation of an enabling environment for local businesses to prosper, agricultural development and support, infrastructure development, good governance and provision of basic needs to local communities (Fezile Dabi District Municipality, 2013). Table 3 summarises a comparison of the level of achievement of the MDGs for South Africa with the region and sub-regions in the study area.

The study region contains a diversity of socio-economic conditions, with the Mafube and Ngwathe sub-regions lagging behind the Metsimaholo and Moqhaka sub-regions. Table 3 indicates high levels of poverty, relatively high levels of illiteracy, high levels of provision of basic services and housing, and relatively high levels of GDP per capita. The rural classification by Meyer (2013:261) classified the region as a "fringe rural" region. This classification defines the region as being strategically located on the fringe of major urban/metropolitan regions. It is located within 2 hours' driving time from a metropolitan area, and contains rural nodes in the form of large and medium towns as service centres, with one or two primary nodes and connectivity corridors. Less than 50% of land uses and economic activity are involved in the agricultural or primary sector. The study region exhibits typical rural development needs and problems.

Table following on the next page

Table 3: Level of achievement of MDGs: National versus Local (2013)

MDG	SA target 2015	SA current status	Fezile Dabi Municipal area	Mafube Municipal area	Metsimaholo Municipal area	Moqhaka Municipal area	Ngwathe Municipal area
MDG 1: Poverty alleviation 1. Percentage (%) of population below the poverty line	5.7	5.0	33.9	50.5	29.6	28.9	37.6
2. Unemployment rate (%)	20.0	26.4	22.0	18.2	18.3	19.0	31.9
MDG 2: Primary Education 1. Literacy rate (%)	100	89	74	60	81	77	69
MDG 6: HIV/AIDS 1. HIV prevalence (%)	Less than 15.6	16.9	10.8	11.1	11.5	10.5	10.4
MDG 7: Environmental quality 1. Population with clean water (%)	81.0	91.4	No data	92.1	89.3	94.8	91.4
2. Population with sewer (%)	79.2	72,2	No data	86.1	87.5	86.2	70.2
3. Population living in informal housing (%)	0	13.4	No data	22.6	16.9	27.7	18.5
MDG 8: Partnership development 1. GDP per capita	High growth	R 49 134	R 89 512	R 24 053	R 203 903	R 63 807	R 27 096

Source: Meyer, (2013, p. 257) as updated.

In a "one-on-one" qualitative and structured with open-ended questions interview, the regional LED manager of the Northern Free State region (also known as the Fezile Dabi District Municipal area) as regional best practice assessment was conducted (Venter, 2016). Table 4 is a summary of the results of the interview. In the assessment process a score of between 0 and 10 was allocated. A score of 0 indicated no action regarding the specific factor, while a score of 10 indicated the ideal situation regarding a factor. The region is doing well in terms of only 3 of the 19 factors, namely in community participation, entrepreneurship development and tourism development. The region struggles with poor governance.

Table following on the next page

Table 4: Regional qualitative best practice assessment

Regional best practice factor	Qualitative score (between 0 and 10)	Reason for score
Quality of life.	2	Very limited programmes are implemented on a local regional level. Most such programmes are implemented from a National government level such as socio-welfare grants.
Basic needs (health, education, social services and facilities.	3	Due to limited budget, no new facilities are provided and maintenance of existing facilities are limited.
Skills training and human development	1	Very limited skills training are provided affecting only a small portion of the population.
Community participation	8	The participation of communities are well implemented, but only focused on the poor section of the population.
Infrastructure development	3	Very limited new infrastructure are provided and existing infrastructure are not well maintained.
Food security	1	No projects currently implemented due to lack of budget.
Environmental protection and improvement	5	Only basic actions are taking place. Environmental quality not under pressure. Some water pollution of water system is the main problem.
Sustainable use of natural resources	4	Mining on the decline. Water sources not used in a sustainable manner.
Good governance, leadership and partnership	2	Poor governance and leadership. Some efforts regarding partnership formation with business and local communities.
Rural town (service centres) development	3	Local rural town are declining economically. Some private sector effort are implemented.
Transport	2	Structured public transport provision is limited, private mini-bus taxi's in most cases the only option, but of poor quality.
Poverty alleviation	3	More than 50% of the population in poverty and numbers are increasing. Only limited efforts are made to address the issue.
Land reform and property ownership	4	National government effort slow to show progress and limited success has been achieved
Agricultural development and support	4	Limited success in support of small farmers. Some actions are implemented such as the agri-parks development and small agri projects such as tunnels and hydrophonic projects.
Local indigenous knowledge	1	Limited use and development of local knowledge.
Market development and access to markets	3	Some support is provided to emerging small farmer, but limited extent.
Entrepreneurship development	6	SEDA and SASOL (private sector) involvement with some success.
Job creation initiatives	5	Some efforts are made by private sector, and government with limited impact.
Tourism development	8	Significant efforts are made with regional success.
Total average score	3.6	Below average leading to a declining region.

Source: Venter, 2016.

5. RECOMMENDATIONS AND CONCLUSION

Excessive urbanisation leads to high levels of unemployment and social problems in urban areas. The perceptions of possible "urban jobs" may lead to higher urban unemployment with rural workers streaming to the city, where only one in four job seekers will find work over the long term. The possibility of subsidised wages calls for further analysis in order to restore the rural-urban imbalances, while programmes of integrated rural development should be encouraged (Todaro and Smith, 2011, p. 417). According to Kofi Annan, former Secretary General of the UN, "Cities will increasingly become the main players in the global economy"

(UN, 2002, p. 5). It is generally accepted that the higher the level of urbanisation, the higher the level of development within a specific area (Todaro and Smith, 2011, p. 312). Continued global urbanisation is leading to an increased unequal distribution of population in mega nodal concentrations, with greater congestion and pollution and an over-supply of labour (Herrich and Kindleberger, 1995, p. 79). In order to prevent over population in urban areas, rural/urban migration ought to slow down. Rural support policies could be considered; these might include issues such as retarding rural migration by providing rural infrastructure and public works projects; and the deflection of migration to large cities towards medium sized rural centres by means of infrastructure and incentives.

In South Africa, those communities most in need of strong local government are the rural communities. These rural communities however have the weakest local governments, which limited information, skills, funding and capacity. Some of the main findings of the research regarding general rural development aspects are listed:

- Well formulated strategic rural development strategies, which are implementable in a coordinated, integrated and sustainable manner, can make a positive impact. Rural areas could be regarded as a viable alternative, but require strong governance, especially at the local level.
- The integration of spatial planning and LED could lead to accelerated rural development, particularly when national policies exist and are implemented.
- The creation of jobs will lead to an improved quality of life. Labour intensive sectors of the economy such as tourism, agriculture including agro-processing, manufacturing and retail should be the focus of a rural economic strategy.
- Rural development is dependent on "hard" as well as "soft" infrastructure provision.
- Rural development must be people centred, encouraging the utilisation of local indigenous knowledge.
- Rural towns are critical for rural regional development and creation of rural-urban linkages.
- The "pull factors" to rural areas include quality of life and environment, a sense of belonging, unique culture and history and a positive economic environment.

Rural development for success requires a holistic approach, including components such as the local economy, social environment, the physical environment and the political one. This is a team effort consisting of local government, the private sector/business sector and the local communities. The utilisation of local knowledge will also improve the quality of policy interventions. Every rural area offers unique locations, resources and environments which call for "best fit" policies. The "one size fits all" approach adopted in many areas is due to a lack of understanding of local areas and is a superficial way to compile a policy. This approach does not lead to long term benefits for local rural communities.

To be effective, rural development calls for an integrated and comprehensive "war" on poverty, unemployment and inequality. The strategies and policies have to be people-centred with projects driven by local communities. Local residents must decide on their own destiny and should therefore be involved in the identification, planning, implementation and the taking of ownership of rural development initiatives. It is vital that economic development lead to an improved quality of life for all residents of a region. This is achieved through, amongst other factors considered above, access to basic needs leading to social and economic freedom.

Finally, good governance within a rural region is essential, regarding coordination of all initiatives, clear policy formulation, well planned interventions and the creation of quality physical and economically enabling environments. In the 2011 World Economic Forum (WEF) report known as "The future of government" it is stated that, globally, governments need to transform themselves into "FAST" (flatter, agile, streamlined, tech-enabled) governments. This concept consists of best practice governance aspects such as increased engagement by citizens,

administrative efficiency, decentralised decision making, an agile, highly skilled workforce with problem solving capabilities, a streamlined government with a reduction in the size of the public service and a highly innovative and a tech-enabled government service (World Economic Forum, 2011, p. 5).

LITERATURE:

1. Africa Economic Analysis. (2005). *Entrepreneurship as an economic force in rural development.* Retrieved 9 February 2016 from www.africaeconomicanalysis.org/articles.
2. Bester, C.W. (1994). *The consequences of urbanization and westernization on black family life in South Africa. Social Work.* 30:101-106.
3. Buxton, E.B. (1976). Delivering Social Services in Rural Areas. In L.H. Ginsberg, (ed.). *Social Work in Rural Communities: A Book of Readings.* New York: Council for Social Work Education.
4. Bryant, C., and Granjon, D. (2009). Rural Sustainability. In Sassen, S. (Ed), *Human Settlement Development Volume 2.* Oxford: Eolss Publishers.
5. Central Intelligence Agency (CIA). (2013). *The World Factbook.* Retrieved 9 April 2015 from www.cia.gov/library/publications.html.
6. Centre for Sustainable Development. (2008). *Sustainable development: Improving people's lives.* Retrieved 26 January 2016 from www.csd-i.org/sustainable-rural-development/.
7. Delius, P. and Schirmer, S. (2001). *Towards a Workable Rural Development Strategy.* Trade and Industrial Secretariat (TIPS). Johannesburg: University of the Witwatersrand.
8. Department of Rural Development and Land Reform (DRDLR). (2010). *A Study on the Revitalization of Rural Towns and Regions in South Africa.* Department of Rural Development and Land Reform. October 2010. Pretoria. Govt printer?
9. Department of Rural Development and Land Reform (DRDLR). (2015a). *Fact Sheet: Comprehensive Rural Development Programme (CRDP).* Pretoria: Government Printer.
10. Department of Rural Development and Land Reform (DRDLR). (2015b). *Strategic Plan: 2015 to 2020.* Pretoria: Government Printer.
11. De Satge, R. (2010). *Rural Development in South Africa.* Cape Town: Phuhlisani Publishers.
12. Djukanovic, V. and Mach, E.P. (1975). *Alternative Approaches to Meeting Basic Health Needs in Developing Countries.* UNICEF/WHO study. Geneva: World Health Organization.
13. Education and Training Unit (ETU). (2012). *Sustainable development.* Retrieved 9 February 2016 from www.etu.org.za/toolbox.docs.development/sustainable.html.
14. Fezile Dabi District Municipality. (2011). *Spatial Development Framework.* Sasolburg.
15. Fezile Dabi District Municipality. (2013). *Local Economic Development Strategy.* Sasolburg.
16. Galvin, M. (1999). The impact of local government on rural development in South Africa. *Transformation.* 40:87-111.
17. Food and Agriculture Organisation of the US. (2011). *The State of the world's land and water resources for food and agriculture.* New York: Earthscan.
18. Global Insight. (2014). *Global Insight Regional Explorer Data Base.* Johannesburg.

19. Hart, T. and Jacobs, P. (2013). *Some Reflections on Research Findings at the Comprehensive Rural Development Programme Sites.* Economic Performance and Development Research Programme. Pretoria: HSRC.

20. Heimann, C. (2010). *Comprehensive Rural Development Programme*. Presentation by Chief Director of the Department of Rural Development and Land Reform. ISAD multi-stakeholder Forum. 25 February 2010.

21. Herrick, B. and Kindleberger, C.P. (1995). *Economic Development.* 4th Edition. London: McGraw-Hill.

22. International Fund for Agricultural Development (IFAD). (2011). *Enabling Poor Rural People to Overcome Poverty.* Rural Poverty Report, 2011. Retrieved 23 September 2015 from www.ifad.org/rpr2011.

23. Institutional Institute for Environment and Development (IIED). (2000). *Rural Planning of South Africa: A Case Study.* London. Retrieved 10 August 2015b from www.iied.org.

24. Kakumba, U. and Nsingo, S. (2008). Citizen participation in local government and the process of rural development: The rhetoric and reality in Uganda. *Journal of Public Administration.* 43 (2):107-123.

25. Khan, M.H. (2001). *Rural poverty in development countries: Implications for public policy.* Wasinghton, International Monetary Fund.

26. Ligon, E. and Sadoulet, E. (2007). *Estimating the Effect of Aggregate Agricultural Growth.* Washington: World Bank Report on Agriculture for Development.

27. Makhura, M.N. (2004). Economic perspective of indigenous knowledge in rural development. *SARDQ.* 2(4):39-48.

28. Meyer, D.F. (2013). *An exploration of rural development strategies: The case of the Northern Free State.* Vanderbijlpark: NWU. (Thesis – PhD).

29. Meyer, D.F. and Meyer, N. (2015). The role and impact of tourism on local economic development: A comparative study. *African Journal for Physical, Health Education, Recreation and Dance.* 21 (1:1):197-214.

30. Meyer-Stamer, J. (2003). *Stimulating Rural Enterprise in South Africa: Lessons from LED*. Paper presented at conference on stimulation rural enterprise, 21-23 May 2003, Kempton Park. Retrieved 13 September 2015 from www.mesopartner.com.

31. Molefe, S.P. (1996). Rural development in South Africa: Implications for social work practice. *Journal of Social Development in Africa.* 11 (2):21-31.

32. Myrdal, K.G. (1957). *Economic Theory and Underdeveloped Regions.* London: Duckworth.

33. National Planning Commission (NPC). (2011a). *National Development Plan: Vision for 2030.* Retrieved 29 August 2015 from http://www.info.gov.za/view/.

34. National Planning Commission (NPC). (2011b). *National Development Plan: Diagnostic report. The Presidency*. Pretoria: Government Printer.

35. Netshitenzhe, J. (2011). *Addressing Challenges of Poverty.* University of Johannesburg (UJ), Colloquium on poverty by J. Netshitenzhe, Executive Director: MISTRA, 21 July 2011.

36. Organization for Economic Cooperation and Development (OECD). (2006). *Investment in Priorities for Rural Development.* Conference held in Edinburgh, Scotland, October 19 to 20, 2006.

37. Rosenstein-Roden, P. (1943). Problems of industrialization of eastern and south-eastern Europe. *Economic Journal.* 53:202-211.

38. Ruhiiga, T.M. (2013). Reverse empowerment in South Africa's Comprehensive Rural Development Programme. *Journal of Human Ecology.* 41 (2):165-174.

39. Sewpaul, V. (1992). Primary care: The challenge to social educators. *Social Work.* 28 (3): 20-28.

40. Sibisi, S. (2009). *Brushing Against the Grains of History: Making Local Economic Development Work in South Africa.* Development Planning Division, Working Paper Series no 5. Midrand: DBSA.

41. Stamoulis, K., and Anriquez, G. (2007). *Rural Development and Poverty Reduction: Is Agriculture Still the Key?* ESA Working paper no 07-02. Agricultural Development Economics Division. The Food and Agriculture Organization of the United Nations.

42. Statistics South Africa. (2012). *Census 2011 Municipal Fact Sheet.* Pretoria: Government Printer.

43. South Africa Human Rights Commission (SAHRC). (2014). *Poverty traps and social exclusion among children in South Africa.* Johannesburg: SAHRC.

44. The Presidency. (2000). *The Integrated Sustainable Rural Development Strategy (ISRDS).* Pretoria: Government Printer.

45. Thompson, E. (2007). Measuring the impact of tourism on rural development: An econometric approach. *Journal of Regional Analysis and Policy.* 37(2):147-154.

46. Todaro, M.P., and Smith, S.C. (2011). *Economic Development.* 11th edition. Essex: Pearson Education.

47. Toerien, D.F. (2014). *The Enterprise Architecture of Free State Towns.* Final Report. Daan Toerien Consultants. Bloemfontein.

48. United Nations (UN). (2002). *World Urbanization Prospects.* Population Division. New York.

49. United Nations Development Programme (UNDP). (2012). *Triple Wins for Sustainable Development.* New York: Bureau for Development Policy.

50. Van Holst Pellekaan, J. (1997). *Taking Action to Reduce Poverty in Sub-Saharan Africa: Development Practice.* Washington: World Bank.

51. Venter, A. (2016). Qualitative interview with Regional LED Manager of the Fezile Dabi District Municipality. Sasolburg, Free State Province, South Africa.

52. World Bank. (2013). *Global data base.* Retrieved 8 September 2015 from http://data.worldbank.org/topic/agriculture-and-rural-development.

53. World Bank. (2014). *Economics of South African Townships: Special Focus on Diepsloot.* World Bank Group. Washington D.C.

54. World Economic Forum (WEF). (2011). *The Future of Government: Lessons Learned From Around the World.* Cologny. Switzerland. Retrieved 10 July 2015 from www.weforum.org.

55. Zuma, J.G. (2015). *State of the Nation Address.* Retrieved 12 April 2015 from http://www.info.gov.za/speech.

Enterprise in Turbulent Environment

PSYCHOLOGICAL EMPOWERMENT AND EMPLOYEE BEHAVIORS EMPLOYEE ENGAGEMENT AS MEDIATOR AND LEADER-MEMBER EXCHANGE AS MODERATOR

Rizwana Kosar
Corvinus University of Budapest, Hungary
rizwanakosar2013@gmail.com

Sayyed M. Mehdi Raza Naqvi
Capital University of Science and Technology Islamabad, Pakistan
razanaqvi@cust.edu.pk

ABSTRACT
The objective of this study is to determine the association between psychological empowerment and two behavioral outcomes of employee (i.e. organizational citizenship behavior and knowledge sharing behavior) by examining the mediating role of employee engagement and moderating role of leader-member exchange. A survey was completed by employees working in different corporations and jobs. The data were collected by self- administered questionnaire and analyzed by using correlation and regression analysis. Results indicate that psychological empowerment positively influences organizational citizenship behavior and knowledge sharing behavior. In addition, employee engagement partially mediates the relationship between psychological empowerment and organizational citizenship behavior and fully mediates between psychological empowerment and knowledge sharing behavior. Psychological empowerment has positive significant relationship with the employee engagement whereas leader-member exchange does not moderate the relationship between psychological empowerment and employee engagement. The implications of these findings are discussed.
Keywords: Employee Engagement, Knowledge Sharing Behavior, Leader-Member Exchange, Organizational Citizenship Behavior, Psychological Empowerment

1. INTRODUCTION
For several decades, researchers have analyzed behavioral consequences of psychological empowerment. Researchers defined psychological empowerment as the deep rooted motivation in task which has sense of control related to employee's work and inclination towards employee's work role (Sprietzer, 1995).

The literature shows that leadership, perceived performance, attributes of work design, social and political support and management practices are the contextual antecedents of psychological empowerment (Seibert, Wang, & Courtright, 2011). Previous studies examined that organizational citizenship behavior is indirectly and positively influenced by psychological empowerment and organizational justice (Najafi et al., 2011).

Organizational citizenship behavior (OCB) is nontraditional job behavior as compared to job performance in formal role (Ozer, 2011). Knowledge Sharing Behavior (KSB) is defined as the behavior of an individual to share his/ her knowledge and skills related to work or task with other members of an organization to increase the effectiveness of an organization (Ozbebek & Toplu, 2011). Engagement is psychological presence to employ and execute job role in an organization (Bakker & Demerouti, 2008). The social relationships between leaders and followers are the core in leader member exchange (Lee, 2005).

In previous studies researchers have examined job satisfaction, organizational commitment and perceived organizational support (POS) as mediating variables between psychological empowerment and OCB and KSB (Najafi et al., 2011). Leader member exchange was examined

as moderator between employee engagement and organizational citizenship behavior and turnover intentions (Alfes et al., 2013). In literature it's rare to have employee engagement as mediating variable between psychological empowerment and organizational citizenship behavior and knowledge sharing behavior along with leader-member exchange as moderator between psychological empowerment and employee engagement.

The decision to include behavioral outcomes (OCB and KSB) was predicted not only on their importance in field of management but also in the area of applied psychology, social psychology and organizational behavior. The employee's behavior greatly affects the smooth functioning of an organization. Hence it is important to examine the factors which have impact on employees' behaviors. These two dependent variables are not only highly relevant to organization but also related to personality of an individual.

The contribution of the study is in two folds. First examines whether leader member exchange critically moderates the relationship between psychological empowerment and employee engagement. Second, whether two behavioral outcomes (OCB and KSB) are influenced by psychological empowerment with the mediating effect of employee engagement. The objectives of the study are, to identify the relationship between psychological empowerment and organizational citizenship behavior; to identify the relationship between psychological empowerment and knowledge sharing behavior; to investigate the role of employee engagement as mediator between psychological empowerment and organizational citizenship behavior and knowledge sharing behavior; and to investigate the role of leader member exchange as moderator in the relationship between psychological empowerment, OCB and KSB. The social exchange theory (SET) introduced in 1958 by the sociologist George Homans, based on the theoretical perspective of social exchange, acts as underpinning theory. This study proposed that psychological empowerment helps to maintain the high quality relationships by influencing the employee's behavior.

2. LITERATURE REVIEW

2.1 Psychological Empowerment and Organizational Citizenship Behavior (OCB)

Several researchers have discussed psychological empowerment in the field of management (Solansky, 2014). Psychological empowerment is intrinsic motivation of an individual caused through four cognitions reflecting individual's familiarization to his/her work role (Thomas & Velthouse, 1990). These four cognitions that create intrinsic motivation are meaning, competence, self-determination and impact (Spreitzer, Kizilos & Nason, 1997).

Meaning refers to a connection between behaviors, values and beliefs of a person and demands of a work role (Spreitzer, 1996). The actions of individuals can be initiated and regulated through sense of choice called self-determination (Deci, Connell & Ryan, 1989). The degree or extent of an individual's belief in his/her own ability for completion of a work related task with skills is called competence, whereas impact is the extent to which operating, strategic and bureaucratic outcomes in an organization are effected by an individual (Ashforth, 1989).

The visionary collaboration and cooperation between coworkers is called organizational citizenship behavior (Chiang & Hsieh, 2012). The training on principles of organizational justice to leaders directs both individual members of the union called individual organizational citizenship behavior (OCBI) and whole union as an organization called organizational citizenship behavior (OCBO) (Skarlicki & Latham, 1996). Intrinsic motivation can increase assistance and coordination among employees.

Previous studies on teachers indicates that perception about level of empowerment of teachers has significant relationship with organizational citizenship behavior and their feelings of commitment for organization, while the important predictors of organizational citizenship

behavior are listed as status, self-efficacy and decision making (Bogler & Somech, 2004; Ahmad et al., 2014).Thus increase in psychological empowerment influences the feelings at individual and team level that turn in influences the job satisfaction which leads to increased organizational citizenship behavior.

H1: There is positive association between psychological empowerment and organizational citizenship behavior.

2.2 Psychological Empowerment and Knowledge Sharing Behavior (KSB)

Knowledge sharing is also called "knowledge exchange" (Cabrera, Collins, & Salgado, 2006) and it can be defined as the technique for solving problems, executing new policies and procedures through collaborating with others (Cummings, 2004). Research shows that psychological empowerment, organizational citizenship behavior, job satisfaction and job involvement independently and positively effects knowledge sharing behavior of employees (Teh & Sun, 2012). Literature on KSB reflects that there is significant association between motivational factors and aims and attitudes of employee knowledge sharing (Lin, 2007; Bock et al., 2005). Thus an organization can achieve its objective and improve its knowledge management through knowledge sharing. Psychological empowerment improves the individual's capability which in turn improves knowledge sharing.

H2: There is positive association between psychological empowerment and knowledge sharing behavior.

2.3 The mediating role of employee engagement between psychological empowerment and organizational citizenship behavior

Employee engagement is the voluntary attempt to perform work by employees (Frank et al., 2004). Job demand undermines the employee's well-being whereas job resources such as skills, experience, freedom and helpful surroundings are positively linked with employee's engagement (Nahrgang, Morgeson & Hofmann, 2011). Psychological empowerment is significantly associated with employee engagement and affective job insecurity acts as moderator (Stander & Rothmann, 2010). Most of the preceding studies support the positive correlation between employee engagement and organizational citizenship behavior components (Rurkkhum & Bartlett, 2012). Engagement and job embeddedness are unique constructs and both are predictors of performance and intention to leave (Halbesleben & Wheeler, 2008). Rurkkhum and Bartlett (2012) found that psychological empowerment has positive influence on employee engagement. Thus, involvement of employee stemming from psychological empowerment leads toward organizational citizenship behavior.

H3: Employee engagement mediates the relationship between psychological empowerment and organizational citizenship behavior.

2.4 The mediating role of employee engagement between psychological empowerment and knowledge sharing behavior

Employee knowledge sharing provides a way for collective learning which may improve organizational performance (Hansen, 2002). The knowledge sharing intentions of employees can be enhanced through social interaction norms, enjoyment and reciprocity (Hau et al., 2013). Knowledge sharing will be improved when employees are highly engaged. The employee's ability to acquire and exchange knowledge enhances when personal encouragement, capacity and network of social interaction are high (Reinholt, Pedersen & Foss, 2011). Past studies found that the enactment of positive behavioral outcomes, as a consequence of engagement, largely depends on the wider organizational climate (Alfes et al., 2013). Thus, when employee's self-efficacy, competence, autonomy and determination are high, the employee will be highly

involved and vigorous in his or her job consequently the exchanging knowledge behavior is positively influenced.

H4: Employee engagement mediates the relationship between psychological empowerment and knowledge sharing behavior.

2.5 The moderating role of leader member exchange between psychological empowerment and employee engagement

Leader member exchange can be defined as the connection of mutual exchange between the new job holder/subordinate and his/her supervisor or boss (Lian, Ferris & Brown, 2012). Members are treated by their leaders differently which leads to different kinds of exchange relationships ranging from lower to higher quality mutual relationships in the context of leader member exchange theory (Sherony and Green, 2002). The feedback of followers in the form of emotions toward leaders is dominated by leader member exchange quality (Fisk & Friesen, 2012). Based on the above discussion in the areas of employee engagement, organizational citizenship behavior, turnover intentions and analytical aspect of social exchange, it is proposed that strong exchange relationship between boss and subordinate will strengthen the association between psychological empowerment and employee engagement.

H5: Leader-member exchange moderates the relationship between psychological empowerment and employee engagement such that the relationship is stronger for those who are higher in leader-member exchange.

2.6 Theoretical Model
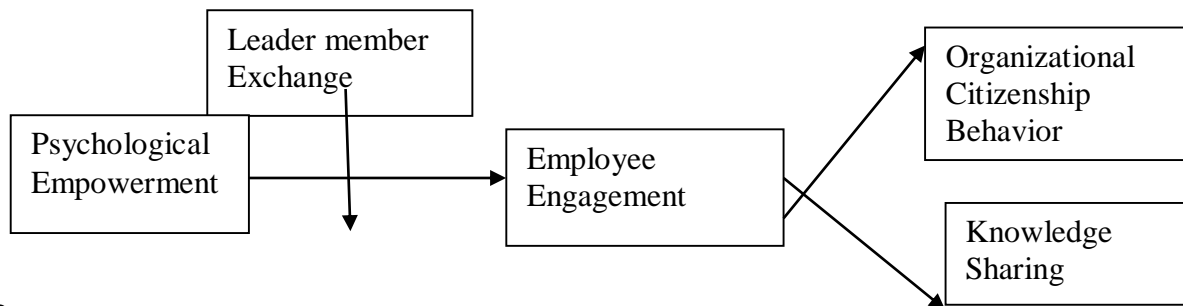
3. METHODOLOGY

3.1 Sample and Procedure

In this study, the sample contained employees working in three different work environments of Pakistan, the researcher has included well established universities from both private and public sectors. It was a cross-sectional study.

Self-administered questionnaire was the tool for collecting data. Mostly, questionnaires were distributed in person but sometimes when it was difficult to reach respondent personally then questionnaires were sent through email. The sample was selected carefully for the study because in selected sector employees spend most of their time in their offices. The convenience sampling technique was used because of limited availability of time and resources. 300 questionnaires were distributed, 156 were received back that constituted 52% response rate. The respondents were asked to identify their gender, age, qualification and work experience. 10 questionnaires were rejected because of misleading and incomplete answers. The total responses used for statistical modeling were 146 (n=146), which is 93.5% of total received questionnaires. The respondents were consisted of 43.8% female and 56.2 % male. 56.8 % of the respondents hold master degrees while 19.9% people hold MS/M. Phil degrees. In terms of age group, 50.7% of the sample lies between 26 and 33 of age.

3.2 Measures

3.2.1 Psychological empowerment

Psychological empowerment was measured by using a twelve item scale developed by Spreitzer (1995). 'The work I do is very important to me' was the sample item. The scale used for measurement was 5 point 'Likert' scale and 0.82 was the Cronbach's alpha for the scale.

3.2.2 Employee engagement

A seventeen item-scale established by Schaufeli et al (2002) was used to measure employee engagement. 'I can continue working for very long periods of time' was the sampling item. A five-point measure is going from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's alpha for the scale was .88.

3.2.3 Leader-member exchange

For leader-member exchange scale, a seven-point measure is going from 1 (strongly disagree) to 7 (strongly agree). An 11 item-scale developed by Liden and Maslyn (1998) was used to measure leader-member exchange. 'I like my supervisor very much as a person' was the sample item. 0.93 was Cronbach's alpha for the scale of leader-member exchange.

3.2.4 Organizational citizenship behavior

The instrument for organizational citizenship behavior is comprised of 16 items. Example of these items consists of: Help others who have been absent, express loyalty towards the organization etc. A seven-point measure is going from 1 (never) to 7 (always). Organizational citizenship behavior has two aspects (organizational citizenship behavior individual and organizational citizenship behavior organization) which were measured by the instrument established by Lee and Allen (2002). 0.896 was the Cronbach's alpha for the organizational citizenship behavior scale.

3.2.5 Knowledge sharing behavior

To measure knowledge sharing, a 5 item scale was used developed by Zarraga and Bonache (2003). 'My knowledge sharing with other organizational members is good' was a sample item. A seven-point measure is going from 1 (strongly disagree) to 7 (strongly agree). 0.85 was Cronbach's alpha for the scale of knowledge sharing behavior.

3.3 Control Variables

In table 1, one way analyses of variance were conducted to compare gender, age and work experience on employee engagement, organizational citizenship behavior and knowledge sharing behavior. These tests revealed that on the basis of age significance difference occurred in employee engagement and organizational citizenship behavior and in employee engagement on the basis of work experience. Thus age and work experience had been controlled in regression analysis.

Table following on the next page

Table 1 ONE-WAY ANOVA

Control Variable	Employee Engagement		Organizational Citizenship Behavior		Knowledge Sharing Behavior	
	F- value	Sig(p)	F-value	Sig(p)	F-value	Sig(p)
Gender	.13	.72	1.34	.25	.01	.94
Age	3.29	.01	2.99	.02	.67	.62
Qualification	.13	.97	1.20	.31	.16	.96
Work Experience	2.55	.03	.77	.57	1.31	.27

If p>0.05, no need to control that variable; If p<0.05, control those variables.

4. RESULTS

4.1 Correlation Analyses

Table 2 presents descriptive statistics and correlations occur among the variables. The correlations of all variables are significant at p<.05. 4.05 was the mean for psychological empowerment and .499 was standard deviation, and that for organizational citizenship behavior was 5.54 (s.d=.94). The correlation between the psychological empowerment and organizational citizenship behavior was .37. The mean for knowledge sharing behavior was 5.64 (s.d=1.13). .19 was the correlation between psychological empowerment and behavior of sharing knowledge. Employee engagement mean was 3.98 (s.d=.56). The correlation among psychological empowerment and employee engagement was .55, among employee engagement and organizational citizenship behavior was .33 and between employee engagement and knowledge sharing behavior was .19.

Table 2 Mean, Standard Deviations, Correlations and Reliabilities

Variable	Mean	S.d.	1	2	3	4	5
1. PE	4.05	.499	(.82)				
2.EE	3.98	.56	.55**	(.88)			
3.LMX	5.25	1.16	.40**	.42**	(.93)		
4.OCB	5.54	.94	.37**	.33**	.49**	(.896)	
5.KSB	5.64	1.13	.19*	.19*	.33**	.46**	(.85)

N=146; Values in parentheses are alpha reliabilities;***p<.001; **p<.01; *p<.05; PE=Psychological Empowerment; EE=Employee Engagement; LMX= Leader-member Exchange; OCB=Organizational Citizenship Behavior; KSB=Knowledge Sharing Behavior.

4.2 Regression Analyses

To test hypotheses, hierarchical regression modeling (HRM) technique was adopted (Table 3). In regressions where dependent variable was employee engagement, age and work experience were recorded as control variables in first step and regressions where dependent variable was organizational citizenship behavior age was entered as control variable in first step. Baron and Kenny (1986) suggested some provisions that were applied to test mediation of employee engagement. Table 3 illustrates that psychological empowerment has significant positive influence on organizational citizenship behavior (β=.70, p<.001), supporting hypothesis 1.

The psychological empowerment has significantly positive influence on knowledge sharing behavior (β=.44, p<.05), supporting hypothesis 2. After launching the mediating variable (i.e. employee engagement) into model, psychological empowerment has significant positive influence on employee engagement (β=.60, p<.001). The employee engagement has the significantly positive influence on organizational citizenship behavior (β=.58, p<.001), while influence of psychological empowerment on organizational citizenship behavior with

490

mediation of employee engagement becomes significant (β=.50, p<.001).Therefore employee engagement partially mediates the connection between psychological empowerment and OCB, partially supporting hypothesis 3. Employee engagement has significant positive influence on behavior of sharing knowledge sharing (β=.60, p<.001). The impact of psychological empowerment on behavior of exchanging knowledge with mediating role employee engagement was insignificant (β=.29, p>.05), therefore full mediation of employee engagement occurs between the relationship of psychological empowerment and knowledge sharing behavior, supporting hypothesis 4. Table 3 illustrates that interaction of psychological empowerment and leader-member exchange has insignificant influence on employee engagement (β=.09, p>.05), which indicates that positive association among psychological empowerment and employee engagement is weaker when the employee are high than low in leader member exchange, not supporting hypothesis 5.

Table 3 Results of Regression Analyses

Predictors	EE			OCB			KSB		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1									
Control variables		.35			.004				
Step 2									
PE	.60***	.32	.29***	.70***	.14	.14***	.44*	.04	
Mediation: EE									
Step 1									
Control Variables					.004				
Step 2									
EE				.58***	.12	.12***	.38*	.04	
Step 3									
PE				.50***	.17	.05*	.29ns	.05	.01ns
Moderation: LMX									
Step 1									
Control variables		.04							
Step 2									
PE	.51***	.36	.33***						
LMX	.11*								
Step 3									
PE×LMX	.09ns	.37	.01ns						

N=146; control variables were age and work experience;***p<.001; **p<.01; *p<.05; PE=Psychological Empowerment; EE=Employee Engagement; LMX= Leader-member Exchange; OCB=Organizational Citizenship Behavior; KSB=Knowledge Sharing Behavior.

5. DISCUSSION

The first hypothesis predicted that there will be positive association between psychological empowerment and organizational citizenship behavior which was supported after analyzing results. Previous studies indicated that psychological empowerment was positively affected by organizational citizenship behavior (Chiang & Hsieh, 2012). The current study is consistent with previous studies by proving that psychological empowerment has significant positive

association with organizational citizenship behavior. The reason for this association is that when employees are psychologically empowered and motivated, they will be highly satisfied and committed towards their job, as a result the cooperation with other organizational members will be increased and individual will spear more time for organization.

The second hypothesis predicted that there will be positive association between psychological empowerment and knowledge sharing behavior which was supported by the findings of the current study. The commitment towards meaningfulness, self- efficacy and autonomy positively influences the employee's knowledge sharing behavior. The employee's feeling of psychological satisfaction will have positive effect on members of the organization.

The third hypothesis predicted that employee engagement mediated in the association of psychological empowerment and organizational citizenship behavior which was partially supported after analysis. The previous results illustrates that work engagement played a mediating role between charismatic leadership and organizational citizenship behavior (Babcock-Roberson & Strickland, 2010). By empowering the employees psychologically, employee engagement at work partially relates psychological empowerment with organizational citizenship behavior. When employees will be psychologically empowered, they will be more vigorous and dedicated towards their job which enhances the activities entailing a greater commitment towards work.

The investigation suggested a mediating role of employee engagement in the association of psychological empowerment and knowledge sharing behavior; supported fourth hypothesis. Employee's behavior towards knowledge sharing and exchange will be positive when employee will be more empowered and engaged in work, because employees will be more dedicated, vigorous and absorbed in their work. The employees will share their expertise and knowledge which contributes to effectiveness of an organization.

The fifth hypothesis was leader-member exchange moderates in the association among psychological empowerment and employee engagement in such a way that the connection is stronger for those who are higher in leader-member exchange. Results were not supporting this hypothesis. According to vertical dyadic linkage theory, nature of interaction of leader with members is varying in in-group and out-group (Graen & Cashman, 1975). In in-group members are more satisfied and committed and in out-group members are dissatisfied and not committed which puts impact on organizational performance (Graen & Ulh-Bien, 1995). This study examined that leader-member exchange does not moderates among the association of psychological empowerment and employee engagement. The argument is that the psychological empowerment and employee engagement relationship of members of out-group will be weaker when leader-member exchange will be high. When employees are psychologically empowered, their dedication and absorption will be more without the role of leader.

6. CONCLUSION

The management of an organization has some functional implications of current research findings. If employee is not intrinsically motivated to perform his/her task, it can create serious problem and conflict in an organization and he/she will show deviant behavior on workplace. Changes in employee's behavior can increase operational cost for organizations. The understanding of psychological empowerment's influence on organizational citizenship behavior and knowledge sharing behavior may help companies to provide solutions to reduce costs of irregular behavior. If employees will not be psychologically empowered they will not share knowledge with other organizational members as a well as they will not cooperate with other organizational members.

It is recommended that managers should increase psychological empowerment of employees. Managers can adapt following steps: First identify what motivates employees such as increase in participation in decision making, expansion opportunities, promotion, job autonomy, job control, team participation and to be a successful team member to accomplish a task. Second determine and explore hurdles that can reduce encouragement of employees such as lack of knowledge, and fear of losing job. Third develop an employee motivation program such as better compensation packages, favorable intrinsic and extrinsic rewards, uplifting, compliment and appreciation as employee's work raise. Fourth add motivation to employee training. Fifth implement procedures for motivating an aging workforce. Managers should provide good supervision to guide and direct activities of employees.

The major strength of this study is field data from of variety of organizations. Field data from different private and public organizations can be generalized. The current study is with few limitations. First, convenience sampling technique was used. Second the possibility of method bias for variables tapped from same source is an issue. Third, the sample size was small.

The future researchers should use large sample size and experimental and longitudinal research designs. Researchers should test mediation –moderation model in different countries or cultures with samples from other occupations and settings. Future researchers should try to examine the link between job demands or job resources with organizational citizenship behavior or knowledge sharing behavior. Job resources, transformational leadership, perceived organizational support and PS fit should be examined as moderators. Future research should also examine employee creativity as mediator between psychological empowerment or employee engagement and organizational citizenship behavior or knowledge sharing behavior.

LITERATURE:

1. Ahmad, M. S., Malik, M. I., Sajjad, M., Hyder, S., Hussain, S., & Ahmed, J. (2014). Linking Teacher Empowerment with Organizational Commitment, Professional Commitment and Organizational Citizenship Behavior. *Life Science Journal*, *11*(4).

2. Alfes, K., Shantz, A. D., Truss, C., & Soane, E. C. (2013). The link between perceived human resource management practices, engagement and employee behaviour: a moderated mediation model. *The international journal of human resource management*, *24*(2), 330-351.

3. Ashforth, B. E. (1989). The experience of powerlessness in organizations. *Organizational behavior and human decision processes*, *43*(2), 207-242.

4. Babcock-Roberson, M. E., & Strickland, O. J. (2010). The relationship between charismatic leadership, work engagement, and organizational citizenship behaviors. *The Journal of Psychology*, *144*(3), 313-326.

5. Bakker, A. B., & Schaufeli, W. B. (2008). Positive organizational behavior: Engaged employees in flourishing organizations. *Journal of Organizational Behavior*, *29*(2), 147-154.

6. Bock, G. W., Zmud, R. W., Kim, Y. G., & Lee, J. N. (2005). Behavioral intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. *MIS quarterly*, 87-111.

7. Bogler, R., & Somech, A. (2004). Influence of teacher empowerment on teachers' organizational commitment, professional commitment and organizational citizenship behavior in schools. *Teaching and teacher education*, *20*(3), 277-289.

8. Cabrera, A., Collins, W. C., & Salgado, J. F. (2006). Determinants of individual engagement in knowledge sharing. *The International Journal of Human Resource Management*, *17*(2), 245-264.

9. Chiang, C. F., & Hsieh, T. S. (2012). The impacts of perceived organizational support and psychological empowerment on job performance: The mediating effects of organizational citizenship behavior. *International Journal of Hospitality Management*, *31*(1), 180-190.

10. Cummings, J. N. (2004). Work groups, structural diversity, and knowledge sharing in a global organization. *Management Science*, 50(3), 352−364.

11. Deci, E. L., Connell, J. P., & Ryan, R. M. (1989). Self-determination in a work organization. *Journal of applied psychology*, *74*(4), 580.

12. Fisk, G. M., & Friesen, J. P. (2012). Perceptions of leader emotion regulation and LMX as predictors of followers' job satisfaction and organizational citizenship behaviors. *The Leadership Quarterly*, *23*(1), 1-12.

13. Frank, F.D., Finnegan, R.P. and Taylor, C.R. (2004), "The race for talent: retaining and engaging workers in the 21st century", Human Resource Planning, Vol. 27 No. 3, pp. 12-25.

14. Halbesleben, J. R., & Wheeler, A. R. (2008). The relative roles of engagement and embeddedness in predicting job performance and intention to leave. *Work & Stress*, *22*(3), 242-256.

15. Hansen, M. T. (2002). Knowledge networks: Explaining effective knowledge sharing in multiunit companies. *Organization science*, *13*(3), 232-248.

16. Hau, Y. S., Kim, B., Lee, H., & Kim, Y. G. (2013). The effects of individual motivations and social capital on employees' tacit and explicit knowledge sharing intentions. *International Journal of Information Management*, *33*(2), 356-366.

17. Lee, J. (2005). Effects of leadership and leader-member exchange on commitment. *Leadership & Organization Development Journal*, *26*(8), 655-672.

18. Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: the role of affect and cognitions. *Journal of Applied Psychology*, *87*(1), 131.

19. Lian, H., Ferris, D. L., & Brown, D. J. (2012). Does taking the good with the bad make things worse? How abusive supervision and leader–member exchange interact to impact need satisfaction and organizational deviance. *Organizational Behavior and Human Decision Processes*, *117*(1), 41-52.

20. Liden, R. C., & Maslyn, J. M. (1998). Multidimensionafity of leader-member exchange: An empirical assessment through scale development. *Journal of management*, *24*(1), 43-2.

21. Lin, H. F. (2007). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of information science*.

22. Nahrgang, J. D., Morgeson, F. P., & Hofmann, D. A. (2011). Safety at work: a meta-analytic investigation of the link between job demands, job resources, burnout, engagement, and safety outcomes. *Journal of Applied Psychology*, *96*(1), 71.

23. Najafi, S., Noruzy, A., Azar, H. K., Nazari-Shirkouhi, S., & Dalvand, M. R. (2011). Investigating the relationship between organizational justice, psychological empowerment, job satisfaction, organizational commitment and organizational citizenship behavior: An empirical model. *African Journal of Business Management*, *5*(13), 5241-5248.

24. Özbebek, A., & Toplu, E. K. (2011). Empowered employees' knowledge sharing behavior. *Int J Bus Manag*, *3*, 69-76.

25. Ozer, M. (2011). A moderated mediation model of the relationship between organizational citizenship behaviors and job performance. *Journal of Applied Psychology*, *96*(6), 28.

26. Rurkkhum, S., & Bartlett, K. R. (2012). The relationship between employee engagement and organizational citizenship behaviour in Thailand. *Human Resource Development International*, *15*(2), 157-174.

27. Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness studies*, *3*(1), 71-92.

28. Seibert, S. E., Wang, G., & Courtright, S. H. (2011). Antecedents and consequences of psychological and team empowerment in organizations: a meta-analytic review. *Journal of Applied Psychology*, *96*(5), 981.

29. Sherony, K.M. and Green, S.G. (2002), "Coworker exchange: relationships between coworkers, leader-member exchange and work attitudes", *Journal of Applied Psychology*, Vol. 87, pp. 542-8.

30. Skarlicki, D. P., & Latham, G. P. (1996). Increasing citizenship behavior within a labor union: A test of organizational justice theory. *Journal of Applied Psychology*, *81*(2), 161.

31. Solansky, S. (2014). Education and experience impact leadership development psychological empowerment. *Leadership & Organization Development Journal*, *35*(7), 637-648.

32. Spreitzer, G. M., Kizilos, M. A., & Nason, S. W. (1997). A dimensional analysis of the relationship between psychological empowerment and effectiveness satisfaction, and strain. *Journal of management*, *23*(5), 679-704.

33. Spreitzer, G. M. (1996). Social structural characteristics of psychological empowerment. *Academy of management journal*, *39*(2), 483-504.

34. Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of management Journal*, *38*(5), 1442-1465.

35. Stander, M. W., & Rothmann, S. (2010). Psychological empowerment, job insecurity and employee engagement. *SA Journal of Industrial Psychology*, *36*(1), 1-8.

36. Teh, P. L., & Sun, H. (2012). Knowledge sharing, job attitudes and organisational citizenship behavior. *Industrial Management & Data Systems*, *112*(1), 64-82.

37. Thomas, K. W., & Velthouse, B. A. 1990. Cognitive elements of empowerment: An "interpretive" model of intrinsic task motivation. *Academy of Management Review*, 15: 666-681.

38. Zarraga, C., & Bonache, J. (2003). Assessing the team environment for knowledge sharing: an empirical analysis. *International Journal of Human Resource Management*, *14*(7), 1227-1245

FINNISH HIGH-IMPACT ICT SMES AND ECOSYSTEMS

Tuomas Ranti
University of Turku, Finland
tuomas.ranti@utu.fi

Mikko Gronlund
University of Turku, Finland
mikko.s.gronlund@utu.fi

Thommie Burstrom
Hanken School of Economics, Helsinki, Finland
thommie.burstrom@hanken.fi

ABSTRACT
It is a well-known fact that the Finnish economy is treading water. The globalisation makes it necessary for firms and policy makers to be able to manage complex international business relationships in a nimble manner. This paper studies the characteristics and role of high-impact small and medium-sized companies (HISMEs) of the information and communication technology (ICT) cluster in the Finnish business environment. From a national point of view, this subset of the whole enterprise population is of particular interest, since these companies have both managed to grow their sales significantly, as well as greatly increase the number of people they employ. We utilised a database comprising the financial information of over 80 million European companies to identify all Finnish HISMEs. We analysed in detail 125 SMEs that met the criteria for a high-impact SME operating in the ICT cluster. The results indicate that the firms studied contribute considerably to the growth and stabilisation of the Finnish economy. Furthermore, we found that HISMEs in the ICT cluster include a high proportion of medium-sized companies and the companies are mainly located in four regions in Finland.
Keywords: High-impact SMEs, company growth, financial performance, business ecosystems, entrepreneurship policy

1. INTRODUCTION

The Finnish national economy is in a downslope, and like many other countries, Finland is trying to find ways to combat economic recession. The hope for economic recovery is based on entrepreneurial success stories, that is, a hope for especially small and medium-sized companies (SMEs) to grow and prosper in such a way that they contribute to maintaining a healthy national economy. Finland shares this hope with the rest of Europe, since SMEs play a vital role in stabilising national economies (EC, 2013a; Bertolini, 2011; Hofheintz & Mettler, 2013). In particular, the role of high-impact firms has been brought forward as contributing to the economic growth and robustness of an economy (Acs et al., 2008). For example, Acs et al. (2008) noticed that the employment and revenue growth in an economy is based on high-impact firms, and they also illustrated that high-impact firms are distributed across all industries. These firms are rather mature, on average around 25 years old, and they appear in all size groups. It was also found that most job losses during the period of their study came from larger, low-impact firms. Taking these facts in concern, Toivonen et al. (2009) propose that the role of high-impact firms be further studied. Therefore, this research examines Finnish SMEs that fulfil the definition of high-impact firms, with a particular focus on the information and communication technology (ICT) cluster, as it has been a key area of development in Finland.

Such studies are of importance since they can bring significant practical value to entrepreneurship stakeholders (Kenworthy and McMullan, 2013).

In the research project, a part of which this research paper represents, we refer to the business context where SMEs act as a business ecosystem, which is composed by a network of organisations that collectively create an integrated co-evolving value-creating social system with customer value in focus (Moore, 1993; Basole, 2009; Lusch, 2010). Iansiti and Levien (2004) describe that any business ecosystem should exhibit variety, that is, a diversity of organisations playing different roles in the ecosystem, namely "niche players", "keystones", or "physical dominators", thus contributing to the health of the ecosystem (Iansiti & Levien, 2004). The health of an ecosystem is usually understood as being based on productivity, robustness and niche creation (Iansiti and Levien, 2004; Jansen and Cusumano, 2013). Our approach is alternative to the traditional approach in ecosystems research, where large firms, often business ecosystem leaders, are studied, as we focus on the role of high-impact SMEs (HISMEs). Our research question is: What are the characteristics and role of Finnish HISMEs in the ICT cluster with regard to being contributors to the economic growth and robustness of the Finnish business ecosystem? We follow the advice of Kenworthy and McMullan (2013) and contribute to the studies of a certain research program, in this case the studies of high-impact firms (Acs et al., 2008). The research lays the groundwork for the aforementioned study of Finnish ICT HISMEs and related ecosystems studies by finding the ICT HISMEs from the general firm population, and mapping and illustrating their characteristics and performance (e.g. firm size, regional distribution, productivity, volatility, foreign ownership, markets, and financial condition).

2. THEORETICAL FRAMEWORK

As presented in the introduction section, this paper aims to lay the groundwork for the study of high-impact firms as actors in business ecosystems contributing to the health of the ecosystems and, consequently, the national economy. Drawing on Birch (1981), Acs et al. (2008) presented the concept of "high-impact firms" for the research of rapidly growing firms. Birch and Medoff (1994) propose that not small or large Firms, but innovative "gazelles", firms whose sales have at least doubled under the most recent four-year period, are the firms who account for most of the employment growth (Birch & Medoff, 1994). Birch identified high-growth firms on the basis of sales growth, which Acs et al., arguing that many "gazelles" do not, in fact, contribute to employment growth, expanded by also including an "employment growth quantifier" (EGQ) to make it possible to take better into account this societal dimension. In this research, we base the definition of high-impact firms on Acs et al. (2008). According to Acs et al., high-impact firms are such firms, whose sales have at least doubled within a period of 4 years, and whose EGQ is at least 2 within the same time period.

High impact firms and their actions have to be explained in relation to some context. In this paper, this context is referred to as a business ecosystem. We draw on Moore (1993) and define business ecosystems as a context where "firms co-evolve capabilities around a new innovation: they work cooperatively and competitively to support new products, satisfy customer needs, and eventually incorporate the new round of innovations." There are different types of firms in a business ecosystem and a high-impact firm would need to manage its relationships to these other firms. Researchers (Moore, 1993; Iansiti & Levien, 2004) describe four types of firms: commodities, niched firms, keystones and physical dominators. In terms of strategy, researchers (Iansiti & Levien, 2004; Pierce, 2009) describe that a commodity firm is active in a slow-moving industry where an ecosystem strategy is of less importance. However, if the business environment is characterised by rapid and constant change, and the organisation can focus on a narrow and defined business segment, a niche strategy might be the best type of strategy to

follow (for example Nvidia Corp.) A niched organisation would develop its own expertise and capabilities in order to cope with the turbulent environment through ongoing innovation activities (Li and Garnsey, 2013). It would also typically operate in the shadow of a keystone. However, a niche player may also challenge keystone actors when new technologies are introduced. For example XML as mark-up language brought power to niched organisations by allowing more loosely coupled networks. In practice, basically all small and medium-sized firms follow a niche strategy.

Researchers also illustrate that a keystone-type of organisation typically operates in a turbulent environment. The keystone would position itself at the centre of a complex network of asset-sharing relationships. A keystone organisation (for example eBay Inc.) would simplify the connection between network participants. The keystone would also carefully manage broadly distributed assets, valuable to the organisation, in order to create value. Therefore, through value sharing, the keystone organisation can capitalise on capabilities of the entire ecosystem and create new business models. However, the keystone may also act aggressively aiming to maximise value from network assets that are not in control of the keystone. If using this type of behaviour, the keystone would follow a value dominator strategy (for example Enron Corp.) This strategy is risky since the keystone might end up terminating the ecosystem.

Additionally, if an organisation is active in a mature industry, it might be able to follow a physical dominator strategy (Iansity & Levien, 2004). If following this strategy, the organisation might utilise vertical and horizontal integration and become its own ecosystem, as in the case with IBM Corp. West and Wood (2013) point out that in such situations, the dominator needs to undertake the general responsibility for the ecosystem health, or otherwise the health of the ecosystem might soon plummet in a negative downward spiral.

Research also illustrates that a business ecosystem typically encompasses several clusters. For example, software vendors are seen as a crucial cluster in the Microsoft ecosystem. Such clusters may be shared with other ecosystems. It is therefore not self-evident how ecosystems evolve and how they overlap. In this paper, high-impact firms are seen as occupying a special domain in the Finnish business ecosystem, namely the ICT cluster. It is assumed that they hold a niche position with possibilities to develop business capabilities and become keystone firms or physical dominators (**Error! Reference source not found.**).

Figure 3 Finnish high-impact SMEs in the ICT cluster
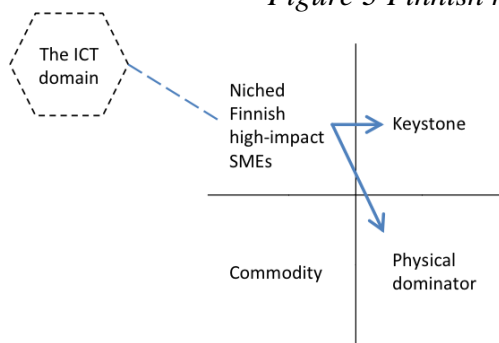
To summarise, it is challenging for a firm to create a balance with other stakeholders, and without question, finding balance is advantageous. However, Finnish SMEs should challenge the current balance and become more competitive. Such a balance can be achieved through national support activities. That is, the government takes action to reinforce the growth of certain business areas. Nevertheless, in order to know what actions to take, the Finnish government as a type of a business ecosystem leader would need to know more of the status of defined business areas, in this case, niched Finnish high-impact firms in the ICT cluster.

3. METHOD

In order to be able to examine the roles of HISMEs in ecosystems, and ultimately as contributors to the wellbeing of the society, we first need to find them and then carry on to examine their characteristics. There are multiple definitions of high-impact firms and many of the earliest definitions are based solely on revenue growth. We see such definitions as too limited since they do not take employment change into account. In this study, high-impact firms must have performed well both in relation to sales and employment growth. Therefore, like said, our definition of high-impact firms is based on Acs et al. (2008) and takes into consideration both the growth of their sales, as well as the growth of their number of employees through the EGQ. The EGQ is calculated as the absolute growth of employment multiplied with the relative growth of employment, the product of which should, by definition, be at least 2 under the most recent four-year period. We make the exception to Acs et al. so that instead of "within a period of 4 years" we use "within a period of 1–4 years", because we consider even the firms that were able to fulfil the definition faster than in four years to be high-impact companies. Furthermore, the companies were also required to have average sales of at least 400,000 euros in 2008–2011. We utilised the EU definition for SMEs, according to which SMEs are firms that employ fewer than 250 persons and have a maximum turnover of 50 million euros and/or an annual maximum balance sheet total of 43 million euros (EC 2003).

Based on the definitions above, we identified all high-impact ICT firms in Finland. In the first phase of the study, the research team used NACE codes in order to carry out company data searches in the Orbis[1] database for each respective cluster, implementing at the same time the definition of high-impact firms. Company data from 2008 was compared with that of 2012 in order to define whether a company could be qualified as a high-impact company.

Once the company information for the cluster had been acquired, it became apparent that the cluster-wise lists of firms identified solely on the basis of NACE classes, as specified by the European Cluster Observatory (Monfardini 2012), failed to represent the cluster accurately. The list would include many firms that clearly could be deemed to not belong to the ICT cluster. This demonstrates the problem of trying to define industry clusters solely on the basis of certain NACE codes, as many NACE classes (as specified in Monfardini 2012) would also include other types of firms than just firms belonging to the ICT cluster. In order to improve the accuracy of the firm list, we started over and searched all HISMEs in Finland and picked out the ones that could be categorised under the ICT cluster.

As a second step, we performed a financial statement analysis. Financial statement analysis is defined as the process of identifying the financial strengths and weaknesses of the firms by properly establishing relationship between the items of the balance sheet and the profit and loss account. Financial statement ratio analysis provides a broader basis for comparison than raw numbers do. However, ratios on their own, without year-to-year or other industry or firm-related comparative data are of little use in judging the health or future of the industry or firm being analysed. There are various methods and techniques that are used in analysing financial statements, such as comparative statements, schedule of changes in working capital, common size percentages, funds analysis, trend analysis and ratios analysis. In this research, we have measured several dimensions of the financial performance of the high-impact ICT SMEs in Finland. These dimensions include the extent of operations, the profitability of operations, the solidity of the company, and productivity.

There are limitations to a study of this kind. The analysis employed in this article is quantitative and based primarily on key financial figures deriving from the financial statements of the firms. Therefore, it answers to questions related to the "what", "where" and "how many" of high-

---

[1] Orbis Europe is a European database of financial information. Currently Orbis, Europe contains information on over 80 million European firms, with an emphasis on private company information.

impact firms within the ICT cluster. While an analysis of this kind is useful, it is by no means exhaustive. Knowing where high-impact firms are located, how many exist, and the degree to which they contribute to job creation is helpful to many audiences, including policymakers, industry leaders, academicians and researchers, media organisations, and even high-impact firms themselves.

4. EMPIRICS

In this section, we illustrate the findings from the study. We first make a brief description of the general situation in Finland and then we illustrate study-specific data. Finland is divided into 19 regions (Finnish: maakunta), which belong to the NUTS (nomenclature of territorial units for statistics) level 3 in the regional classification system of the European Union. The regions are governed by regional councils, which serve as forums of cooperation for the municipalities of a region. The main tasks of the regions are regional planning and the development of enterprises and education.

According to Statistics Finland, approximately 354 000 enterprises operated in Finland in 2013. These enterprises had a total of 387 000 establishments. The vast majority (347 000) of the enterprises had only one establishment. The remaining enterprises had an average of five establishments per enterprise. A little over 99 percent of the Finnish companies had fewer than 50 employees and their share of all personnel was slightly under 50 percent (Table 8). It is notable that firms are mostly very small and that the number of medium-sized firms is very low.

Table 8: Enterprises in Finland by size class in personnel in 2013 (Source: Statistics Finland)

	Number of enterprises	Share	Turnover	Share	Total number of personnel	Share	Sum of salaries	Share
1-4	314 981	89,0 %	43 024 921	10,9 %	281 620	19,1 %	5 278 225	9,9 %
5-9	19 858	5,6 %	20 777 538	5,3 %	127 446	8,7 %	4 278 395	8,0 %
10-19	10 341	2,9 %	27 133 283	6,9 %	137 474	9,3 %	5 031 076	9,4 %
20-49	5 700	1,6 %	41 575 688	10,5 %	169 656	11,5 %	6 665 639	12,5 %
50-99	1 699	0,5 %	33 144 001	8,4 %	115 412	7,8 %	4 678 411	8,8 %
100-249	912	0,3 %	51 005 144	12,9 %	138 113	9,4 %	5 906 358	11,1 %
250-499	315	0,1 %	32 009 810	8,1 %	110 000	7,5 %	4 765 096	8,9 %
500-999	163	0,0 %	39 167 484	9,9 %	111 485	7,6 %	5 000 399	9,4 %
1000 or more	112	0,0 %	106 319 554	27,0 %	279 930	19,0 %	11 833 674	22,1 %
Total	354 081	100 %	394 157 423	100 %	1 471 135	100 %	53 437 272	100 %

4.1 Study-specific data

Our definition of the ICT cluster is based on a definition by OECD, which states that the ICT sector represents a combination of manufacturing and service businesses, whose products capture, transmit and display data and information electronically (OECD 2007). We determined that 125 HISMEs operated in the ICT cluster in Finland, representing 8 percent of the total number of HISMEs in Finland. As mentioned, even though the NACE classification was not utilised as the basis for data search, we can see from the results that Computer programming activities (NACE [Rev. 2] primary code 6201) represents the largest group of companies (38%), followed by Computer consultancy activities (NACE [Rev. 2] 6202; 15%) and Business and other management consultancy activities (NACE [Rev. 2] 7022; 9%).

Figure 4 Distribution of ICT cluster high-impact SMEs by region in 2012, n = 125
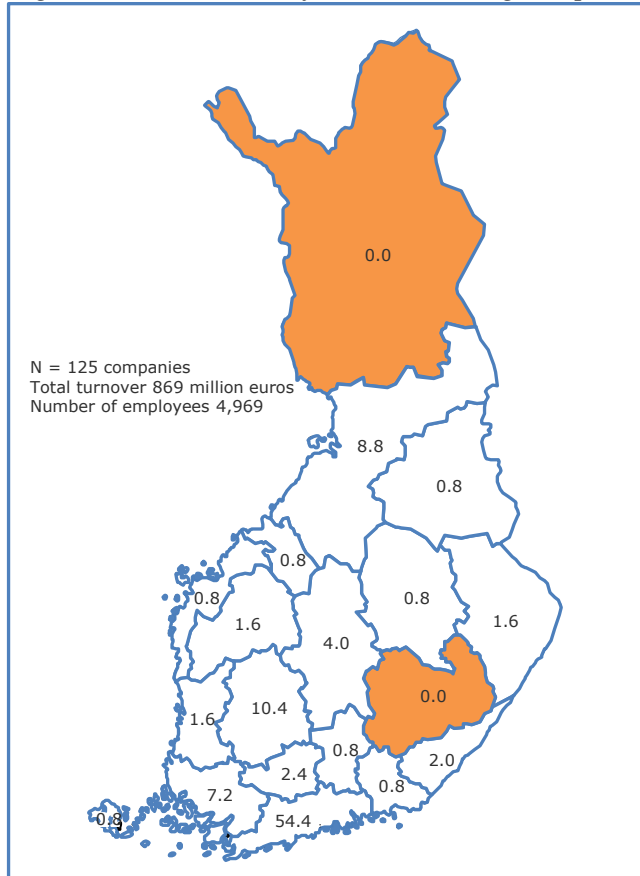
Over half (54%) of the identified ICT HISMEs were based in the capital city region of Uusimaa (Figure 4). Slightly over 10 percent of the identified companies are located in Pirkanmaa, followed by Northern Ostrobothnia (9%) and Southwest Finland (7%). This means that 80% of ICT HISMES are located in only four regions. It should also be observed that two regions lack entirely the presence of an ICT HISME, namely Lapland and Southern Savonia. Policy makers within each region could find it beneficial to compare these data with their SME strategies and financial input in the development of ICT business activities in order to acquire complementing data for the assessment of the cost-benefit ratios of policy actions that have been conducted. For instance, the Northern Ostrobothnia region has positioned its development activities especially on ICT, which is also reflected by the presence of HISMEs based in that region.

About two-thirds of the ICT HISMEs were established between 2000 and 2009, and their average age is 14 years and the median age is 12, based on 2013 data. In 2012, these companies had a combined turnover of 869 million euros and employed some 5 000 people. The average number of personnel was 40, while the median number of personnel was 22. Between 2008 and 2013, the median turnover of the companies increased from somewhat over 0.8 million euros to over 3.4 million euros.

Figure following on the next page

501

*Figure 5 Distribution of ICT cluster high-impact SMEs by
number of personnel in 2012, n = 125*
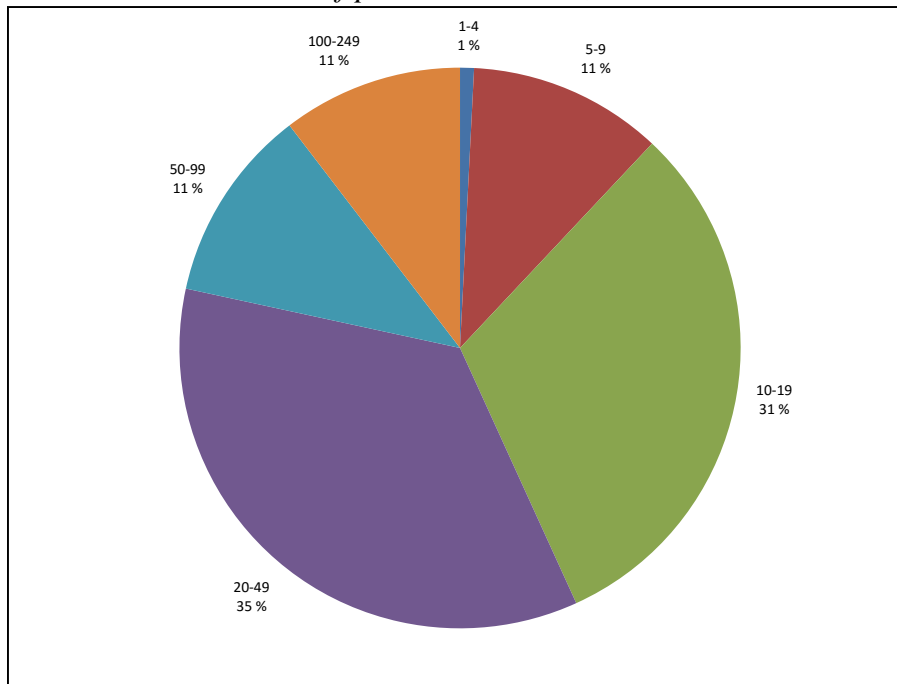
As can be seen in Figure 5, 22% of the firms are medium-sized in terms of the number of employees. This is remarkable since, in average, only some 0.5% of all Finnish firms are medium-sized. In terms of market scope and internationalisation, the results show that 39 percent of the companies sell their products and services to an international market, while the rest focus on targeting the domestic nationwide market, and merely a small proportion (4%) focus on regional-level markets. The vast majority (92%) offer their products and services to business customers, with only 2 percent devoted to the consumer market. In terms of ownership, the results indicate that about every fifth (22%) HISME is at least partly foreign-owned. In terms of geographical distribution, the at least partly foreign-owned HISMEs in the ICT cluster are heavily focused in the capital region of Uusimaa (nearly 82%).

4.2 Statistical information about HISMEs
In this section, we describe key statistical figures that are important for understanding the role of ICT HISMEs in the Finnish business environment. We measured several dimensions of the financial performance of HISMEs in Finland, such as their productivity and profitability, along with their geographical scope of operations. The following statistical measures are used to describe the development of indicators and the cost-structure: average, median, lower quartile and upper quartile.

First, the net profit margin (%) of ICT HISMEs is assessed (Figure 6). This figure is also referred to as the bottom line, net income or net earnings, and it is a measure of the profitability of a business venture after accounting for all costs. The cumulative net result of a company should be positive in order for it to be considered profitable. Positive net result indicates that the company has been able to cope with the interest rates from its regular business operations, as well as with managing its working capital loans and investment co-financing. The adequacy of net income and the required minimum level are mainly determined by the profit distribution objectives of the company in question. During 2008–2013, the median net profit margin of ICT HISMEs varied between 4.5 percent and 6.9 percent. At the same time, the development of operational profitability in these companies has been similar to the development of the

comparison group of all high-impact and low-impact SMEs in Finland, while the median EBITDA (earnings before interest, taxes, depreciation and amortisation) margin of ICT HISMEs is slightly higher. In 2013, the operating margin of ICT HISMEs was 8.3 percent.

Figure 6 Net profit margin of ICT cluster high-impact SMEs in 2008–2013 (%)
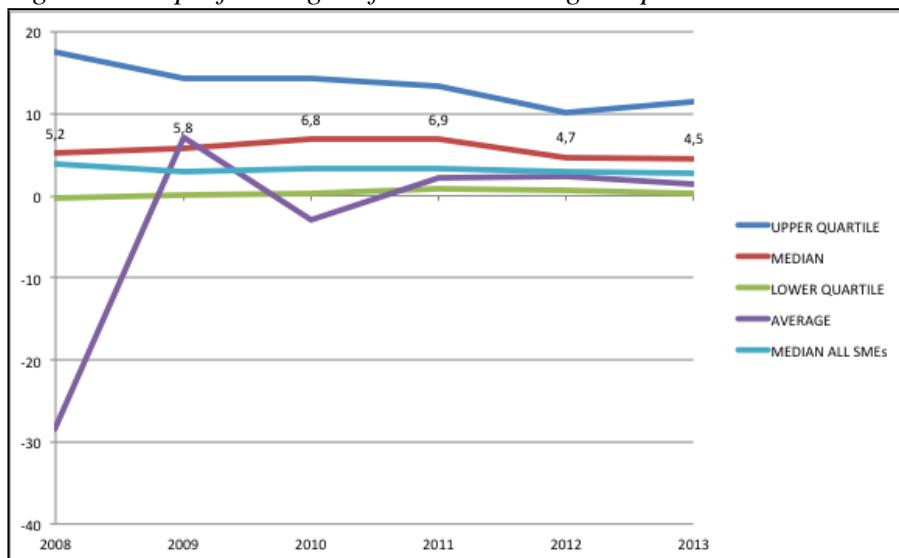
The equity ratio (%) measures the capital and the reserves/equity of a company, as divided by its total assets. The equity ratio measures the solidity of a company, that is, its ability to tolerate losses and the ability to manage its long-term liabilities, as the asset levels of a company constitute a buffer against any losses. If the capital buffers fall too low, then even a single disadvantageous year could result in a bankruptcy. If the profitability of a company is reasonable and stable, but it records great losses, it is considered to have low self-sufficiency. Low equity ratios contain a major risk when profitability is reduced. For this reason, companies should maintain a sufficiently large safety buffer against potential bad years. A high equity ratio also gives a company significantly greater freedom of movement, because its dependence on economic cycles and other changes in the operating environment is less pronounced. Companies whose solvency ratios are lower than those of their competitors are usually the first to encounter difficulties in a recession. The equity ratio is usually dependent on the age of the company. Young companies are often more indebted than their more established counterparts. From 2008 to 2013, the median equity ratio of ICT HISMEs stayed good, increasing from about 36 percent to almost 42 percent.

Value added refers to the value that is created by the factors of production of a company. Value added is a measure of particular importance, as it has a considerable impact on the ability of an enterprise to pay its workforce and generate profit. The ratio of value added to personnel costs is a way of looking at the relationship between the costs of the people employed in the industry and the value generated. It is a relative measure and therefore not subject to distortions such as exchange rate variations or inflation. Rather than being a direct measure of productivity, it is a measure of the effectiveness of a company in terms of the money spent on employment, regardless of the number of people who are employed. The critical value is 1. If the indicator is below 1, it means the value created does not cover the employment costs, creating an operational loss. Between 2008 and 2013, the median value added per personnel costs of all HISMEs in Finland declined from 1.37 to 1.26. In ICT HISMEs, on the other hand, the development of productivity stayed relatively flat, with the median value added per personnel costs increasing slightly from 1.20 to 1.23 (Figure 5).

Figure 7 Value added per personnel costs of ICT cluster high-impact SMEs in 2008–2013
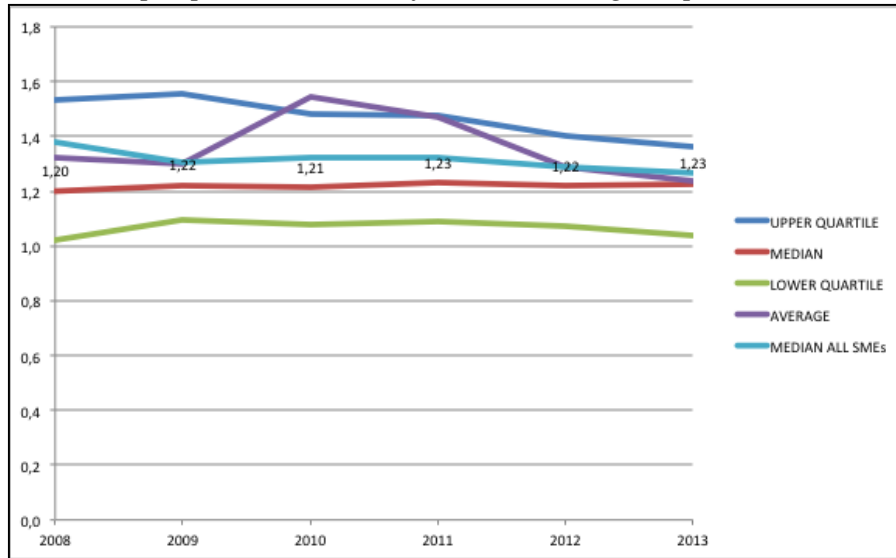

Positioning the ICT HISMEs on a productivity–profitability matrix (

Figure following on the next page

Figure 8) (Paasio et al., 1994), we see that 40% of them (compared with 27% of the group of all SMEs, both high- and low-impact) have a positive net profit but have less than median productivity (lower right quadrant), whereas 37% (47%) have a positive net profit and at least median productivity (upper right quadrant). The 22% (23%) having a negative net profit and less than median productivity (lower left quadrant) are the most likely ones to exit the market due to bankruptcy. The remaining 1% (3%) have a negative net profit and at least median productivity (upper left quadrant). The data suggests that even though ICT HISMEs are on par with the group of all SMEs in terms of profit generation, they are trailing the others somewhat in terms of productivity. The greater presence of the ICT HISMEs in the lower right quadrant, also dubbed as the "kindergarten", reflects the fact that the firms are relatively young and may move towards the upper right quadrant, the "business class", as they mature, becoming increasingly important for the national economy.

Figure following on the next page

Figure 8 ICT cluster high-impact SMEs on 2013 productivity and profitability axes
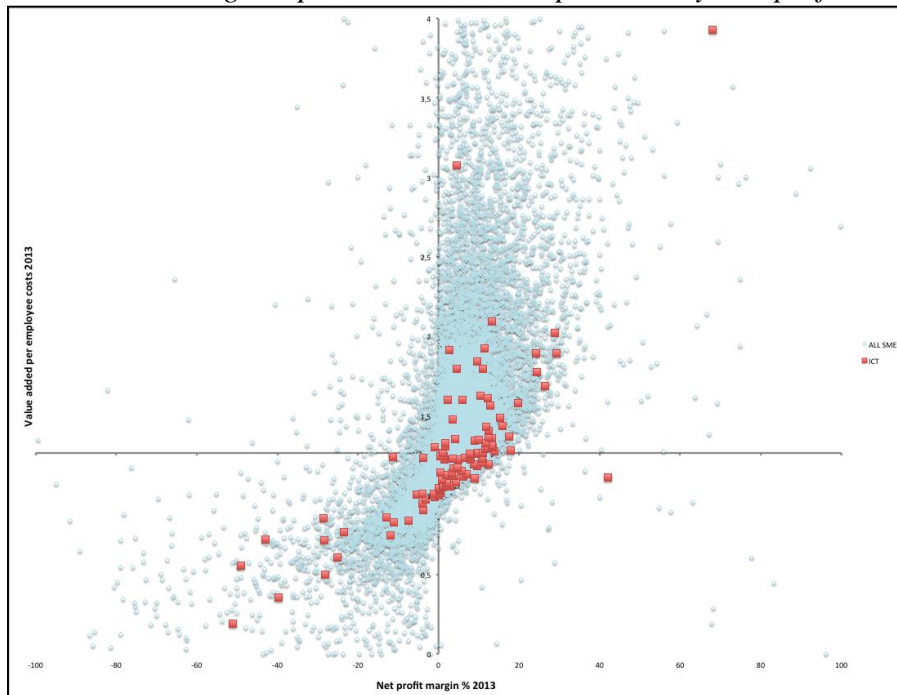
5. CONCLUSION

This research set out to lay the groundwork for the study of business ecosystems in ICT through the examination of Finnish high-impact ICT SMEs (HISMEs). While the previous ecosystem research has traditionally focused on studying large firms, we contributed to the earlier business ecosystem studies by studying the role of high-Impact SMEs (HISMES). Seen from an ecosystem perspective, the geographical distribution of HISMEs is of great interest to comprehend, since it is said that HISMEs bring stability to a national economy (Acs et al., 2008). It was observed in this paper that the geographical distribution of ICT HISMEs is very uneven. First, the lion's share of the firms are found in the capital area. Second, 80% of all HISMES are located in only four Finnish regions. Put in another way, out of the 5000 people that are working in this cluster, 4000 are active in four regions. This is somewhat unexpected,

since ICT in general has a ubiquitous and boundary-less nature, enabling advanced value-adding contributions irrespective of physical location. Furthermore, we also observed that, in comparison to the general population of companies in Finland, the group of ICT HISMEs are especially characterised by a relatively much greater proportion of medium-sized companies. Seen from an ecosystem perspective, this is a significant finding. It is reasonable to believe that it is among medium-sized firms that we may find potential candidates to eventually become future global "keystone" players. These firms display a dynamic capability of taking risk, as well as managing it. Therefore, the results suggest that the significance of medium-sized companies should be increasingly recognised and studied as important contributors to economic growth. These firms are of particular interest for national policy makers since supporting these firms may potentially lead to the creation of new global business hubs. Finally, the level of internationalisation is also very high in this group of firms. This is of significant importance when viewed from an ecosystem perspective. Maintaining a trade surplus is a challenge for countries such as Finland, and the recognition of HISMEs and their role may be seen as beneficial for policy makers from the point of view of increasing exports. In conclusion, the cluster of ICT HISMEs is characterised by having a large proportion of medium-sized firms, being to a great extent internationalised, and having an unexpectedly uneven geographical distribution of firms. The results indicate that the group of ICT HISMEs plays a significant role in the national business ecosystem and should be recognised by policy makers as an important subset of the Finnish ICT cluster.

LITERATURE

1. Acs, Z, J., Parsons, W., & Tracy, S. (2008). High-Impact Firms: Gazelles Revisited. SBA Office of Advocacy, No. 328.
2. Basole, R. C. (2009). Visualization of interfirm relations in a converging mobile ecosystem. Journal of Information Technology, 24(2), 144-159.
3. Bertolini, N. (2011) Speech by Nicola Bertolini in Small Business Act – Bilateral Meeting with Montenegro, Head of Section for civil society, media and research, Unit D3, DG Enlargement, European Commission, 6.10.2011. Available online at http://www.delmne.ec.europa.eu/code/navigate.php?Id=1580. Accessed on 24.3.2014.
4. Birch, D. (1981). Who Creates Jobs? The Public Interest, 65, 3-14.
5. EC 2003. Commission recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (2003/361/EC). Official Journal of the European Union, 20.5.2003, L124/36. Available online at http://eur-lex.europa.eu. Accessed on 17.3.2015.
6. European Commission (2013a). EU gives top priority to helping SMEs create jobs. Memo/13/606, 25.6.2013. Available online at http://europa.eu/rapid/press-release_MEMO-13-606_en.htm. Accessed on 18.3.2014.
7. Hofheintz, P. & Mettler, A. (ed.) (2013). SMEs in the single market – A growth agenda for the 21st century, A Lisbon Council publication, 2013. Available online at www.lisboncouncil.net/component/downloads/?id=721. Accessed on 18.3.2014.
8. Iansiti, M., Levien, R. (2004). Strategy as ecology. Harvard business review, 82(3), 68-81.
9. Jansen, S., Cusumano, M. A. (2013). Defining software ecosystems: a survey of software platforms and business network governance. Software Ecosystems: Analyzing and Managing Business Networks in the Software Industry, 13.
10. Kenworthy, Thomas and McMullan, W. Edward (2013). Finding Practical Knowledge in Entrepreneurship. Entrepreneurship Theory and Practice, Vol. 37, Issue 5, pp. 983-997.

11. Lusch, RF. (2011). Reframing Supply Chain Management: A Service-Dominant Logic Perspective. Journal of Supply Chain Management 47(1), 14-18.

12. Monfardini, E., Probst, L., Szenci, K., Cambier, B. & Frideres, L. (2012). "Emerging industries": report on the methodology for their classification and on the most active, significant and relevant new emerging industrial sectors. Extension of the European Cluster Observatory, Promoting better policies to develop world-class clusters in Europe, 71/PP/ENT/CIP/11/N04C031, WP3, deliverable 1.

13. Moore, J. F. (1993). Predators and prey: a new ecology of competition. Harvard Business Review, 71(3), 75-83.

14. Paasio, Antti, Picard, Robert G. & Toivonen, Timo E. (1994) Measuring and Engineering Personnel Productivity in the Graphic Arts Industry, Journal of Media Economics, 7(2), 39-53.

15. Pierce, L. (2009). Big losses in ecosystem niches: How core firm decisions drive complementary product shakeouts. Strategic Management Journal, 30(3), 323-347.

16. West, J. & Wood, D. (2013). Evolving an open ecosystem: The rise and fall of the Symbian platform. Advances in Strategic Management, 30, 27-67.

THE AUDIT COMMITTEE INFORMATION SOURCES: A DISADVANTAGE OF THE TWO-TIER SYSTEM

Peter Podgorelec
University of Maribor, Faculty of Economics and Business, Razlagova 14, Maribor, Slovenia
peter.podgorelec@um.si

Sasa Prelic
University of Maribor, Faculty of Law, Mladinska 9, Maribor, Slovenia
sasa.prelic@um.si

ABSTRACT

There are two leading corporate governance systems established in the world today: a one-tier and a two-tier system. Distinctions between the two systems are decreasing, with audit committee being one of convergence factors. Nevertheless, legal status of audit committee in a two-tier system is still not fully comparable to its legal status in a one-tier system. One of the differences that remain even after the most recent reform of the EU audit law relates to the possibility of obtaining information, and high-quality information is one of essential conditions for effective functioning of audit committee. In a two-tier system, legally regulated information sources of supervisory board - and thus also of the audit committee - are the following: regular and special management reports, the auditor of annual financial reports, external supervisory board experts and the right of access to incorporated information. The dilemma is whether the audit committee has an option to obtain information directly from the company's employees. In this respect, the question of possible direct communication between the audit committee and internal auditor is central to the discussion. This issue is specific to the two-tier system. According to prevailing opinions in theory of the two-tier system, this possibility of direct communication is allowed only in exceptional cases. However, authors of the article are observing that this strict approach is slowly weakening and a trend of gradual convergence of internal auditor and supervisory board can be noted. The interaction between the audit committee, the auditor of annual reports and internal auditor is one of the indicators of good corporate governance.
Keywords: Audit Committee, Corporate Governance, Information Sources, Internal Auditor, Two-Tier System

1. INTRODUCTION

There are two leading corporate governance systems: a one-tier and a two-tier system. The first model, i.e. the one-tier model, which is characterized by having only one body - the Board of directors that is responsible for both management and supervision - a Unitary Board, is much more common worldwide. In a two-tier system, functions of management and supervision are strictly separated and divided into two bodies: the Management board and the Supervisory board - a Dual Board. Members of the Management board cannot be members of the Supervisory board.

Every governance system has its advantages and disadvantages. The main disadvantage of the one-tier system is execution of supervision, since it requires members of the body to supervise themselves. This disadvantage is eliminated when the majority of members of the body consists of non-executive directors, and by forming the audit committee, whose members cannot be executive directors. The Board of directors is thus *de facto* divided into two parts. All members

of the body - including non-executive directors, who assume performance of supervisory functions - nevertheless remain responsible for management of the company. Involvement of non-executive directors in management facilitates better information flow between both groups of members, while it also provides a possibility for non-executive directors to obtain additional information, not only from executive directors, but from any person in the company. Universal competence of the Board of directors to manage the company includes the possibility to obtain any information. In case certain tasks are delegated to the committee, for example, the audit committee, necessary competencies are generally transferred as well. Information sources of non-executive directors are unlimited - non-executive directors have access to the same information sources as executive directors.

The availability of information sources needed to carry out supervisory function is the main weakness of the two-tier system. The main information source of the Supervisory board are management reports - possibilities of direct access to other information sources are limited. This means that information is mostly provided by those subjects, whose work is supervised by the Supervisory board. This of course creates a risk of conflict of interest and thereby of increased information asymmetry.

Even though a trend of convergence can be detected, differences between the two governance systems remain significant. This divergence is also evident in the case of the audit committee. The audit committee is an idea that derives from the one-tier system, and already has a long history. In the context of discussions on improvement of corporate governance, which followed in the aftermath of major financial scandals both in the US and in Europe *(Enron, WorldCom, Parmalat, ...)*, this idea also spread to legal environments that are characterized by the two-tier system. *Sarbanas - Oxley Act* (SOA - USA, 2002) has had a major impact on national codes of corporate governance, as well as on legislative activities of the European Union (EU) institutions. The existence of the audit committee is now a standard of corporate governance, not only for listed companies with the one-tier system, but also for listed companies with the two-tier system.

However, the integration of "Anglo-American" audit committee into the two-tier system faces certain obstacles, due to which it does not have the same power as in the one-tier system. These obstacles are a reflection of a fundamental structural difference between the one-tier and the two-tier system: in the one-tier system, functions of management and supervision are combined in the Board of Directors, while in the two-tier system, these two functions are strictly separated. In the one-tier system, the audit committee can obtain information directly from the internal auditor, while in the two-tier system, this is permissible only in exceptional cases. Together with the Management board and the auditor of annual financial reports, the internal auditor is the most important source of information for the audit committee.

A study on directors' obligations and liability, which was commissioned by the European Commission and conducted by *London School of Economics* (April 2013), shows that a number of Member States that allow a choice between the one-tier and the two-tier system (the so-called optional model) is increasing in the European Union. These Member States are: Bulgaria, Denmark, Finland, Croatia, France, Hungary, Italy, Lithuania, Luxembourg, Portugal, Romania, Slovenia and with some restrictions also the Netherlands. Nevertheless, in many Member States, the choice is still not an option. Thus, only the two-tier system is allowed in Germany, Austria, Czech Republic, Estonia, Latvia, Poland and Slovakia, while the one-tier system is a forced model of governance in the UK, Belgium, Spain, Ireland, Greece, Malta, Cyprus and Sweden. However, even in Member States that recognize the option of choice, the one-tier system is more common.

The two-tier system is a German "invention", and is in Germany the only admissible model of governance of "national" public limited companies. Other member states that have enacted the

two-tier system have followed the example of this law. Therefore, this contribution is based on a brief analysis of German law. German law is then compared with the latest developments in Slovenia, which is one of the countries with optional model, but the two-tier system is much more widespread in practice.

In Slovenia, a comprehensive reform of corporate law was conducted last year (amendments to the Companies Act (*Zakon o gospodarskih družbah*) - ZGD-1I, Official Gazette of RS, No. 55/2015). In this context - among other things - provisions regulating the audit committee were amended, mainly due to the implementation of Directive 2014/56/EU, and some aspects of direct cooperation between the Supervisory board and the internal auditor were enacted. The aim was to strengthen the position of the internal auditor and to improve the efficiency of the Supervisory board.

2. THE AUDIT COMMITTEE AFTER THE LATEST REFORM OF EUROPEAN AUDIT LAW (DIRECTIVE 2014/56/EU) AND ITS IMPLEMENTATION

On 16 April 2014, a comprehensive Directive 2014/56/EU was adopted, amending Directive 2006/43/EC on statutory audits of annual accounts and consolidated accounts. Among other things, the directive affected provisions regulating the audit committee of the Supervisory board or the Board of directors, but without any significant changes. Conceptual differences between the audit committee in the one-tier system and the audit committee in the two-tier system therefore remain even after the latest reform.

The directive has extended and partly also complemented tasks of the audit committee (Article 39, item 6). One of its central tasks is to monitor the processes of financial reporting and the effectiveness of internal controls, risk management systems and internal audit, namely in relation to financial reporting.

Directive additionally provided that the audit committee shall make recommendations and proposals to ensure the integrity of financial reporting. The second set of functions of the audit committee relates to the audit of financial reports: the audit committee monitors statutory audit and reviews and monitors independence of statutory auditors or audit firms. Two additional task were added to this set of functions. The audit committee is responsible for the procedure for selection of statutory auditors or audit firms, and it also informs the Board of directors or the Supervisory board of the outcome of the statutory audit and explains how the statutory audit contributed to the integrity of financial reporting and what the role of the audit committee was in that process.

All public-interest entities (PIE) should have an audit committee, but the directive allows the Supervisory board to refrain from establishing the audit committee and to perform all the tasks itself. In fact, the option of a Member State, which enacted the two-tier system, to refrain from prescribing a mandatory audit committee already existed under the previous regime and was only confirmed by the latest directive.

However, in case the audit committee was established, the directive requires a majority of its members to be independent from the audited entity, including the chairman of the audit committee. Nevertheless, Member States may also waive this requirement. If all members of the audit committee are members of the Supervisory board or the Board of directors, it is not necessary for a majority of them to be independent (Article 39, item 5). As regards the qualifications, the directive has retained a requirement that at least one member of the audit committee shall have competence in accounting or auditing (Article 39, item 1). New is a provision that all members of audit committee shall have competence relevant to the sector in which the audited entity is operating.

A comparison between Germany and Slovenia shows that Germany chose both options, while Slovenia chose none.

Under German law, the audit committee is already not mandatory. In Germany, it is estimated that the enactment of mandatory audit committee is not needed, since the vast majority of major listed companies already has an audit committee, which is a consequence partly of Anglo-American influence, partly of recommendation *of Deutsche Corporate Governance Kodeks* (Recommendation No. 5.3.2), and the establishment of audit committees in medium-sized or small companies would not be rational (Merkt, 2015, p. 613). In case the company has an audit committee, German *Aktiengesetz* (AktG) does not further require that a majority of members shall be independent from the company.

In Slovenia, the audit committee is compulsory for all public-interest entities.[1] At least one member must be an independent expert and qualified for accounting or auditing - the same applies in German law (the fourth paragraph of par. 107 in connection with the fifth paragraph of par.100 AktG). The other members of the audit committee may only be members of the Supervisory board, who are independent from the audited entity (first paragraph of Article 280 of ZGD-1). This means that Slovenia set even stricter requirements concerning independence of audit committee members from those required by the European directive.

As regards responsibilities of the audit committee, Germany is not planning any significant changes or additions other than those which are necessary for compliance with European law. Slovenia has already harmonised a renewed definition of the audit committee's functions from Directive 2014/56/EU with the amendment ZGD-1I, with the list of tasks of the audit committee being further extended. In this respect, the most important is a new task of the audit committee, pertaining to which the audit committee cooperates not only with the auditor of annual and consolidated report, but also with the internal auditor, in particular by exchanging information on major issues related to the internal audit.

A new Article 281. a of ZGD-1 also refers to the internal audit. In accordance with this Article, the annual report on internal audit shall be submitted to the Management board, the Supervisory board and the auditor of financial reports (the external auditor). The Supervisory board may ask the internal auditor to provide additional information - if a company has an audit committee, this right shall be exercised by the audit committee. The Supervisory board is responsible for giving consent to appointment, removal and remuneration of the head of the internal audit, to the act that governs the function, purpose and responsibilities of the internal audit and to the internal audit plans.

Numerous researchers of corporate governance consider a relationship between the audit committee and the internal auditor "symbiotic". (Abbot, Parker, Peters, 2010, p. 4). An effective audit committee increases the quality of the internal audit and vice versa: an objective internal audit supports the audit committee in avoiding of misstatements in financial reports. The condition for this is independence of the audit committee from the management. The auditor of annual financial reports may also refer to results of the internal audit - under the conditions laid down in the International Standards on Auditing (ISA 610). Therefore, an effective internal audit may also contribute to greater efficiency of auditing of annual financial reports, which is carried out by the external auditor.

Mutual cooperation between the audit committee, internal and external auditor thus improves and rationalises the processes of supervision and thereby improves the quality of system of corporate governance.

---

[1] Public-interest entities are companies with securities traded in the regulated market, as well as banks and insurance companies.

3. PROBLEM OF INFORMATION ASYMMETRY AND CONFLICT OF INTEREST IN THE TWO-TIER SYSTEM

In the two-tier system, which is characterized by institutional separation of functions of management and supervision, and by their distribution between two different bodies, the Management board and the Supervisory board, two fundamental problems can be identified.

The first problem is information asymmetry: since the Supervisory board is excluded from business management, it is also excluded from information sources. Solving this problem leads to the second issue: to conflict of interest. The main source of information for the Supervisory board is the Management board. The Management board is responsible for business management and thus has the best access to the information needed by the Supervisory board in order to exercise supervision (cheapest cost avoider).Thus, both German (the first paragraph of par. 90 AktG) and Slovenian law (the first paragraph of Article 272 of ZGD-1) list issues on which the Management board shall periodically report to the Supervisory board (the so-called push principle).The Management board shall, for example, report regularly on: the planned business policy and other fundamental issues of corporate planning, transactions which may have a significant impact on economic viability of the company and on its liquidity, etc.

In addition to regular reports, the Supervisory Board may request additional reports from the Management board (the so-called pull principle) - information duties of the Management board towards the Supervisory board and its committees are unlimited. Nevertheless, the Management board is the one being supervised and have its work evaluated by the Supervisory board. The Management board tends to emphasise favourable information before the Supervisory board and to withhold information it considers unfavourable (Seibt, 2009, p. 392). In short, there is a risk of conflict of interest with management reports and thereby of incorrect or incomplete information, whereas high-quality and timely information is an essential condition for the effective exercise of supervision.

It is therefore important to have additional resources available - the information independent from Management board, which allows for verification of management reports and substitution of its incomplete or incorrect reports (Leyens, 2006, p. 160). Since in the one-tier system the Board of directors is responsible both for management and supervision, non-executive directors are able to access the same information sources when exercising supervisory function as executive directors. In the two-tier system, possibilities of the Supervisory board, and therefore also of members of its audit committee, to obtain information independent of the Management board are limited. The most important external source of information is the auditor of annual financial reports, who is appointed by the assembly upon proposal by the Supervisory board. The Supervisory board also enters into contract with the external auditor and thus has the opportunity to influence determination of the focus of auditing, etc.

Furthermore, the Supervisory board has the so-called right of access to incorporated information (the second paragraph of par. 111 AktG and the second paragraph of Article 281 of ZGD-1). Nevertheless, there are different views in theory and in German case law on whether the Supervisory board may use this right at any time, or only as *ultima ratio* (e.g. overview of opinions in: Drygala, 2015, p. 1726). Both AktG and ZGD-1 provide for the possibility of the Supervisory board to engage the external expert for consideration of specific issues (e.g. a lawyer, tax advisor, external auditor, etc.).

The key dilemma is whether the Supervisory board may obtain information directly from employees or, for example, from members of management bodies in controlled companies, of which there are different views as well. In this respect, a prevailing opinion remains that direct contacts with "lower levels" are only permitted with consent of the Management board, unless in case of suspicion of serious irregularities by the Management board (e.g. overview of opinions in: Leyens, 2006, p. 183; Velte, Eulerich, 2013, p. 126; Drygala, 2015, p. 1697).

4. THE INTERNAL AUDITOR AS AN INFORMATION SOURCE. DIRECT COOPERATION BETWEEN THE AUDIT COMMITTEE AND THE INTERNAL AUDITOR

As a consequence of the above-described positions in German legal theory, a direct access of the audit committee to the internal auditor is permitted only with consent of the Management board. The consent is not necessary if there is a suspicion of serious irregularities by the Management board.

Such restrictions do not exist in the one-tier system: the audit committee has a possibility of direct access to the internal auditor, regardless of the suspicion of serious irregularities and irrespective of the consent of executive directors.

In the one-tier system, the internal auditor is functionally subordinate to the audit committee. Because of separation of functions of management and supervision in the two-tier system, functional subordination of the internal auditor to the Supervisory board is unacceptable (Hucke, Münzenberg, 2015, p. 132).

A possible solution for improvement of cooperation between the audit committee and the internal auditor in the two-tier system is an advance agreement between the Supervisory board and the Management board.

The information policy of the Management board or the rules of procedure of the internal audit may determine, for example, the following issues: submission of internal audit reports directly to the Supervisory board, participation of the internal auditor at meetings of the Supervisory board and the audit committee, and the *ad hoc* information duty of the internal auditor towards the audit committee (e.g. in case of suspicion of serious irregularities by members of the Management board, etc., Warncke, 2008, p. 634).

The company statute may determine authorisation of the Supervisory board to give consent to the internal audit plan, to appointment and removal of the head of the internal audit, to the budget of the internal audit and to its organizational position within the company (Warncke, 2008, p. 636; Velte, Eulerich, 2013, p. 127). The Supervisory board has the right to determine by itself which issues will require its consent (the fourth paragraph of par. 111 AktG; the fifth paragraph of Article 280 of ZGD-1).

Institutionalization of the relationship thus mainly depends on the initiative of the Supervisory board. If it requires participation of the Management board (e.g. in determining that annual internal audit reports are also submitted to the Supervisory board; in stipulation of *ad hoc* information duties of the internal auditor; or in regulation of participation of the internal auditor in meetings of the audit committee), the Management board probably will not resist, as it will want to avoid a conflict with the Supervisory board.

Eulerich (2012, page 294) lists the fact that in Germany, about 35 % of internal auditors are annually reporting to the Supervisory Board. Internal auditors at least occasionally participate in meetings of the Supervisory board or the audit committee. However, internal audit plans are approved by the Supervisory board in less than 15 % of cases. It can be concluded that cooperation between the internal auditor and the Supervisory board (audit committee) remains weak. However, Eulerich (2012, page 292) emphasises that the situation in Germany is slowly improving and that the internal auditor, who is in the two-tier system subordinate to the Management board, is becoming an important source of information for the Supervisory Board and its audit committee.

The position that a direct access of the audit committee to the internal auditor is permitted only with consent of the Management board, unless there is a suspicion of serious irregularities by the Management board, is currently being "softened", especially in regulated sectors, for example in the area of banking. The ninth paragraph of Article 25. d of German *Gesetz über*

Kreditwesen (Kreditwesengesetz -KWG) provides that the president of the audit committee may obtain information directly from the head of the internal audit. Notification of the Management board is sufficient.

Slovenia adopted a more "radical" solution and has extended a possibility of the audit committee to obtain information directly from the internal auditor to all companies (Article 281. a of ZGD-1). A position of the internal auditor is further strengthened by authority of the Supervisory board to give consent to appointment, remuneration and dismissal of the head of the internal audit. The Supervisory board also gives consent to annual and multiannual internal audit plans and to the act that regulates function, purpose and responsibilities of the internal audit. Annual report on the work performed by the internal audit shall be submitted to the Management board, the Supervisory board and the auditor of financial statements no later than within 3 months after the end of the financial year. It is a responsibility of the Audit Committee to cooperate with the internal auditor.

5. CONCLUSION

Conceptual differences between the audit committee in the one-tier system and the audit committee in the two-tier system remain even after the most recent reform of the EU audit law. One of these differences also refers to the information sources. In the one-tier system, the possibilities of non-executive directors to gain information are unlimited, while in the two-tier system, the main information sources of the Supervisory board members - and thus also of its audit committee - are management reports. This creates a risk of conflict of interest and increases information asymmetry. As a correction of "information monopoly" of the Management board, the right of access to incorporated information is provided by law. In exercising this right, the Supervisory board or the audit committee can be assisted by the external expert. An independent source of information is also the auditor of annual financial reports. Experiences with the one-tier system, however, indicate that one of the key information sources of audit committee is the internal auditor. In this respect, the prevailing opinion in the two-tier system still remains that the audit committee does not have a possibility of direct access to the internal auditor, except in rare cases (e.g. suspicion of serious irregularities by Management board) or if authorized by the Management board. A comparison between Germany and Slovenia was conducted in this article. In Germany, a direct communication between the audit committee and the internal auditor is only legally regulated in the field of banking. Slovenia, however, took a step forward with the recently adopted amendments ZGD-1I, and has extended the possibility of direct communication between the internal auditor and the audit committee to all companies. Additionally, the status of the internal auditor is enhanced by the Supervisory board's consent to essential questions of internal audit (its organizational position within the company, internal audit plans, appointment, remuneration and removal of the head of the internal audit). An effective audit committee increases the quality of internal audit and vice versa: an objective (independent) internal audit supports the audit committee in performance of its tasks. An efficient internal audit may also contribute to a more effective audit of annual financial reports. With tight cooperation between the audit committee and the internal and external auditors, supervision, and with it the quality of corporate governance, is improving and rationalising at the same time.

LITERATURE:

1. Abbot L. J., Parker S., Peters G. F. (2010): Serving Two Masters: The Association between Audit Committee Internal Audit Oversight and Internal Audit Activities. In American Accounting Association: *Accounting Horizons,* Vol. 24, No 1, 2010, pp. 1 – 24.

2. Eulerich M. (2012): Serving Two Masters. Deutsche Institut für Interne Revision (DIIR): *Zeitschrift Interne Revision 6/12* (pp. 292 – 298). Berlin. Published by: Erich Schmidt Verlag.

3. Drygala T. (2015). Commentary on Art. 107. In K. Schmidt, M. Lutter: *AktG Kommentar* (pp. 1633 - 1671). Köln. Published by: Verlag Dr. Otto Schmidt.

4. Eulerich M., Theis J. (2012): Zusammenarbeit von Interner Revision und Audit Committee in deutschen Corporate Governance-System. Deutsche Institut für Interne Revision (DIIR): *Zeitschrift Interne Revision 6/12* (pp. 132 – 137). Berlin. Published by: Erich Schmidt Verlag.

5. Hucke A., Münzenberg T. (2015). *Recht der Revision.* Berlin. Published by Erich Schmidt Verlag.

6. Leyens P. C. (2006): *Information des Aufsichtsrats.* Tübingen. Published by: Mohr Siebeck Verlag.

7. Merkt H. (2015): Die Zusammenarbeit von Aufsichtsrat und Abschlussprüfer nach der EU-Reform: Mut zur Erwartungslücke? In: M. Habersack et alt: *Zeitschrift für das gesamte Handelsrecht und Wirtschaftsrecht* (pp. 601 – 644). Frankfurt am Main. Published by: Verlag Recht und Wirtschaft.

8. Seibt C. H. (2009): Informationsfluss zwischen Vorstand und Aufsichtsrat (dualistisches Leitungssystem) bzw. Inerhalb des Verwaltungsrats (monistisches Leitungssystem). In: Hommelhoff P., K. J. Hopt, A. Werder: *Handbuch Corporate Governance,* (p. 391). Stuttgart. Published by: Schäffer-Poeschel Verlag. Köln. Published by: Verlag Dr. Otto Schmidt.

9. Velte P, Eulerich M. (2013). Die Interaktion zwischen Interner Revision, Prüfungsasschuss und Abschlussprüfer als Qualitätsindikator der Corporate Governance. In: *Zeitschrift für Corporate Governance 3/13* (pp. 124 – 139). Berlin. Published by Erich Schmidt Verlag.

10. Warncke M.: Zusammenarbeit von Internen Revision und Prüfungsausschuss. In C. C. Freidank, V. H. Peemöller: *Corporate Governance und Interne Revision*, (p. 623). Berlin. Published by: Erich Schmidt Verlag.

THE CONCEPTUAL FRAMEWORK FOR INTEGRATING MARKET AND DESIGN ORIENTATION WITHIN MARKETING

Sanja Rocco
Zagreb School of Business, Croatia
sanja.rocco@vpsz.hr

Aleksandra Pisnik
Faculty of Economics and Business, University of Maribor, Slovenia
aleksandra.pisnik@um.si

ABSTRACT

Purpose. *While the role of other functions within marketing are continuously researched and measured, the role of design has been neglected. The main purpose of this study is to propose the initial conceptual model investigating relationships between design and market orientation.*
Design/methodology/approach. *Existing models of market orientation (MO), design orientation (DO), and design management (DM) are investigated. The background of the market orientation and design orientation construct are explained. The initial conceptual model based on theory is proposed as the starting point for future research. The preliminary qualitative research has been executed in this stage of the research.*
Findings. *The qualitative stage deals with the potentials of design orientation from the managers', as well as the designers' perspectives. When analyzing the results, we come to a conclusion that differences between the two groups of examinees exist, mostly in their perception of design.*
Originality/value/implications. *The challenge is to propose a new model of managing design within the marketing concept, with the purpose of better cooperation between all the stakeholders involved, bringing better business results in different environments. The new design orientation-market orientation model contributes to both marketing and design scholars, as well as marketers, designers, and managers in practice. The results of this study may provide a basis for future research on the topic.*
Research limitations. *Investigating the relationship between MO and DO is at an early stage; furthermore, both concepts, as well as the relationships, are very complex and multidimensional.*
Keywords: *conceptual model, design management, design orientation, market orientation, relationships*

1. INTRODUCTION

Marketing concepts have been constantly developing throughout history. Today, marketing engages all an organization's resources, skills, products, services, and thinking to understanding and meeting consumer's conscious and latent needs. New approaches research exchange relationships based on characteristics of the actors in the process of exchange and on mutuality, within constraints of the social environment. Current developments in social exchange theory offer new directions for marketing thought by incorporating and going beyond existing concepts of relationship marketing and cocreation of value (Bagozzi, 2011). Customers are looking for added value and their expectations are getting more and more sophisticated, while in most industries technical and functional qualities are taken for granted. When responding to customer needs, recent marketing literature mentions three crucial terms: market orientation, customer orientation, and design orientation (Gummesson, 1991; Moll, Montana, Guzman, & Praallada, 2007; Coley, Mentzer, & Cooper, 2010; Venkatesh, Digerfeld-Mansson, Brunel, & Chen, 2012). Bringing not only functional dimensions, but also emotional experience, design is

becoming an important competitive advantage. The main thesis of this paper is that a strong link exists between market orientation and design orientation and that both have great impact on the success of new product and the firm in the market. The focus on the customer gives design an even more important role, becoming very efficient when integrated in all levels of the company. Therefore, the potentials of design need to be taken into account by marketing scholars and managers.

In general, design is considered an important element of marketing (Kotler & Rath, 1984; Dumas & Mitzberg, 1991; Blaich & Blaich, 1993). While the role of other functions within marketing are continuously researched and measured, it is obvious that the role of design has been neglected. Design is still often treated only as functional (Schroeder, 2002), aesthetic (Schmitt and Simonson, 1998), or ergonomic characteristics of physical products (Srinivasan, Lilien, & Rangaswami, 2006). Most managers are not aware of design potential when designing processes and do not use design as a strategic tool (Verizer & Borja de Mozota, 2005; Borja de Mozota, 2009). However, recent market-oriented (Coley et al., 2010; Jaworski & Kohli, 1993; Gummesson, 1991) and design-oriented studies (e.g., Moll et al., 2007; Venkatesh et al., 2012) about the role of design consider it to be the essence of innovation and a powerful strategic tool. To be successful in the same way as marketing, design has to be integrated in all functional parts of an organization (Borja de Mozota, 2003a; Best, 2010). The impression is that design management has not yet been accepted by broader marketing management specialists, educators, or managers, as a possibility to innovate for not only tangible products, but also brands and intangible processes (Borja de Mozota, 2011).

Studies about the influence of design on customer satisfaction, product development, and innovation or business performance also exist, but there is a lack of research about the relationship and possible role of design in strategic marketing, as well as of possibilities and potential of the common platform for closer collaboration.

The originality of this paper lies in the fact that it addresses the influence of market orientation on design orientation as well as its relation to the customer orientation, which, according to Narver and Slater (1990), is a component of MO. Customer orientation is the set of beliefs that puts the customer's interest first, while not excluding those of all other stakeholders, in order to develop a long-term profitable enterprise (Deshpande, Farley, & Webster Jr., 1993). Second, the conceptual model provides the context for empirical research of direct relationships between market and design orientation as well as indirect relationships with perceived value of design for the customer and the company. Understanding design potentials and design implementation efficiency when integrated at all levels of an organization, in different industries, allows marketers and managers to achieve more success, focusing on customers' needs at the same time. The paper consists of theoretical background with literature review, development of a conceptual model, qualitative research results, discussion, limitations, and suggestions for future research.

2. THEORETICAL BACKGROUND

Market orientation can simply be defined as the implementation of the marketing concept, generating market information within the entire organization regarding the current and future needs of customers and clients (Kohli, Jaworski, & Kumar, 1990). The majority of studies from the 1990s suggest that market orientation is related with superior performance, sales growth, and new-product success (Atuahene-Gima, 1995; Desphande & Farley, 1998; Han, Yun, Kim, & Cho, 1998; Jaworski et al., 1993; Slater & Narver, 1994). Some authors also suggest that market orientation is a driver of innovation (Berthon, Hulbert, & Pitt, 1999), or research and development activities (Frosch, 1996). However, market orientation consists not only of so-called *responsive* market orientation led by customers' conscious needs they are able to express, but also of so-called *proactive* market orientation, where we consider latent, future customer

needs, the ones they are not aware of and which are crucial for developing products and services novel to the market (Slater & Narver, 1998; Bodlaj, Coenders, & Žabkar, 2012). A successful market-oriented behavior should be supported and guided by a market-oriented culture (Deshpandé et al., 1998; Slater & Narver, 1994). Market orientation is positively related to a number of strategic orientations. To be successfully implemented, all alternative orientations should be guided by the necessary underlying system of beliefs (Grinstein, 2008).

The research by Narver, Slater, and MacLahlan (2004) deals with the concept of market orientation and its relationship with new product success. Their findings show the positive relation between proactive market orientation and innovations, also supporting the significant relationship to new product success in the market, so we presume that the same goes with design orientation. However, the four variables of market orientation proposed by Lafferty and Huit (2001) and accepted by Moll et al. (2007) are also incorporated in our conceptual model. According to Narver et al (2004), latent needs are universal and, to avoid price competition, business must move beyond customers' expressed needs to the latent ones, exceeding the expectations of the customers to be able to attract and retain them. This is the right opportunity for design-driven innovation. There are three basic types of innovations: incremental, which exploits existing forms or technologies through small changes or improvements (and are usually called redesign of products); modular innovation, within one or more components or systems; and radical innovation which is transformational, upgrading existing knowledge, capabilities, or technologies to create something new (Best, 2010). From that point of view, and considering Olson, Slater, and Cooper's (2000) categorization of product innovation closely connected with the design process, namely new-to-the-world products, line extensions, me-too products, and product modifications, are taken into account.

In general, design orientation has been defined as the process in which design is a crucial factor of integrating different elements in different levels of a company, focused on the customers' conscious and latent needs. It is seen as an organizational model that uses design throughout the company as a transformational process. Design orientation represents an organizational vision and includes the set of conscious, reflective, and creative ways of conceiving, planning, and making of products and services that generate value for the customers and which enable them to engage in their individual or social endeavors, whether these endeavors be utilitarian, functional, material, communicative, symbolic, or experiential (Venkatesh et al., 2012). It has been identified as a factor integrating decisions at different levels of an organization and involving customers as a key element (Bloch, Brunel, & Arnold, 2003; Moll et al., 2007). Four trends of design orientation are relevant for differentiation in the field of marketing: design in technologically oriented industries, design in non-technological, more craft-oriented industries, design of service-oriented environments, and brand design. Design as an element is essential for all of them, but its know-how is different in the four fields (Venkatesh et al., 2012). Design is the vital part of enterpreneurship and design orientation plays a significant positive role in business performance. It is an important factor of products differentiation in the market. Design orientation can also be described as a strategic managerial approach based on choosing design as a source of competitive advantage (Borja de Mozota, 2003a). Design-oriented companies are those that incorporate their design process into their business strategy (Moll et al., 2007).

Design orientation is positively related to a proactive business strategy based on consumer needs and design-driven innovations, which enables them receptivity to market change, even without significant financial investments in expensive technological improvements, which is especially important for SMEs with restricted resources. Using design and design techniques at all levels of the company provides innovations in products, services, processes, and better performance in the market, bringing benefits to all stakeholders involved (Best, 2006). It is considered to be the core innovation tool (Von Stamm, 2008; Borja de Mozota, 2003b). However, design orientation and design implemetation are also related to the environment in

which a company operates, including social, political, and economic circumstances, design tradition, education, and national design policy. The challenge is to propose a new model of managing design that has been incorporated into the marketing model, which could bring better performance in different environments.

3. DEVELOPMENT OF A CONCEPTUAL MODEL

Comparison of the design-orientation literature (Moll et al., 2007; Chitturi, Raghunattan, & Mahajan, 2008; Srinivasan et al., 2006; Verizer et al., 2005) and market-orientation literature (Gummesson, 1991; Kohli, Jaworski, & Kumar, 1990, 1993) indicates that customer-centered product as well as service design strategies are critical to superior market performance and success. Many authors discuss that market orientation has a positive impact on a company's economic result in the market (Narver & Slater, 1990; Jaworski et al., 1993; Kohli et al., 1993; Kahn, 2001; Snoj, Milfelner, & Gabrijan, 2007). Additionally, it has been proven that there is a relationship between investing in design and improved business results (Black & Baker, 1987; Sisodia, 1992; Bruce, Potter, & Roy, 1995; Ulrich & Pearson, 1998; Slater & Narver, 2000; Gemser & Leenders, 2001; Borja de Mozota, 2003b; Design Council, 2004; Hertenstein, Platt, & Veryzer, 2005).

Slater and Narver (2000) suggest that market orientation is one component in the architecture of a learning organization that leads to a superior learning capability. They believe that this replication provides strong support for the existence of a positive relationship between market orientation and performance, and that future research should focus on the processes for developing and reinforcing a market-oriented culture and for implementing it through organizational structure, systems, capabilities, and strategies. Most design management research results found that design improves performance of innovation, whether or not they are technological (Borja de Mozota, 2003b; Von Stamm, 2008), and also improves a company's communication policy (Best, 2006). However, most research includes corporate leadership (managers and CEOs), but there have not been significant studies among designers about their knowledge and understanding of design management. The main goal is firstly to develop a conceptual model of relationships based on existing literature and preliminary qualitative research, and in the second phase to perform empirical testing of the proposed model. In the presented paper, we are focused on the first phase.

The basis of the new initial design-market orientation conceptual model is the existing market orientation model in relation to new product (and service) success (Narver et al., 2004) combined with the managerial model of design (Moll et al., 2007), where market orientation and design orientation are put into a relationship. It is the result of an empirical qualitative research undertaken in three Spanish industries concerning design orientation, market orientation, and design management. These three categories are put in the relationship, offering a new revised model of design management. However, the model does not show the precise correlation between different variables of design and market orientation.

Design-oriented companies use design in generating the ideas and developing them for new products and services, processes, and even strategic positioning. This means that they have to be market oriented, they need to think about market demand, about the competitors, and about the customer, including the customer's wishes, preferences and needs, even the ones of which they are not aware. In order to prove links between market orientation and design orientation, the direct and indirect relationships are going to be investigated with several hypotheses. The initial conceptual model of relationships between market orientation and design orientation, with basic links, is shown in figure 1.

Figure following on the next page

Design-oriented companies and organizations are not always customer-driven because they have to predict trends and needs. But if we agree on the definition that design orientation describes a strategic managerial approach based on choosing design as a source of competitive advantage (Borja de Mozota, 2003b, 2009; Best 2006; Von Stamm, 2008; Brown, 2008), then we come to a conclusion that design orientation has a strong relationship with market orientation. Therefore, we propose: *H1 Companies that are more market oriented are also more likely to be design oriented.*
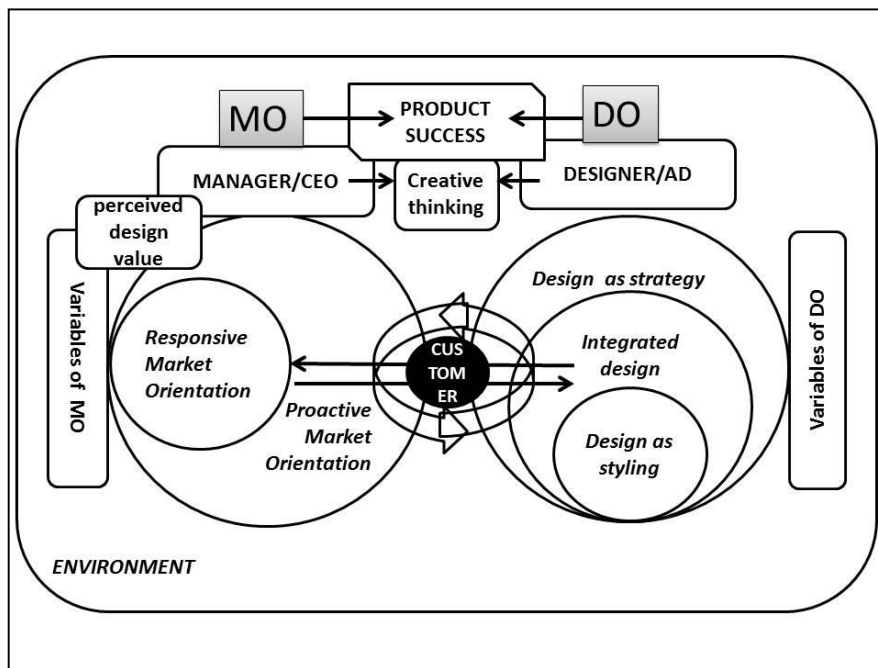

Figure 1: The development of a conceptual model with main links; source: authors

Every successful design concept starts with the user—the customer and his needs. There is strong evidence about this fact in many studies (e.g. British Design Council), as well as in case studies (Bloch et al., 2003; Borja de Mozota, 2003a; Srinivasan et al., 2006). The design-oriented companies give attention to their products from the design point of view, they observe and in this way follow the changes to better understand user needs. User-centered designers are usability focused and driven by human factors. They use intuition and empathy, but also a variety of research approaches, to understand users. In doing so, they adopt a holistic approach by looking at problems from a systematic point of view; they are integrative thinkers. In addition, as noted above, they continuously improve the products or services they design through an iterative, process-driven approach. (Borja de Mozota & Peinada, 2013). Also, the above-mentioned research (Moll et al., 2007) shows that design-oriented companies have a strong emphasis on clients. They continually analyze their customers' current and future needs; in all of the companies within the study, this process serves as a means to capture new business opportunities. Emotional value of design, including the aesthetic element, is as important as

functional. The ultimate success of a design-oriented company is to capture customers' hearts, more than customers' minds (Vekantesh et al., 2012). Therefore, we propose: *H2 Companies that are more design oriented are also more customer oriented.*

Further, several existing studies show that design-oriented companies are more open to creative managerial "design thinking." Tim Brown, one of the co-founders of IDEO, a design and innovation consultancy agency that promotes design thinking, defines the term as a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity (Brown, 2008). A market orientation appears to require a certain level of risk-taking on the part of senior managers and a willingness to accept occasional failures of new products and services as being a normal part of business life (Jaworski & Kohli, 1993). Design is the purposive application of creativity to all the activities necessary to bring ideas into use, either as product (service) or as process innovations (Bruce & Bessant, 2002). Empathy, integrative thinking, experimentalism, collaboration, and even optimism are learned skills that a designer integrates through a long process of learning by doing and applying. However, as Borja de Mozota (2009) argues, there is "design you can see" and "design you can't see." The former describes "the reality of design activity (through concrete design projects classified under many design disciplines, namely *tangible* design)," while the latter refers to "the definition of design activity (variously identified as design science, design ethics, or design theory – all *intangible* things)." Managers interested in design thinking approaches have to integrate design theories into their organizational theories and see design as sources of knowledge for designing their organization's platforms and structures (Borja de Mozota & Peinado, 2013). A qualitative empirical case study comprising 19 interviews with managers and designers was counducted to prove the potentials of design thinking. Stevens, Moultree, and Crilly (2008) document the results of this exploratory study of design's potential at strategic level, and the difficulties faced by organizations in exploiting design strategically. It is suggested that design's strategic relevance can be considered in three ways: competing by *high design* can be a strategic position in itself; an integrated, coherent design approach can help implement strategic positioning; design methods (so-called *design thinking*) can inform strategy formulation. Different approaches to the decision making process is a universal problem that exists no matter how developed countries are (Borja de Mozota, & Peinada, 2013). To conclude, therefore we propose: *H3 The managerial approach to a decision-making process in more design-oriented companies is significantly different from the one in non-design oriented companies.*

Successful design orientation is a company-wide phenomenon, and the best way to view a company is organically rather than structurally (Venkatesh et al., 2012). User-oriented design (UOD) increases collaboration through enhancing integration and providing a common point of reference for different disciplines involved in new product development (Veryzer and Borja de Mozota, 2005). Design's contribution to meeting business objectives, its role in business strategy, innovating, or in building the brands depends on its position in the company and its relationship with the management (Moll et al., 2007). Results from the case study research undertaken in 19 Swedish high quality design companies (Venkatesh et al., 2012) prove that design orientation is not an isolated function, but that it represents a top-to-bottom execution of design philosophy throughout the organization`s departments; therefore, we propose: *H4 Design oriented companies that have more interfunctional coordination inside the company also have design implemented at more levels.*

4. PRELIMINARY QUALITATIVE RESEARCH ANALYSIS

In this paper, we analyze the results of the first qualitative stage of the research focused on design orientation of market-oriented companies. Two groups of respondents are included:

managers and designers, through a series of qualitative, face-to-face interviews. The sample of selected professionals was based on the assessment of the researcher, as typical representatives of the future examinees in quantitative research. Five selected top managers from different industries have been interviewed, as well as a selection of five designers, to provide opinion from another perspective, in order to design the final questionnaire for quantitative research. With in-depth interviews we want to identify possible difference in their approach to design, the managers' awareness of design potentials, their use of design thinking, their cooperation with designers, their knowledge about design management and, finally, their understanding of relationship between design and market orientation. The interviews lasted between 45 minutes and an hour.

One of the selected managers is also a CEO, while two of them are top managers and two are marketing managers. They come from different fields - food industry (2), beverages (1), furniture industry (1), hotel industry (1). Three companies have between 51-100 employees, while two have more than 200. One designer is a freelancer, while three of them work in design studios (between 2 and 5 employees) and one is a creative director in a marketing agency (more than 31 employees). While one has between 6 and 10 years of design experience, others have more than 11 years. The fields of design they cover are multiple, from communication design (all of them) to visual identity (4), interactive design (3), advertising (3), service design (3), interior (1), product (2) and design management (2). Most of them work for commercial clients, while one works mostly for non-commercial clients (culture). About their job, designers mostly negotiate with marketing managers (4) or CEOs (4) who usually are also managers and responsible for design in their company.

At the beginning of the interview, managers and designers have to define design in their own words. Both groups also evaluate the design characteristics by their importance for business performance. While managers are asked to also specify the areas and levels of design use in the company, designers are asked the same concerning their main client. A set of questions about marketing orientation are also discussed with the respondents. For all the examined managers the most important driving force behind the product/service development is customer value and in their opinion they measure customer satisfaction systematically, working closely with lead users to recognize customers´ needs before the majority of market. Also, for them, the most important elements of company's design orientation are the focus on customers and the use of creativity, as well as design thinking throughout the company. For them, design creates a competitive advantage and added value, allows an opportunity to sell at a higher price, it innovates services accompanying products and differentiates a product or service from the competition. Their problems in communicating with designers are different approach to design problems, lack of designers´ creativity or professionalism, as well as different values and priorities. For designers, the meaning of company`s design orientation is the use of design in different levels, throughout the company, implementing design thinking and focus on customers and their needs, in order to improve their lives, as well as to contribute to the society. Most problems they are facing while working with managers are lack of information and badly prepared design brief, misunderstanding of design problems and its potentials, as well as short deadlines.

Results show that managers estimate creative competitive advantage of design as the most important element of design management, creating added value for the customers. Designers, on the other hand, consider improving external and internal communications, differentiation of products, and competitive business strategy as the most valuable characteristics of using design. While all of the five managers believe that they use design broadly in their companies, from corporate communications, branding, product, and service development to strategic planning, designers estimate that their clients use design mostly to a limited extent in specific areas, such as corporate communications, advertising, branding, and product development. However, there

is not much difference in the meaning of design orientation between the two groups of examinees. Finally, both groups of examinees estimate the state of national design industry as moderate, lack of design policy, and unfavorable environment for design development.

5. CONCLUSION, LIMITATIONS, AND FUTURE RESEARCH

The qualitative stage deals with the potentials of design orientation from the managers', as well as the designers' perspectives. When analyzing the results, we come to a conclusion that differences between the two groups of examinees exist, mostly in their perception of design. According to the Commission of the EU Communities' document (2013), design should be a driver of innovation, especially in the SME sector, where use of design is poor. Design management has become a broadly accepted strategic approach to innovativeness. It includes the use of design thinking, design methods, or even designers' sensibility to solve general business problems (Brown, 2009). However, the level of design implementation is not the same in every company and there are specific reasons for different perceptions of design values, depending on, among other things, the top management approach to design. Similarities between marketing and design discussed by academics include design's focus on customer value, identification of new market opportunities, and design becoming a corporate philosophy directing all organizational activities. However, there remains a gap between design practice and theory on how design should be managed and integrated with other units. As seen in the literature surrounding the marketing-design relationship, opinions remain divided on whether the two functions should be integrated. In order to fully understand the value of marketing and design in organizational innovation, more research should be undertaken, as they help to provide a more complete picture of the strategic importance of marketing and design on success in the market (Sun, 2012).

The proposed conceptual model, providing a new approach, extends current thinking by integrating market and design orientation towards strategic competitive advantage. The discussion strengthens the synergy effect of market and design orientation for better business performance. The model also provides the context for empirical research of direct relationships between market and design orientation as well as for indirect relationships with perceived value of design and its performance in the market. The limitation of the study is the complexity of the topic. It is not possible to investigate all the aspects of the problem. Also, the research is at an early stage. However, we suggest that this study provides a solid basis for future quantitative research. Another suggestion is to broaden research to other countries, enabling comparison of results, concerning different environments.

LITERATURE:

1. Atuahene-Gima, K. (1995). An exploratory analysis of the impact of market orientation on new product performance. *Journal of Product Innovation Management*, Vol. 12, pp. 275-93.
2. Bagozzi, R. (2011). The evolution of marketing thought: From economic to social exchange and beyond (Chapter 14). *The SAGE Handbook of Marketing Theory*. Maclaran P., Saren M., Stern B. and Tadajewski M. (Editors), Sage Publications.
3. Berthon, P.R., Hulbert, J.M., & Pitt, L.F. (1999). Brand management prognostications. *Sloan Management Review* (winter), 53-65.
4. Best, K. (2006). Design management: Managing design strategy, process and implementation. Ava Publishing, Zurich.
5. Best, K. (2010). Fundamentals of design management. Ava Bloomsberry.
6. Black, C. D., Baker, M. (1987). Success through design. *Design Studies.* Vol. 8, No. 4, pp. 207-216.

7. Blaich, R. & Blaich, J. (1993). Product design and corporate strategy – Managing the connection for competitive advantage. McGraw Hill, New York.

8. Bloch, P.H., Brunel, F.F., & Arnold, T.J. (2003). Individual differences in the centrality of visual product aesthetics: Concept and measurement. *Journal of Consumer Research*. 29, 551-565.

9. Bodlaj, M., Coenders, G., & Žabkar, V. (2012). Responsive and proactive market orientation and innovation success under market and technological turbulence. *Journal of business economics and management*, vol. 13, no. 4, 666-687

10. Borja de Mozota, B. & Peinado, A. (2013). New approaches to theory and research in art & design lead educational programs - Can "Design Thinking" sparkle new answers to old problems? CAA Conference, New York.

11. Borja de Mozota, B. (2003a). Design management: Using design to build brand value and corporate innovation. DMI/Allworth Press, New York.

12. Borja de Mozota, B. (2003b). Design and competitive edge: A model for design management excellence in European SMEs, Université Paris X Nanterre. Reprint #02ABOR88, first published in Design Management Journal Academic Review, 2002, Vol.2, pp. 88-103.

13. Borja de Mozota, B. (2009). Design management as core competency: From "Design You Can See" to "Design You Can't See". Journal of DMI, vol. 4.

14. Borja de Mozota, B. (2011). Design economics–microeconomics and macroeconomics: exploring the value of designers' skills in our 21st century economy. 17–39, CUMULUS // DRS SIG on Design Pedagogy 1st International Symposium for Design Education Researchers, Paris, 18–19.

15. Brown T. (2008). Design Thinking. *Harvard Business Review*, June Issue, 86-93.

16. Bruce, M. & Bessant, J. (2002). *Design in Business*. Harlow. Financial Times/Prentice Hall.

17. Bruce, M., Potter, S., & Roy. (1995). The risks and rewards of design investment. *Journal of Marketing Management*, Vol 11, Issue 5, pp. 403-17.

18. Chitturi, R., Raghunattan, R., & Mahajan, V. (2008). Delight by Design: The Role of Hedonic Vs Utalitarian Benefits, Journal of Marketing 72 (May): 48-63

19. Coley, L. S., Mentzer, J. T., & Coope, M. (2010). Is consumer orientation a dimension of market orientation in consumer markets? *Journal of Market Theory and Practice*, 18 (2), 141-154.

20. Commission of the EU Communities (2013). Implementing an action-plan for design-driven innovation. Retrieved 17 Aug. 2014 from : http://ec.europa.eu/enterprise/policies/innovation/policy/designcreativity.

21. Design Council. (2004). *Design in Britain 2005-2006*. Available at: www.designcouncil.org.uk/factfinder, retrieved 25 May, 2008

22. Deshpande, R. & Farley, J. (1998). Measuring market orientation: generalization and synthesis. *Journal of Market-Focused Management*, Vol. 2 No. 3, pp. 213-32.

23. Dumas, A. & Mitzberg, H. (1991). Managing the form, function and fit of design. *Design Management Journal 2*, (Summer), 26-31.

24. Frosch, R. (1996). The customer for R&D is always wrong! *Research-Technology Management*, November–December, pp. 22–27.

25. Gemser, G. & Leenders, M.A. (2001). How integrating industrial design in the product development process impacts on company performance. *Journal of Product Innovation Management*, Volume 18, Issue 1, pages 28–38.

26. Grinstein, A. (2008). The relationships between market orientation and alternative strategic orientations: A meta-analysis. *European Journal of Marketing*, Vol. 42. Issue. 1/2, pp. 115–134,

27. Gumesson, E. (1991). Marketing orientation revisited: The crucial role of the part-time marketer. *European Journal of Marketing*, 25 (2), 60-75.
28. Han, S.H., Yun, M.H., Kim, K., & Cho, S. (1998). Development of a usability evaluation method. *Technical Report* (97-G-17-01-A-15), Ministry of Science and Technology of South Korea.
29. Hertenstein, J., Platt, M., & Veryzer, R. W. (2005). The impact of industrial design effectiveness on corporate financial performance. *The Journal of Product Innovation Management,* Vol. 22, No. 1, pp. 3-21.
30. Jaworski, B.J. & Kohli, A.K. (1993). Market orientation: Antecedents and consequences. *Journal of Marketing*, Vol.57 (July), 53-70.
31. Kahn, K. B. (2001). Market orientation, interdepartmental integration, and product development performance. *Journal of Product Innovation Management,* Vol. 18 No 5, pp. 314-323.
32. Kohli, A., Jaworski, B., & Kumar, A. (1990). Market orientation: The construct, research propositions and managerial implementations. *Journal of Marketing*, 54 (April), 1-18.
33. Kohli, A., Jaworski, B., & Kumar, A. (1993). MARKOR: A measure of market orientation. *Journal of Market Research*, 30 (4); 467-477.
34. Kotler, P. & Rath, G. A. (1984). Design: A powerful but neglected strategic tool. *Journal of Business Strategy*, 5, 16-21.
35. Lafferty, B.A. & Huit, G.T.M. (2001). A synthesis of contemporary market orientation. *European Journal of Marketing,* Vol. 35, No. 1/2, pp. 92-109.
36. Moll, I., Montana, J., Guzman, F., Praallada, F.S. (2007). Market orientation and design orientation: A management model. *Journal of Marketing Management*, 23 (9): 861-876.
37. Narver, J. & Slater, S. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, 54 (3), 20-35.
38. Narver, J.C., Slater, F.S., & MacLachlan, D.L. (2004). Responsive and proactive market orientation and new-product success. *The Journal of Product Innovation Management*, 21: pp. 334-347.
39. Olson, E., Slater, S., & Cooper, R. (2000). Managing design for competitive advantage. *Design Management Journal*, Vol. 11, No. 4, 10-17.
40. Schmitt, B., Simonson, A. (1998). Coupling brand and organizational identities through planning. *Design Management Journal,* Vol. 9, no. 1, 9-14.
41. Schroeder, J.E. (2002). *Visual Consumption*, New York, Routlege.
42. Sisodia, R.S. (1992). Competitive advantage through design. *Journal of Business Strategy*, Vol. 13, No. 6, pp. 33-40.
43. Slater, S. & Narver, J. (1994). Does competitive environment moderate the market orientation performance relationship? *Journal of Marketing*, Vol. 58, January, pp. 46-55.
44. Slater, S. & Narver, J. (1998). Customer-led and market-oriented: Let's not confuse the two. *Strategic Management Journal*, 19 (10), 1001-1006.
45. Slater, S.F. & Narver, J.C. (2000). The positive effect of a market orientation on business profitability: A balanced replication. *Journal of Business Research*, 48, 69-73.
46. Snoj, B., Milfelner B., & Gabrijan, V. (2007). An examination of the relationships among market orientation, innovation resources, reputational resources, and company performance in the transitional economy of Slovenia. *Can J Adm Sci*, 24 (3), 151-164.
47. Srinivasan, R., Lilien, G.L., & Rangaswami, A. (2006). The emergence of dominant designs. *Journal of Marketing*, 70 (April), 1-17.
48. Stevens, J., Moultrie, J., & Crylli, N. (2008). Designing and design thinking in strategy concepts: Frameworks towards an intervention tool. *International DMI Education Conference*, Design Thinking, ESSEC, Cergy-Pointoise.

49. Sun, S. (2012). Marketing and design in organisational new product development. Master Thesis, Victoria University of Wellington, School of Marketing and International Business.

50. Ulrich, K.T. & Pearson, S. (1998). Assessing the importance of design through product archaeology. *Management Science,* 44 (3), 352-369.

51. Venkatesh, A., Digerfeld-Mansson, T., Brunel, F.F., & Chen, S. (2012). Design orientation: A grounded theory analysis of design thinking and action. *Marketing Theory,* 12 (3), 289-309.

52. Veryzer, R.W. & Borja de Mozota, B. (2005). The impact of user-oriented design on new product development: An examination of fundamentals relationship. *Journal of Product Innovation Management*, 22 (March), 128-143.

53. Von Stamm, B. (2008). Managing innovation, design and creativity. John Wiley and Sons Ltd.

FACTORS AFFECTING CAPITAL STRUCTURE: A PANEL DATA ANALYSIS ON BORSA ISTANBUL

Onur Akpinar
Kocaeli University, School of Tourism and Hotel Management, Kocaeli-Turkey
onur.akpinar@yahoo.com, onur.akpinar@kocaeli.edu.tr

ABSTRACT

The aim of this paper is to reveal the factors affecting capital structure. In the paper, the factors affecting capital structure is examined by testing 77 Turkish manufacturing firms traded on Borsa Istanbul, with 308 observations from 2010 to 2013. Non-manufacturing firms were not included in the study since their incentives are different compared to manufacturing firms.

In the paper, different levels of leverage are employed as proxies for capital structure. Using Leverage (LEV) and Debt to Equity (DE) as proxies for capital structure (leverage) on panel data analysis, the significant relationship is found between independent variables used in models and capital structure. Size, profitability, tangibility, growth opportunity, equity turnover, dividend paying and maturity are used as the firm's specific variables that affect a firm's capital structure decision. In addition, Altman's-Z score is employed as proxy for bankruptcy risk.

Empirical results present that there are significant relationships between firm's specific variables and capital structure, except equity turnover. The coefficients of bankruptcy risk as measured by Altman Z score for all models are negative and significant. General evaluation suggests that the obtained results conform to the trade off theory better than the pecking-order theory.

Keywords: Altman Z Score, Pecking Order Theory, Trade off Theory.

1. INTRODUCTION

The fast pace of globalization and technological advances push firms to operate in a heavily competitive environment and increase the uncertainties of the future. Therefore the effective use of capital and risk management has become essential for long-term success.

A firm's capital structure is the mix of financial securities used to finance its activities and asset investments. In addition to equity securities, many debt securities are used in financing a firm. Moreover, in theoretical approaches, the capital structure components are summarized as debt and equity.

Capital structure decisions are very important for a firm to continue its operations effectively. The primary financial objective of a firm is to maximize the wealth of its shareholders. In other words, it can be called the maximization of earnings per share or net income (Jensen & Meckling, 1976). To achieve this goal, the firm needs to create a low-cost, high-benefit financing compound.

The concept of capital structure was not a thoroughly investigated subject until Modigliani & Miller (MM) (1958) suggested their "*irrelevance theory*". Many studies have been conducted after MM and alternative theories were suggested. Still, the empirical findings from the studies are not convincing enough.

The aim of this study is to determine the factors affecting capital structure decisions. Thus, the aim is to find out the magnitude and direction of the effects of different firm-specific factors on different debt levels. Another aim is to contribute to the finance literature that contains conflicting findings.

This study examines the firm-specific factors that affect the capital structure. In the models of study, leverage and debt to equity were used as proxies of capital structure. The study attempts to test the effects of as many factors as possible to the capital structure.

In the paper, the factors affecting capital structure is examined by testing 77 listed Turkish manufacturing firms traded on Borsa Istanbul, with 308 observations from 2010 to 2013. Non-manufacturing firms were not included in the study since their incentives are different compared to manufacturing firms.

2. LITERATURE

One of the oldest studies concerning capital structure was conducted by Durand (1952). The theory called "irrelevance theory" by MM (1958) attracted the attention of all researchers. Durand (1959) and some other researchers supported the theory. According to the perfect market assumptions of Modigliani and Miller (MM, 1958), due to procedures of investors who intend arbitrage and who have an equal right to get into the market, it is asserted that capital structure would have no effect on firm risk and value.

Theoretically, the "irrelevance theory" is based on many assumptions. However, these assumptions are not consistent with real life. In the study by MM (1963), when the initial assumptions were relaxed, they had to consider the tax-savings effect of interest costs. In line with this adjustment, MM (1963) concluded that the leveraged firm value consisted of the non-leveraged firm value and the tax-savings effect of the leveraged firm.

In the following years, new variables and various models that were thought to affect the capital structure were suggested by many researchers. Agency costs (Jensen and Meckling, 1976), income tax effect (Miller, 1977), financial distress and bankruptcy costs (Titman, 1984), information asymmetry (Myers, 1984) may be mentioned among these. Generally speaking, "*pecking order theory*" and "*trade off theory*" are the most prevalent among the approaches investigated in the literature.

The pecking order theory was first discussed in the 1960s and was developed by Myers and Majluf (1984). This approach is based on sorting the financial resources of firms according to their importance. It suggests that the retained earnings should be evaluated first as they are the cheapest resource; and the next to be evaluated should be bond issuance since it is cheaper than equity issuance. Equity issuance, as an expensive financial resource, should be evaluated last. According to this theory, there is no optimal capital structure to maximize firm value. While using debts or equity, only the capital costs are considered. In Baskin's study (1989), it was found that the firms frequently choose internal financing instead of external financing.

The trade off theory claims that a firm's optimal debt ratio is determined by a trade-off between the losses and gains of borrowing, holding the firm's assets and investment plans constant. The firm substitutes debt for equity, or equity for debt until the value of the firm is maximized. The gain of debt is primarily the tax-shelter effect, which arises when paid interest on debt is deductible on the profit and loss account. (Frydenberg, 2004, p.8). According to this approach, due to the trade-offs that occur in various ways, an optimal capital structure that will maximize the firm value is possible. One of these trade-off methods is balancing the tax benefits of the debt and its financial distress effects. Additionally, Jensen and Meckling (1976) suggested that a trade-off between the benefits of the debt and the agency costs may achieve the optimal capital structure.

While some of the studies in the literature concerning capital structure emphasize the effects of capital structure on the firm performance, others, as in this study, examines the determination of the factors affecting capital structure decisions. The studies in the literature present conflicting findings.

Titman and Wessels (1988) reached conclusions supporting the "pecking order theory". Since high-profitable firms are able to find internal resource financing, they can maintain their operations through relatively lower debt ratios. Their study used short-term debts, long-term debts and total debts as independent variables. It was concluded that all the independent variables had a negative and significant effect on the return on assets.

Frank and Goyal (2003) examined the factors affecting on capital structure decisions using a sample of US firms. They concluded that the pecking order theory couldn't explain the dataset well, and that the trade off theory was better suited when generally evaluated. The most significant variables were median industry leverage (+ effect on leverage), bankruptcy risk as measured by Altman's Z-Score (-), firm size (+), dividend- paying (-), intangibles (+), market-to-book ratio (-).

Chen and Strange (2005) examined the factors determining capital structure in a sample of Chinese firms. The significant variables in their study were profitability (- effect on leverage), size (+), risk (+), age (+), ownership (-). They concluded that tax is not an effective factor on debts.

Berger and Patti (2006), in their study on US banking industry, tested the assumption that debt affects agency costs, and thus firm performance. They obtained significant correlations between the capital structure and profitability efficiency.

Margaritis and Psillaki (2010) examined the relationship between capital structures, ownership structures and firm performance in terms of the French industrial companies. In their study, they performed data enveloping analysis and have tested whether the profitable companies have lower debt ratios. They used both profitability and capital structure as dependent variables in their models.

Muzir (2011) examined firm size, capital structure and firm performance in his study. He concluded that any asset expansion financed with debt has proved to increase risk exposure especially during economic downturns, which favors the static trade off theory over the others.

Skopljak (2012) used return on equity as a dependent variable in his study. According to his findings, he concluded that the effect of capital structure on performance was not linear and caused a second-degree curved effect. Additionally, their finding indicated that at relatively low levels of leverage an increase in debt leads to increased profit efficiency, at relatively high levels of leverage increased debt leads to decreased profit efficiency.

Kakilli Acaravci (2015) has performed panel data analysis on the sample of manufacturing firms in Borsa Istanbul. This study examined the factors that were the determinants of capital structure. The factors applied in the basic model of the study were growth opportunity, size, profitability, tangibility, non-debt tax shield. Growth opportunity has effect on capital structure that this result supports the trade off theory. Size, profitability and tangibility have effects and support the pecking order theory.

3. METHODOLOGY

The aim of this paper is to reveal the factors affecting capital structure. In the paper, the factors affecting capital structure is examined by testing 77 listed Turkish manufacturing firms traded on Borsa Istanbul, with 308 observations from 2010 to 2013. Non-manufacturing firms were not included in the study since their incentives are different compared to manufacturing firms.

The situation often arises in financial modeling where the data comprising both time series and cross-sectional elements, and such a data set is known as "panel data" or "longitudinal data". A panel of data will embody information across both time and space. Importantly a panel keeps the same individuals or objects and measures some quantity about them over time. (Brooks, 2008: p.487).

This study included all the possible alternatives of the variables (capital structure, bankruptcy risk, value, profitability, size, liquidity, efficiency, growth, maturity, dividend paying and tangibility) and considered the most explanatory ones.

The data for the variables in the models were obtained using the financial tables and audit reports of the firms taken into consideration for the study. The financial tables of the firms were accessed through the official web site of the **_Public Disclosure Platform_** (www.kap.gov.tr). Explanations for all the variables are presented in Table 1.

Table 1. Variables - Proxies

VARNAME	VARIABLES	PROXIES
(LEV)	Leverage	Total Debt / Total Assets
(DE)	Debt to Equity	Total Debt to Equity
(Z)	Bankruptcy Risk	Altman Z Score
(VALUE)	Value	Market to Book
(ROE)	Profitability	Net Profit / Total Equity
(SIZE)	Size	Natural logarithm of Total Assets
(LIQ)	Liquidity	Current Assets/Short Term Dept
(ETO)	Efficiency	Equity Turnover
(GROW)	Growth	(Total Assets $_t$ / Total Assets $_{t-1}$) -1
(AGE)	Maturity	Firm Age
(DIV)	Dividend Paying Dummy	Dividend Paying 1, Otherwise 0
(TANG)	Tangibility	Fixed Assets/ Total Assets

Leverage and debt to equity were used as dependent variables representing capital structure for the models composed for the study. The following two models were created concordantly.

Model 1:

$$LEV_i = \alpha + \beta_1 Z_{1it} + \beta_2 VALUE_{2it} + \beta_3 ROE_{3it} + \beta_4 SIZE_{4it} + \beta_5 LIQ_{5it} + \beta_6 ETO_{6it} \qquad (1)$$
$$+ \beta_7 GROW_{7it} + \beta_8 AGE_{8it} + \beta_9 DIV_{9it} + \beta_{10} TANG_{10it} + \varepsilon_i$$

The first model tested the ratio of total debt to total assets (dependent variable) as a proxy of capital structure for independent variables.

Model 2:

$$DE_i = \alpha + \beta_1 Z_{1it} + \beta_2 VALUE_{2it} + \beta_3 ROE_{3it} + \beta_4 SIZE_{4it} + \beta_5 LIQ_{5it} + \beta_6 ETO_{6it} \qquad (2)$$
$$+ \beta_7 GROW_{7it} + \beta_8 AGE_{8it} + \beta_9 DIV_{9it} + \beta_{10} TANG_{10it} + \varepsilon_i$$

The second model tested the ratio of total debts to equity (dependent variable) as a proxy of capital structure for independent variables.

The expected signs of the independent variables in the models according to the theoretical literature are presented in Table 2.

Table 2. The Determinants of Capital Structure and Expected Signs

Variables	Pecking Order Theory	Trade off Theory
Bankruptcy Risk	+/-	-
Value	+/-	+
Profitability	-	+
Size		+
Liquidity	-	+
Efficiency	-	+
Growth	+/-	+
Maturity	+/-	+
Dividend Paying Dummy	+	-
Tangibility	+/-	+

The expected signs of the variables in the study are generally organized according to the study by Frank and Goyal (2003). Furthermore, liquidity and efficiency variables are independently estimated. According to the pecking order theory, since high-liquidity companies will borrow less, a negative relationship between liquidity and borrowing levels is expected (Deesomsak et al, 2004: 394).

4. RESULTS

Two different estimators for the parameters of a panel data regression model as treated by Hausmann. Specifically, it is well known that both the "random effects" and the "fixed effects" panel estimators are consistent under the assumption that the model is correctly specified and that the regressors are independent of the "individual-specific effects".

It is often said that the random effects model is more appropriate when the entities in the sample can be thought of as having been randomly selected from the population, but a fixed effect model is more plausible when the entities in the sample effectively constitute the entire population (for instance, when the sample comprises all of the stocks traded on particular Exchange). However the random effects approach has a major drawback which arises from the fact that it is valid only when the composite error term is uncorrelated with all of the explanatory variables. If they are uncorrelated, a random effects approach can be used; otherwise the fixed model preferable (Brooks, 2008: p.500).

The Hausmann test was performed on the models to determine appropriate model. The test results are presented in Table 3.

Table 3. The Results of Hausmann Test

Models	Hausmann Test
Model 1	197.136155 (0.0000)***
Model 2	245.509840 (0.0000)***

***,** and * are statistical significant at %1 level, %5 level and %10 level.

The *p*-value for the tests are less than 1%, indicating that the random effects model is not appropriate and that the fixed effects specification is to be preferred. For both models, the panel data analysis was performed according to the fixed effect model.

A common assumption in many time series models is that the data are stationary. A stationary process has the property that the mean, variance and autocorrelation structure do not change over time. Stationarity tests allow verifying whether a series is stationary or not. According to Augmented Dickey-Fuller test (ADF), the null hypothesis is that the series possesses a unit root and hence is not stationary. In the study, ADF unit root test was performed on the final series and it was concluded that the series were stationary.

Panel data analysis was performed using Model 1 and Model 2. The results obtained at the end of the analyses are presented in Table 4.

Table following on the next page

Table 4. The Results of Panel Data Analysis

	Dependent Variables	
	Leverage	Debt to Equity
Independent Variables	**Model 1**	**Model 2**
C	0.129979	-396.7201***
	(1.113959)	(-4.206682)
Bankruptcy Risk	-0.038337***	-16.02182***
	(0.015032)	(-5.806582)
Value	0.006949***	2.445821***
	(9.086039)	(3.956843)
Profitability	0.047087**	30.91534*
	(2.293165)	(1.862794)
Size	-0.017274***	2.737898
	(-4.920929)	(0.965018)
Liquidity	-0.000931	187.8757***
	(-0.100823)	(25.17743)
Efficiency	-0.005330	-3.99444
	(-0.530466)	(-0.49186)
Growth	-0.021608	-31.71560**
	(-1.373843)	(-2.494935)
Maturity	0.014412***	3.225475**
	(7.445746)	(2.061715)
Dividend Dummy	-0.028339***	-15.5692*
	(-2.870925)	(-1.95148)
Tangibility	0.143029**	257.0017***
	(2.391035)	(5.315661)
Observation	**308**	**308**
R^2	**0.953285**	**0.815591**
Adjusted R^2	**0.939803**	**0.762373**
F -statistics	**70.71010**	**15.32531**
P-value	**0.000000**	**0.000000**
Durbin Watson -statistics	**1.587969**	**1.942970**

***,** and * are statistical significant at %1 level, %5 level and %10 level.

The coefficient of determinant also called R-squared shows the percentage of the effects on the dependent variables explained by the independent variables. The adjusted R-squared is considered a more effective result in terms of statistics. The adjusted R-squared values of Model 1 and Model 2 were determined to be 93% and 76%, respectively.

The Durbin Watson test examines the auto-correlation probability among the series. According to Table 4, neither of the models have an auto-correlation issue. Additionally, the F statistic shows the overall significance of the model. Both models are statistically significant at 1% level.

According to the results obtained by applying Model 1, there is a significant relationship at the level of 1% between bankruptcy risk, value, size, maturity and dividend dummy, and leverage. The relationship with the profitability and tangibility variables is significant at the level of 5%, and there is no significant relationship for efficiency and growth.

According to the results of Model 2, there is a significant relationship at the level of 1% between bankruptcy risk, value, liquidity and tangibility, and debt to equity. While maturity and growth are significant at the level of 5%, profitability and dividend dummy are significant at the level of 10%. But the coefficients of size and efficiency are not significant.

The variables providing consistent results in both models were bankruptcy risk (- effect on leverage and debt to equity), value (+), profitability (+), maturity (+), dividend dummy (+) and tangibility (+). Profitability has positive and significant effect on capital structure that this result supports the pecking order theory. Value, maturity, dividend dummy and tangibility have

significant effects on capital structure and support trade off theory. General evaluation suggests that the obtained results conform to the trade off theory better than the pecking-order theory.

5. CONCLUSION

This paper attempts to explore the factors affecting capital structure of a sample of 77 listed Turkish manufacturing firms traded on Borsa Istanbul, with 308 observations from 2010 to 2013. In the models, leverage and debt to equity were used as proxies of capital structure. The study attempts to test the effects of as many factors as possible to the capital structure. These factors are bankruptcy risk, value, profitability, size, liquidity, efficiency, growth, maturity, dividend dummy and tangibility.

This study examines the pecking order theory and trade off theory assumptions in a sample of Turkish manufacturing firms. The pecking order theory emphasizes the ordering of financial resources according to their importance levels. According to this theory, there is no optimal capital structure to maximize firm value. It is thought that firms prefer to use internal financing instead of external financing. On the other hand, the trade off theory postulates the existing of an optimal capital structure, which indicates the optimal choice of capital structure by firms is a balance of corporate tax shield against the bankruptcy cost and/or agency cost. This approach suggests a capital structure that will maximize the firm value.

The following conclusions were reached based on the results that were consistent in both models.

Bankruptcy risk is inversely related with capital structure. Consistent with much of the previous literature, it is found that riskier firms have lower leverage. Turkish dividend paying firms have lower leverage than non-dividend paying firms. Maturity has a significant and positive effect upon the capital structure.

As regards the coefficients of the profitability are positive, it can be stated that firms with more profitable projects are inclined to use debt rather than internally generated funds. Firms with high proportions of tangible assets are more likely to have higher leverage, since the coefficients are statistically significant. The values of Turkish firms are positively correlated with capital structure. General evaluation suggests that the obtained results conform to the trade off theory better than the pecking order theory.

LITERATURE:

1. Altman, E. I. (1968). *Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy*. The Journal of Finance. Vol. 23, No. 4, 589-609
2. Altman, E. I. (2000). *Predicting Financial Distress of Companies: Revisiting the Z-Score and ZETA Models*. NYU Working paper.
3. Baskin, J. (1989). An *Empirical Evidence of the Pecking Order Hypothesis*. Financial Management Association International. Vol. 18, No 1, 26-35.
4. Berger, A. N. and Patti, E. B. (2004). *Capital Structure and Firm Performance: A New Approach to Testing Agency Theory and an Application to the Banking Industry*. Journal of Banking and Finance. Vol. 30, Issue 4, 1065-1102.
5. Brooks, C. (2008). Introductory Econometrics for Finance. 2'nd Edition, New York: Cambridge University Press.
6. Chen, J. and Strange, R. (2005). *The Determinants of Capital Structure: Evidence from Chinese Listed Companies*. Economic Change and Restructuring. Vol. 38, 11–35.
7. Deesomsak, R., Paudyal, K. and Pescetto, G. (2004), *The Determinants of Capital Structure: Evidence from the Asia Pacific Region*. Journal of Multinational Financial Management. *Vol. 14*, 387-405.

8. Donaldson, G. (1961). *Corporate Debt Capacity: A Study of Corporate Debt Policy and the Determinants of Corporate Debt Capacity*, Graduate School of Business and Administration. Boston: Harvard University Press.
9. Durand, D. (1952).*The Cost of Debt and Equity Funds for Business: Trends and Problems of Measurement.* Conference on Research on Business Finance. New York National Bureau of Economic Research, 215-220.
10. Durand, D. (1959). *The Cost of Capital, Corporation Finance and the Investment: Comment*. American Economic Review. *Vol. 49, No. 4*, 39-55.
11. Frank, M. Z. and Goyal, V. K. (2003). *Testing The Pecking Order Theory Of Capital Structure*. Journal of Financial Economics. *Vol. 67*, 217–248
12. Frydenberg, S. (2011). *Theory of Capital Structure - A Review.* Frihet Og Mangfold, Festsskrift Til Odd, G. Arntzen. L. Fallan & O. Gustafsson, eds., Trondheim: Tapir/TØH, Tapir Academic Press, 1-41.
13. Harris, M. and Raviv, A. (1991). *The Theory of Capital Structure*. The Journal of Finance. Vol. 46, Issue 1, 297-355.
14. Jensen, M. C. and Meckling, W. H. (1976). *Theory of the Firm: Managerial Behavior*. Journal of Financial Economics. 305-360.
15. Kakilli Acaravci, S. (2015). *The Determinants of Capital Structure: Evidence from the Turkish Manufacturing Sector*. International Journal of Economics and Financial Issues. Vol. 5, No. 1, 2015, 158-171
16. Margaritis, D. and Psillaki, M. (2010). *Capital Structure, Equity Ownership and Firm Performance*. Journal of Banking & Finance. 34, 621–632
17. Miller, M. H. (1977). *Debt and Taxes*, Journal of Finance. Vol. 32, 261-276.
18. Modigliani, F. and Miller, M. H. (1958). *The Cost of Capital, Corporation Finance and The Theory*. The American Economic Review. Vol. 48, 261-297.
19. Modigliani, F. and Miller, M. H. (1963). *Corporate Income Taxes and the Cost of Capital, A Correction*. The American Economic Review. Vol. 53 No. 3, 433-443.
20. Muzır, Erol (2011)., *Triangle Relationship among Firm Size, Capital Structure Choice and Financial Performance Some Evidence from Turkey*. Journal of Management Research. Vol. 11, No. 2, 87-98
21. Myers, S. C. and Majluf, N. S. (1984). *Corporate Financing And Investment Decisions When Firms Have Information that Investors Do Not Have*. Journal of Financial Economics. 187-221.
22. Rajan, R.G., Zingales, L. (1995), *What Do We Know about Capital Structure? Some Evidence from International Data.* Journal of Finance. Vol. 50, No.5, 1421-1460.
23. Titman, S. (1984). *The Effect of Capital Structure on a Firm's Liquidation Decision*. Journal of Financial Economics. 13(1),137-151.
24. Titman, S. and Wessels, R. (1988). *The Determinants of Capital Structure Choice*. The Journal of Finance. *Vol. 43, No 1*, 1-19.

IMPLEMENTATION OF THE BUSINESS IMPACT ANALYSIS FOR THE BUSINESS CONTINUITY IN THE ORGANIZATION

Melita Kozina
Faculty of Organization and Informatics, Croatia
melita.kozina@foi.hr

Anamarija Barun
Faculty of Organization and Informatics, Croatia
anamarija.barun@foi.hr

ABSTRACT
Business Continuity Management (BCM) aims to reduce risks and develops plans for restoring business activities if they are interrupted by a disaster. As business are increasingly dependent on IT services, the objective of IT Service Continuity Management (ITSCM) is to support the overall BCM by ensuring that required IT infrastrucure (IT services) can be restored within optimal costs and time after a disaster. The business impact analysis (BIA) as well as the risk analysis are very important phases of the BCM process in order to determine the critical business processes and their priority for the recovery in the case of outages caused by disasters. The purpose of the paper is to conduct the business impact analysis within the specific trade organization in Croatia. The obtained results can be used to further the implementation and maintenance of the business continuity in the same organization.
Keywords: *Business Continuity Management (BCM);IT Service Continuity Management (ITSCM); Business Impact Analysis (BIA)*

1 INTRODUCTION

Business Continuity Management (BCM) aims to reduce risks and develops plans for restoring business activities if they are interrupted by a disaster. As business are increasingly dependent on IT services, the objective of IT Service Continuity Management (ITSCM) is to support the overall BCM by ensuring that required IT infrastrucure (IT services) can be restored within optimal costs and time after a disaster. The business impact analysis (BIA) as well as the risk analysis are very important phases of the BCM process in order to determine the critical business processes and their priority for the recovery in the case of outages caused by disasters. **The purpose of the paper** is to conduct the business impact analysis within the specific trade organization in Croatia. Successful implementation of the business impact analysis for the business continuity requires the understanding and support of the whole organization, especially the essential support of senior business managers and directors. **Chapter 2** offers a short overview of the main activities of the BCM process. **Chapter 3** decribes the main activities of the BIA within the BCM process that were conducted within the our research.

In addition, the analysis of the BCM strategies was conducted in this study for each critical business process. One strategy was proposed with respect to the RTO for each business process, and other strategies have been proposed for each business process due to the risk matrix (described in the chapter 4). **Chapter 4 decribes the results of the conducted research and presents them in Table 2.** The research was based on the closed interviews (the BIA questionnaire with predefined possible answers) with business and IT managers, process owners within the specific trade organization in Croatian business practice.

2 THE BCM PROCESS

As stated above, BCM aims to reduce risks and develops plans for restoring business activities if they are interrupted by a disaster. **BCM process supported by ITSCM** and its main stages (activities) are shown in Fig.1.
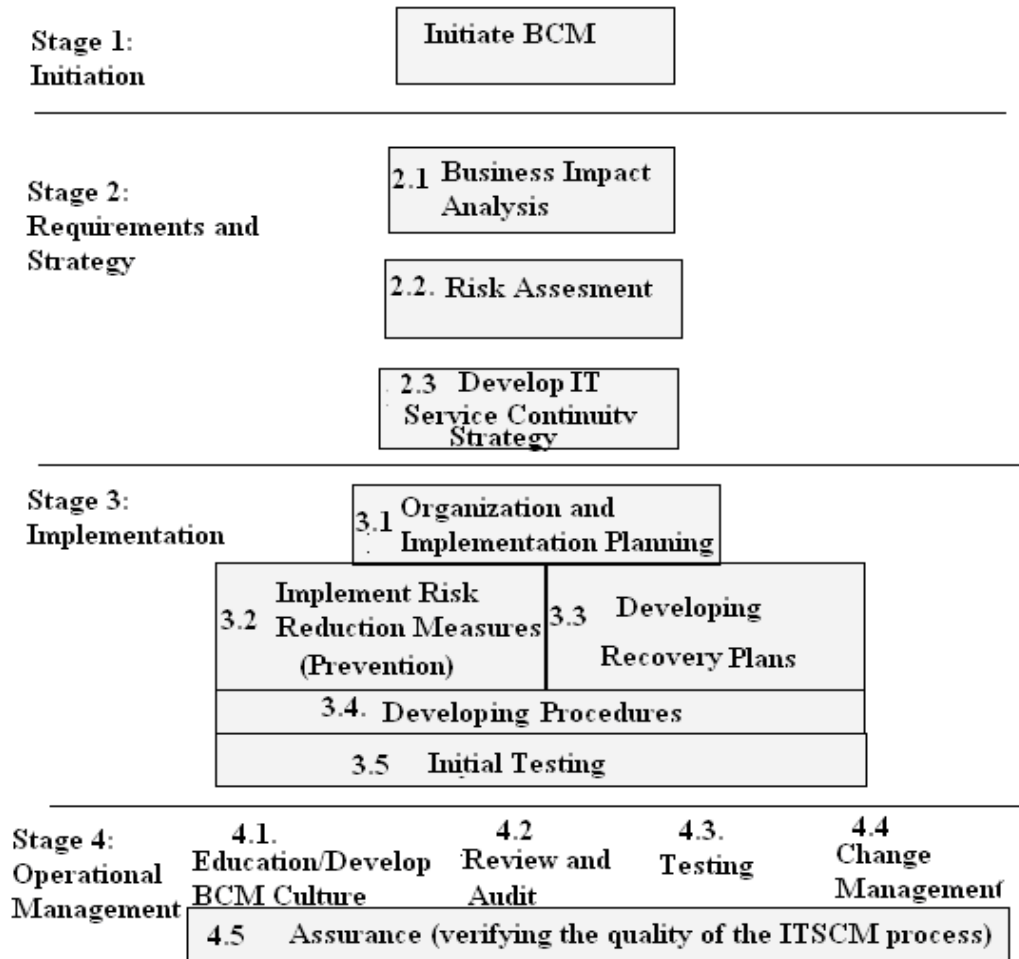

Figure 1: BCM process (OGC, ITIL V3, Service Design, 2011)

In adition, BCM process, supported by ITSCM process, is desribed in more detail using the example of the mapping of the Cobit control objectives for Ensure Continuous Service (DS4) with specific BCM/ITSCM activities according to the ITIL V3. CobiT (Control Objectives for Information and related Technology), published by ITGI, is a globally accepted for IT governance (ISACA, CobiT 4.1,2007). ITIL (Information Technology Infrastructure Library) standard, published by the UK government, ensures a consistent best practice concept for setting up the IT service management processes built into the IT function. It is shown in Table 1 **(Kozina, 2011).**

CobIT DS4 Control Objectives	KEY AREAS for control objectives (DS4)	ITIL V3 processes and activities (focus on ITIL ITSCM process)
DS4.1 IT continuity framework	a) Enterprisewide consistent approach to continuity management - to develop IT continuity framework to support BCM using a consistent approach - to analyze the required infrastructure - to drive the development of disaster recovery and IT contigency plans - to define organizational structure for BCM (roles, tasks, service providers, planning processes that create the rules and structures to document, test and execute the recovery and IT contigency plans) - to identify the critical resources and their monitoring and the principles of backup.	ITSCM-Stage 1: Initiation-initiate ITSCM - to define the ITSCM policy (awareness due to ITSCM) - to define ITSCM scope and relevant areas (insurance requirements; quality standards; security management; methods for risk assessment and business impact analysis) - to define management structure with assigned responsibilities and process structure - to allocate resources - setting up the project organization
DS4.2 IT continuity plans	a) Continuity plans based on risk assessment and business impact analysis b) Continuity plans have to address requirements for resilience, alternative processing and recovery capability of all critical IT services.	ITSCM-Stage 2: Requirements and Strategy 2.1. Business Impact Analysis - to define the reasons for including ITSCM in BCM (protecting business processes, rapid service recovery, maintaining market share and profitabiliy, customer satisfaction, etc.) - to identify the potential impact of a serious disruption of IT services; business can survive for some time and the focus will be on *restoring services*; in other cases, business cannot operate without IT services and the focus will be on *prevention*; most business have a balance between these two cases. - to analyze the IT services that are essential for the business and that must be available according to **SLA** - to assess the dependencies between services and IT resources; *availability management* information is used to analyze the extent to which IT resources support IT service; *capacity management* provides information about the required capacity; these information is useful for recovery options for each IT service. 2.2. Risk Assessment - to identify the relevant IT components (assets) (the purpose of each component must be documented). - to analyze the threats to those assets and the likelihood (high, medium,low) that a disaster will occur. - to identify the vulnerabilities of the assets; classified – high, medium, low. - to evaluate the threats and vulnerabilities in the context of the IT components in order to estimate the level of risks. 2.3. Developing IT Service Continuity Strategy - most business will focus to a balance between *risk reduction (prevention) and recovery planning.* - prevention measures can be taken on the basis of the risk analysis; the measures focuse to

Table 1: COBIT - ITIL mapping for Business Process Continuity Management (continued)

		reduce the likelihood or impact of contingencies.
		- other risks are covered by <u>recovery planning/options</u> (paper-based backup routines; reciprocal arrangements; cold, warm or hot stand by recovery);
		
		ITSCM-Stage 3: Implementation
		3.1. Once the ITSCM strategy has been defined, the ITSCM has to be implemented and the plans for the IT facilities have to developed in detail.
		- an organization has to set up to implement the ITSCM process.
		- <u>this could include management, coordination and recovery teams for each service.</u>
		- in the case of the business recovery process, for example, the following plans have to be activated: (accommodation and service plan; computer system and network plan; telecommunications plan; security plan; personnel plan; financial plans.)
		3.2.Defining prevention measures <u>to reduce the impact of an incident are taken together with availability management</u> and together with **stand-by agreements** include the following activities:
		  a) negotiating off-site recovery facilities with third parties
		  b) maintaining and equipping the the recovery facility
		  c) purchasing and installing stand-by hardware (dormant contracts), etc.
		3.3.Developing recovery plans
		- a typical recovery-planning problem relates to changes in the infrastructure and the SLA
		- <u>**the recovery plan should include all elements relevant to restoring the business activities and IT services; it includes:**</u>
		  a) **introduction** that describes the structure of the plan and recovery facilities
		  b) **updating** that defines the maintaining the plan, tracks changes to the infrastructure
		  c) **recovery initiation** that describes when the plan is invoked
		  d) **contingency classification** (seriousness –minor, medium, major; duration – day, weeks; damage (minor, limited, serious)
		  e) **special section:** _administration_ (how and when is the plan invoked; wchich managers and personnel are involved; where is the control center); _IT infrastructure_ (hardware, software, telecommunications to be provided by the recovery system; recovery procedures;dormant contracts); _personnel_ required at the recovery facility; _security_ (plans for protection against burglary, fires, explosions, etc.); _recovery sites_ (information about contracts, security, transport, personnel with specific function, etc.); _restoration_ (procedures to restore the normal situations; different conditions related to procedures)

		3.4.Developing procedures can inlude installing and testing hardware and software components; restoring applications, databases and data, etc.
DS4.3 Critical IT resources	a) Focus on critical infrastructure in the IT continuity plan to build in resilience and establish priorities in recovery situations; b) Consider resilience, response, recovery requirements	**ITSCM-Stage 2: Requirements and Strategy** **2.3. Developing IT Service Continuity Strategy (cooperation with Availability Management)** - <u>to consider prevention measures and especially recovery options for IT services</u> (return to a manual-paper based system for minor services; _reciprocal arrangements_; _gradual recovery_ (cold stand-by; example 72 hours); _intermediate recovery_ (warm stand-by; 24-72 hours); _immediate recovery_ (hot stand-by; immediate or less than 24 hours); combinations of options.

Table 1: COBIT - ITIL mapping for Business Process Continuity Management (continued)

CobIT DS4 control objectives	KEY AREAS for control objectives (DS4)	ITIL V3 processes and activites (focus on ITIL ITSCM process)
DS4.4 Maintenance of the IT continuity plan	Changing control to reflect changing business requirements	ITSCM-Stage 4: Operational Management (ongoing operation) 4.2 Review and Audit - plans should be reviewed regularly every time there is any change to the IT infrastructure or the changes in business and IT strategy; it must be implemented under the direction of Change Management 4.4. Change management - the impact of any change to the recovery plan is analyzed
DS4.5 Testing of the IT continuity plan	a) Regular testing to ensure that IT systems can be effectively recovered b) Implementing action plan according to the test results	ITSCM-Stage 3: Implementation 3.5. Initial testing of the plans, procedures and technical components involved within ITSCM. ITSCM-Stage 4: Operational Management (ongoing operation) 4.3. Testing - the recovery plan must be tested regulary in order to identify weaknesses in the plan or changes that were overlooked.
DS4.6 IT continuity plan training	- Regular training for all concerned parties	ITSCM-Stage 1: Initiation - training must be provided to ensure that personnel are prepared to realize stage 2 of the ITSCM process (Requirements and Strategy) ITSCM-Stage 3: Implementation ITSCM-Stage 4: Operational Management (ongoing operation) 4.1. Education/Develop BCM culture
DS4.7 Distribution of the IT continuity plan	- Proper and secure distribution to all authorised parties	ITSCM-Stage 3: Implementation (developing plans and procedures; their adequate distribution) ITSCM-Stage 4: Operational Management (ongoing operation) - plans must be accessible under all disaster scenarios
DS4.8 IT services recovery and resumption	- Planning the actions for period when IT is recovering and resuming services - Business understanding and investment support	ITSCM-Stage 4: Operational Management (ongoing operation) - cooperation with ITIL Availability Management
DS4.9 Offsite backup storage	- Offsite storage of all critical media, documentation and resources needed in collaboration with business process owners	ITSCM-Stage 2: Requirements and Strategy - information backup
DS4.10 Post-resumption review	-Regular management assessment of plans	ITSCM-Stage 4: Operational Management (ongoing operation) 4.5. Assurance – it means verifying that the quality of the process (procedures and documents) are adequate to meet the business requirements.

Table 1: COBIT - ITIL mapping for Business Process Continuity Management

3 THE BUSINESS IMPACT ANALYSIS

BIA process is used to identify, quantify and qualify the criticality and impact on the business due to loss of interruption or disruption of the business processes. BIA provides information in order to define specific business continuity strategy (Hiles,2002). The main inputs of the BIA are business functions, business process and IT systems. The main outputs of the BIA are (Snedaker, 2007):

- assessment of the business process criticality;
- assessment of the business process impact (on the business, finance, law, market,employees, customer perception, image, environment, etc.);
- interdependence of processes and resources;
- IT dependency;
- Recovery time requirements;
- Key roles,positions, skills, knowledge and other resources needed for recovery;
- Work-around procedures.

Strategic Directors, Senior Managers and Operational/Service Leaders have the main responsibilities within the BIA process.

Figure 2: Gathering data for the Business Impact Analysis

(1)One of the first steps of the BIA implementation is to identify the key business functions and processes (to define the scope of the BIA based on the organizational structure within the company). The critical business functions/processes are those functions/processes that must be updated in the case of disruption in order to protect the company's assets, meet the needs of companies and legislation, achieve the customer satisfaction, etc.

(2)Once identified key business functions/processes it is necessary the gathering data for the BIA in order to determine the criticality for each business process as well as their impact on the organization in the case of outages caused by disasters. Dana points are shown in Fig.2 (Snedaker, 2007). In adittion, it is very important to include the data about the critical business processes and their dependencies on IT systems across the organization. The outage of a business process impacts IT systems or the outage of business processes does not impact IT but the outage of IT systems can impact key business processes. These interdependencies must be clearly understood and documented.

The impact to the company from various perspectives can include: *Financial* (example: loss of revenues, higher costs);*Customers,suppliers.employees* can be lost; *Public relations and credibility; Regulatory requirements* (example: we can not meet regulatory requirements in the case of disasters); *Environmental; Operational.* (example: operations must be identified and ranked in terms of criticality);*Loss Exposure* (example: what types of losses will your company face); *Social and corporate ; Financial community credibility* (example: how will banks, investors, or other creditors respond to incident).

(3)For each key business process, the collected data and possible impact must be analyzed and assessed in order to determine the criticality. Recovery objectives must also be assigned to the business processes. There are several types of the recovery time:

- Maximum Tolerable Downtime (MTD) – determines how long the company can tolerate unavailability of a particular function/process; Recovery Time Objective (RTO) – time after the incident in which we should establish minimum functionality of the process; Work Recovery Time (WRT) – time necessary for recovery of lost data and system testing; Recovery Point Objective (RPO) – period of time that determines how often a backup data.
- (4) The resources must also be assigned to the critical business processes (minimum resources required for the process performace).

4 BIA IMPLEMENTATION IN THE ORGANIZATION
Gathering data in order to determine the criticality for each business process was based on the BIA questionnaire. An example is described for the process of shipping (shown in Fig.3).

Figure 3: The BIA questionnaire for data gathering (Barun, 2015)

The trade company has 6 identified business functions: *procurement, warehouse, retail, wholesale, rental*,*finance/accounting/administration* and 24 identified business processes. BIA analysis was conducted for 10 business processes within our study. The collected data are analyzed to determine the criticality of each business process. The following scale is used:
- Category 1: Very Critical—0–5 hours
- Category 2: Critical—6-24 hours

- Category 3: Average—1–3 days
- Category 4: Litlle impact—3- 5 days
- Category 5: No impact—more than 5 days

We have assigned the criticality, recovery time objectives (RTO) and recovery point objectives (RPO) to each process individually (shown in Table 2).

Business process	RPO	RTO	criticality	Seven levels of disaster recovery solution (due to RTO)	Determining BCM Strategies 4 risk scenarios			
					Plan for Conti-nuity	Accept the risk	Reduce or prevent risk	Transfer the Risk
Sale	1 day	8h	2	4			✔	
Invoice	1 min	48 h	3	2			✔	
Shipping	1 day	6h	2	4	✔			
Contracting	1 day	24 h	3	2				✔
Validation	1 day	24 h	3	2			✔	
Ordering raw materials	5 days	5 days	4	1			✔	
Selection of supplier	7 days	7 days	5	1		✔		
administration	30 min	8h	2	3	✔			
damage assessment	1 day	24h	3	2				✔
monitoring stocks	5 days	8h	2	4			✔	

Table 2: Results of the BIA and defined BCM strategies in the company (Barun, 2015)

In the next paragraph, we describe how to develop BCM strategies based both on the various risk **scenarios** our company faces and on the criticality (RTO) of each business processes (also shown in Table 2). Strategic Directors, Senior Managers and Operational/Service Leaders, Risk and Continuity Planning have the main responsibilities within this stage of the BCM. The risk assessment was not conducted in our research in detail for each business processes. However, likelihood of the possible outage of the each critical business process caused by some incident as well as its impact on the business was assessed in our study (based on the questionnaire with managers, process owners. The possible strategies are: *risk reduction*; *recovery plans*; *accepted risk* or *transferred* risk (shown in Fig 4). The level of risk for each of 4 scenarios is a function of the LIKELIHOOD that an adverse event will occur, and the IMPACT on stakeholders if the event actually occurs. RISK = Likelihood (L) x Impact (I) (Anytown Council ,2007).

Figure following on the next page

Figure 4. BCM strategies according to the risk scenarios

Likelihood: 5 = Very High; 4 = High; 3 = Significant; 2 = Low; 1 = Very Low; Impact: 5 = Catastrophic; 4 = Serious; 3 = Acceptable; 2 = Marginal; 1 = Negligible

Furthermore, the determination of the levels of availability (solution) with respect to the RTO (Recovery Time Objective) was conducted for each critical business process within our research. The levels of availability due to the RTO are shown in Fig.5 (Brooks C., Bedernjak M., Juran I., Merryman J.,2002). In the case of increased recovery time, expenditures for recovery is reduced. Due to the RTO, we have assigned one of these levels of the BCM solution to each business process within the study (shown in Table 2).
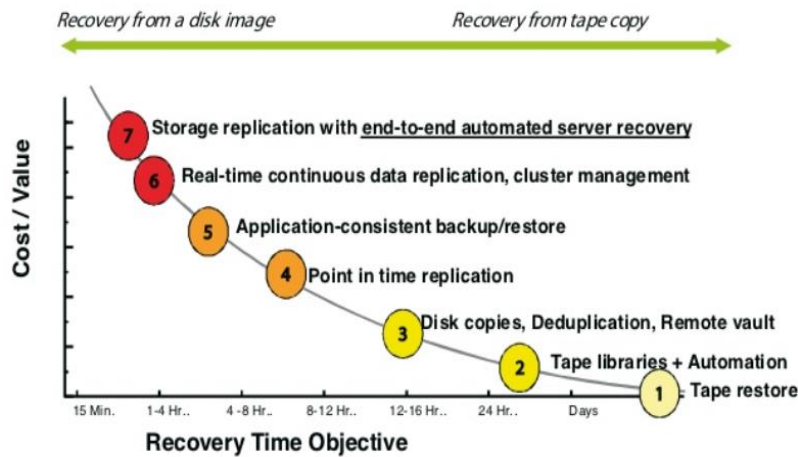
Figure 5. Seven levels of disaster recovery solution

5 CONSLUSION

The planning and management of BCM/ITSCM process requires many efforts and support of the whole organization, especially business managers and IT professionals . The implementation of this process can include different problems related to resources, commitment, access to recovery facilities, difficult estimating the damage, budgeting, no business manager commitment, delay, IT department that must be guided by the business requirements, lack of BCM awareness.

BIA is the important phase within the BCM process. In our study, it was conducted within the trade organization for the 10 key business processes. The data were gathered using BIA questionnaires and interview with the managers, process owners and IT professionals. The collected data were analyzed and assessed in order to determine the criticality of each business process. Recovery objectives were assigned to the business processes. Additionally, BCM strategies based both on the various risk scenarios the company faces and on the criticality (RTO) of the key business processes were analyzed and assigned. BCM strategies are mostly focused to reduce or prevent risks for the majority of business processes of the company.

Implementation of the business impact analysis for the business continuity in the organization is very important due to the following reasons: protection of business processes; quick recovery processes/IT services; maintain market share; maintain profitability; customer satisfaction, company image, competitive position and others. The obtained results can be used to further the implementation and maintenance of the business continuity in this organization.

LITERATURE:

1. Anytown Council (2007). *Business Continuity Management. A manager's toolkit*. Retrieved 10.11.2015 from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/61080/good-practice-bcm-toolkit.pdf.
2. Barun, A., (2015). *Application of the BIA for the business continuity management in the company*, Graduate thesis, FOI, Varazdin (mentor: izv.prof.dr.sc.Melita Kozina)
3. Brooks C., Bedernjak M., Juran I., Merryman J. (2002). *Disaster Recovery Strategies with Tivoli Storage Management*, Retrieved 10.11.2015 from http://www.redbooks.ibm.com/redbooks/pdfs/sg246844.pdf.
4. Hiles, A. (2002). *Enterprise Risk Assessment and Business Impact Analysis: Best Practices* Rothstein Associates Inc., USA.
5. Hiles, A. (2014). *Business Continuity Management: Global Best Practices*, 4th Edition Rothstein Associates Inc., USA
6. ISACA, CobIT 4.1 (2007). Retrieved 18.11.2015 from https://www.isaca.org/Knowledge-Center/cobit/Documents/COBIT4.pdf
7. ISACA, CobIT 5 (2012). Retrieved 11.12.2015 from https://www.isaca.org/cobit.
8. Kozina, M., (2011). *Analysis of the ITIL Mapping With COBIT over the Business Process Continuity Management*. Computer Technology and Application (CTA) Journal,Volume 2, 2011.
9. OGC, ITIL V3 (2011). *Service Design.*
10. Snedaker, S. (2007). *Business Continuity & Disaster Recovery for IT Professionals.* BurlingtonI: Syngress Publishing, Inc.

HUMAN CAPITAL MANAGEMENT: MONITORING OF THE INTERRELATIONSHIPS CO-WORKERS IN ORGANIZATIONS IN THE CZECH REPUBLIC

Jana Skoludova
University of Pardubice, Pardubice
jana.skoludova@upce.cz

ABSTRACT

Monitoring of the interrelationships co-workers are an essential prerequisite for successful human capital management. The goal of this paper is to identify the current trend of the most competitive companies in the Czech Republic based on the monitoring of communication and relationships between employees. Furthermore, the paper aims to answer a research question relating to the existence of a correlation relationship between monitoring employee collaboration and enterprise size by number of employees. The goal of the survey research was to map the current state of the investigated problematic and its trends. The methodology of this paper is based on Spearman correlation analysis. The basic sample for the survey encompassed the most prevalent sectors found in the first 100 most significant companies in the Czech Republic. To ensure a credible sample of respondents was determined by clear criteria and the selection of those organizations was secured using database information system MagnusWeb. The overall comparison of acquired data presents current trends in human capital management and provides the answer to the research question. The results indicate the possible use of modern technologies for more effectively monitoring of communication and relationship between employees in the form of enterprise social networks. Furthermore, the use of the latest trends, innovations in technology for managers doing have been discussed, to achieve effective leadership and present the vision for the future research. This paper tries to highlight the fact that it is necessary to follow the latest technology and adopt new sophisticated tools to ensure effective human capital management.
Keywords: Human Captial Management, Interrelationships, Co-workers, Organizations

1 INTRODUCTION

During recent years, way of looking at workers as valued assets shifted to a much more aware cognition - employees are standalone, by independent investors of their human capital, who are largely free to decide whether and to what extent will the organization in which they work, get involved (Walker et al., 2003, pp. 92). Factors needed for modern organizations consist not only in the production facilities, but also in information and communication technologies. Employees are one of the key factors in the success of the enterprise, because employees have expert knowledge, skills, have a positive attitude towards work and they see opportunities for professional development at work. (Dvořáková, 2012, pp. 391)

Labor relations, their quality, as claimed Koubek (1995, pp. 150-167), create a framework significantly affecting the achievement of corporate goals, as well and professional and life goals of individual employees. Corrective, harmonious, satisfying working and interpersonal relationships create a productive atmosphere, which has a very positive effect on the individual, collective and organization-wide performance. This attitude is favorably reflected in employee satisfaction and contribute to the reconciliation of individual interests and goals with the goals and interests of the company. Labor relations in the company affects all other personal activities and often significantly determine their effectiveness. Jackson et al. (2006, pp. 27–70) argue that the effective utilization of knowledge-intensive teamwork can be a source of sustained competitive advantage for firms that pursue a variety of strategies and compete in a variety of industries.

A firms can derive great benefit from both intra- and inter-organizational relationships. Internally secured social capital facilitates a firm's internal coordination, knowledge creation and accumulation, and creativity. (Nahapiet and Ghoshal, 1998, pp. 242–266) Social capital promotes innovation through knowledge utilization and increases a firm's competitiveness and likelihood of success (Pérez-Luño et al., 2011, pp. 1369–1376; Wu, 2008, pp. 122–146). Human Capital Management may also be based on the permanent monitoring of opinions and attitudes of company employees, based on the analysis of the quality of the relationship or the monitoring teams and relationships between hierarchical degrees. (Livian, Pražská, 1997, pp. 40) Gittell et al. (2010, pp. 490–506) propose that high-performance work systems can improve organizational performance by strengthening relationships among employees who perform distinct functions, a pathway that is expected to be particularly important in settings characterized by highly interdependent work. One of the studies investigates the relationship between human resource management practices and organizational social capital and the moderating effects of industrial characteristics. (Chuang et al., 2013, pp. 678–687)

2 METODOLOGY AND RESEARCH RESULTS

The goal of this report is to identify the current trend of the most competitive companies in the Czech Republic based on the monitoring of communication and relationships between employees. Furthermore, the paper aims to answer a research question relating to the existence of a correlation relationship between monitoring employee collaboration and enterprise size by number of employees.

The report's methodology is based on comparative qualitative research using a questionnaire given in the Czech Republic in 2014 as its basis. The basic sample for the survey included the most prevalent sectors among the first 100 most significant companies in the Czech Republic.

The research investigation took place on the basis of a questionnaire given in 2014 and 2015 from October 2014 until February 2015. The questionnaire was sent by email and included an accompanying letter. Establishing the basic sample for questioning first consisted of determining which sectors were the most prevalent among the top 100 most significant companies in the Czech Republic. The association CZECH TOP 100 has an online document which served for this purpose.

The following five sectors were established as being among the most prevalent sectors:

- CZ NACE 350000 Manufacture and distribution of electricity, gas, steam and air conditioning;
- CZ NACE 290000 Manufacture of motor vehicles (except for motorcycles), trailers and semi-trailers;
- CZ NACE 190000, 200000, 210000 The chemical, pharmaceutical, rubber and plastic industries;
- CZ NACE 640000, 650000, 660000 Banking and insurance;
- CZ NACE 260000, 270000 Electronics, optics and electrical equipment.

In addition to the chosen sectors, the following additional criteria were established:

- legal entity;
- turnover of above 30 mil. CZK;
- number of employees above 50;

- all areas of the Czech Republic;
- actively engaged in business.

Next, specific companies with the above-listed selected criteria were established using the MagnusWeb database information system. The final sample for questioning amounted to a total of 1295 respondents. From these, 95 companies were in CZ NACE category 350000; 249 companies in CZ NACE 290000; 473 companies in CZ NACE 190000, 200000 and 210000; 142 companies in CZ NACE 640000, 650000 and 660000; and 336 companies in CZ NACE 260000 and 270000. The rate of return for correctly filled-in questionnaires was 9.73 %, with 126 overall.On the basis of the questionnaire, the following facts were established and empirical generalization and interpretation of the final results was conducted.

Table 1: Hard data (Own calculation)

Type of Ownership		Legal Business Form		Number of Employees	
Domestic Owner	53 %	Joint-Stock Company	52 %	50 – 150	42 %
Foreign Owner	37 %	Private Limited Company	48 %	151 – 250	13 %
Partially Foreign Ownership	8 %	General Partnership	0 %	251 – 500	15 %
State	2 %	Limited Partnership	0 %	501 and more	30 %

Table 1 depicts the so-called hard data that was acquired and represents the data listed by respondents in percentages. The most common legal business forms for the respondent sample were the joint-stock company and private limited company; next, the most prevalent type of organization ownership was domestic. The organization's size according to turnover was most prevalent in the range of 200 mil. or more with the range of 30 – 59.99 mil. following. Organization size according to the number of employees had highest representation in the range of 50 – 150 and 501 or more employees.

Subsequently, was performed testing the selected research question, which is as follows: *Exists a correlation relationship between monitoring employee collaboration, their mutual communication and company size by number of employees?*

The methodology of this paper is based on Spearman correlation analysis. The calculation of this coefficient was performed in STATISTICA. We are testing that X and Y are uncorrelated random variables. The significance level test was determined by $\alpha = 0.01$, which represents a 1% probability that we reject the resulting correlation relationship, and simultaneously will be valid. If the p-value is smaller than the significance level of $p < \alpha$, the correlation coefficient is statistically significant at the significance level, ie. Correlation of monitored variables is demonstrated (Kubanová, 2008, pp. 58).

Table 2 shows the result of correlation analysis of STATISTICA. The results show that there is no correlation relationship between monitoring cooperation and communication employees with company size ($p=0.028318 > \alpha=0.01000$).

Table following on the next page

Table 2: Hard data (Own calculation)

Pair of variables	Spearman correlation Ref. correlations are significant at the level $p < 0.01000$			
	Number of valid	Spearman R	t(N-2)	p.value
Monitoring of cooperation, communication & Company size	126	-0.246819	-2.23497	0.028318
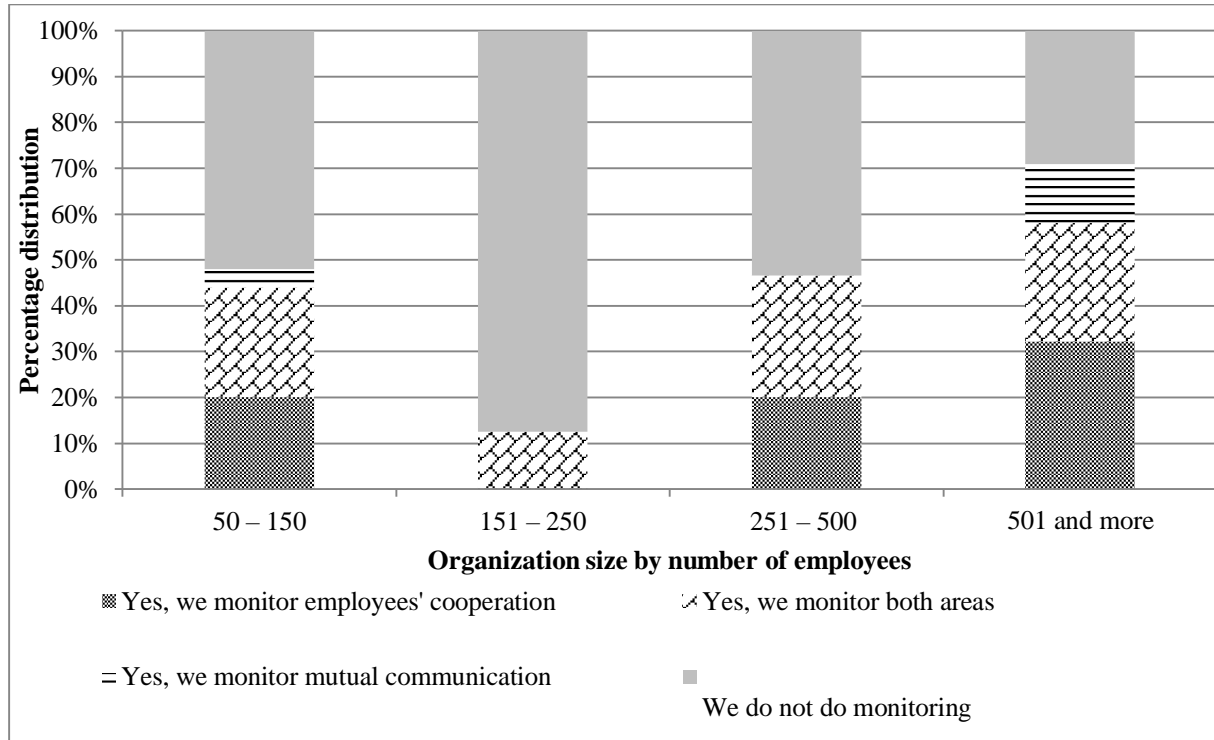
Figure 1: Correlation of monitoring employee collaboration and mutual communication of company size (Own calculation)

4 CONSLUSION [FONT TIMES NEW ROMAN, SIZE 12, BOLD]

The overall comparison of the research data presents current trends and highlights the activities of organizations in the area of monitoring, cooperation and communication workers.

The research question was focused on the correlation of monitoring employee collaboration, their mutual communication and company size by number of employees. Result Spearman correlation analysis not proved direct dependence. Although this direct dependence has not been confirmed, Figure 1 shows that large companies employing at 501 or more workers frequently monitor the cooperation of employees. Exceptions are companies employing 151 to 250 workers, these companies do not use monitoring cooperation and communication between employees. The cause of this result could be that small companies are experimenting with instruments of monitoring and large companies can afford to invest in sophisticated tools for monitoring solution.

Enterprise Social Networks can offer a numerous benefits to modern business management. One of the benefits is the possibility of monitoring of cooperation and communication employees. By connecting the knowledge gained by analyzing large amounts of data with business processes brings a a more thorough understanding of employees' opinions on the

company's current situation. It helps detect some fundamental behavioral formulas of their employees. (Kovaříková, 2013; Bartpůšoc. 2013) This activity should be the role of managers (Livian, Pražská, 1997, pp. 40).

Human Resource Management is mainly interested in economic and performance characteristics of employees. Despite this, companies should be aware that managers should monitor the cooperation and communication employees and identify their behavioral formulas. Further investigation into this specific finding can offer additional insights.

LITERATURE:

1. Bartolšic, M. (2013). *Firemní software a sociální sítě*. Retrived 10.02.2016 from http://computerworld.cz/internet-a-komunikace/firemni-software-a-socialni-site-50368.
2. Chuang, C., Chen, S., Chuang, C. (2013). Human resource management practices and organizational social capital: The role of industrial characteristics. *Journal of business research.*
3. Dvořáková, Z. (2012). *Řízení lidských zdrojů*. Praha: C. H. Beck.
4. Gittell, J.H., Seidner, R. , Wimbush, J. (2010). A relational model of how high-performance work systems work. *Organization Science*.
5. Jackson, E., Chuang, C.H. , Harden, E.E., Jiang, Y. (2006). Toward developing human resource management systems for knowledge-intensive teamwork. Oxford: *Research in personnel and human resources management.*
6. Kovaříková, J. (30.01.2013). Co se loni uvařilo v interní komunikaci. *Marketing journal*. Retrieved 10.02.2016 from http://www.m-journal.cz/cs/cs/public-relations/interni-komunikace/co-se-loni-uvarilo-v-interni-komunikaci__s317x9655.html.
7. Kubanová, J. (2008). *Statistické metody pro ekonomickou a technickou praxi*. Bratislava: Statis.
8. Livian, Y., Pražská, L. (1997). *Řízení lidských zdrojů*. Praha: HZ Systém, spol. s. r.
9. Nahapiet, J, Ghoshal, S. (1998). Social capital, intellectual capital, and the organization advantage. *Academy of Management Review*.
10. Pérez-Luño, A., Cabello Medina, C., Carmona Lavado, A. (2011). How social capital and knowledge affect innovation. *Journal of Business Research*.
11. Walker, J. et al. (2003). *Moderní personální management*. Nejnovější trendy a technologie. Praha: Grada Publishing a.s.
12. Wu, W.P. (2008). Dimensions of social capital and firm competitiveness improvement: The mediating role of information sharing. *Journal of Management Studies*.

INNOVATION BEHAVIOUR AND R&D PERFORMANCE OF SMES: THE MODERATING EFFECT OF REGIONAL DYNAMISM

Hasan Aksoy
Department of International Trade and Logistics, Gaziantep University, Turkey
haksoy@gantep.edu.tr

Erol Cengiz
Department of International Trade and Logistics, Gaziantep University, Turkey
erolcengiz@gantep.edu.tr

ABSTRACT

In recent years, the causes and effects of regional variations in economic performance and their link with innovation have been attracted considerable attention by policy makers and various scholars. It is evident from the literature on regional competitiveness and innovation that the role of the firm has been seen as a critical within the innovation system of a region. Therefore, this study seeks to cast some light on the innovation performance and characteristics of the firms operating in the Gaziantep province.

This study aims to convey a reliable picture on the current state of affairs regarding the Gaziantep SMEs modus operandi with regards to innovation and at the same time to identify critical gaps in R&D and innovation involvement of the SMEs, that if left without a training and capacity building response, may seriously impede the developement of the Gaziantep Province economic competitiveness.

The study establishes the needs and requirements in the fields of R&D and Innovation in all identified SMEs. It provides and overall insight of a broader sample of innovation and technology intensive SMEs in Gaziantep. More particularly, using survey data from 254 SMEs. The research identified that:

- *Innovation performance of Gaziantep SMEs*
- *Innovation characteristics of Gaziantep SMEs*
- *Main sources of innovation*
- *Attitudes towards innovation*

The collected responses were transformed into numbers in order to analyze using SPSS and STATA (statistical software). T-test and one-way ANOVA test have been generated to define the statistic and theoretical significances between the groups of each question and to identify relationships between different variables.

Keywords: Innovation behaviour, R&D performance, Regional dynamism

1. INTRODUCTION

In recent years, the causes and effects of regional variations in economic performance and their link with innovation have been attracted considerable attention by policy makers and various scholars. It is evident from the literature on regional competitiveness and innovation that the role of the firm has been seen as critical within the innovation system of a region. There has been widespread acceptance among scholars and practitioners that innovation is crucial issue for firms seeking to find their place in the market and ensuring long-term survival (Drach-Zahovy et al., 2004; Molina-Castillo & Munuera-Aleman, 2009; Anderson et al., 2014).

It has monitored that there are major changes in customers' demands with evolving technology. Enterprises who want to continue their life in the global competitive environment, it is not possible to ignore customer requirements. Therefore, enterprises have started to take an interest in the subject of innovation because they can not compete with conventional products and

service understanding and among enterprises innovation race has began (Örücü, Kiliç, & Savaş, 2011).

The process of equipping in new, improved capabilities or increased utility has been defined by Drucker (1985) as innovation. Innovation is about adapting knowledge into economing activity. It is a continuum of discovery, learning, and application of new technologies and techniques from many sources.

According to Zawislak et al. (2012), innovation is one of the main stimulating source of competitive advantage for a firm. An innovation is "the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organisation or external relations." (OECD, 2005, pp. 46-47).

In the intervening 30 years, the definition of "innovation" has been changed and morphed into its current status which has terms such as creativity, success, profitability and customer satisfaction, a finding reflected in literature (Johannessen et al., 2001; McAdam et al., 2000).

SMEs are an essential component in a regional economy for creating local jobs and with a high potential for innovation. Through capability of operating closely to every level of customers; SMEs has chance to evaluate their preferences immediately, make the necessary changes in production structure and increase their ability to adapt to changing market conditions quickly. SMEs can make new investments without requiring large assets and technology. This situation gives them a chance to practice new ideas for investments. Because it is an important advantage using production skills versatile. SMEs are the ideal environment to generate new ideas and crises that occur in different ways requires taking the risk test new ideas (İraz, 2005: 233).

From an SME perspective, innovation commonly refers to new products or processes which address customer needs more competitively and profitably than existing solutions (O'Regan and Ghobadian, 2005; Zahra et al., 1999), and comprise a key SME success factor (O'Regan and Ghobadian, 2005; McEvily et al., 2004; Banbury and Mitchell, 1995).

According to Scherer (1965), studies had to rely on R&D as a proxy for innovation, and found that, at the firm level, R&D increased more than proportionately than firm size up to a treshold point, when a direct relationship emerged. Moreover, R&D is necessary to attain the products essences demanded by customers such as quality (Acosta, Coronado, & Romero, 2015)

The key source of successful innovation is the knowledge and experience of people within an SME, in particular, the owner/manager (Knight, 1995; Cummins et al., 2000). Nonetheless, innovative individuals must be able to carry out this process to profit from the concept (Kleindl, 1997).

When the predecessors in the literature are examined, it is seen that the relationship between innovation and r&d performance is vastly examined and most of the studies on this nexus concluded that the overall performance of companies are positively affected by innovative activities. However, as our knowledge, there are limited number of studies conducted on this nexus and the individual effects of innovation and r&d performance for SMEs are mostly ignored in these studies. Based on these reasons, the main purpose of this study is to fill the gap in the literature and to determine the possible effects of r&d performance on innovation of SMEs. Furthermore, it is also aimed to investigate the reflection of the attitudes towards innovation. The theoretical framework of this study is that the innovation and r&d performance will be effective on SMEs herewith regional dynamics.

2. LITERATURE REVIEW
2.1.SMEs and effects on regional economy

Like most concepts, the term SME has been defined variously by scholars. Also there is used different criterias to define SMEs across countries. For instance, while a country may define a SME to be an enterprise with less than 500 employees, other one may define the decrease to be

250 employees (Ayyagari, et. al., 2007). SMEs were described as "… (1) an engine of innovation and growth and (2) they help reduce poverty because they are labour-intensive and thus stimulate job growth, but (3) they are constrained by institutional and market failures" (Beck, 2013). According to Turkish Official Journal (2012), a SME is defined as an enterprise which employs less than 250 employees or net sale revenue per year not exceeding 40 million Tukish Liras. The European Observatory for SMEs - in the EU, the micro (1-9 employees) and small enterprises (10-49 employees) form 99% of all enterprises, medium-sized companies (50-249 employees) form 1% and large enterprises (250 and more employees) represent less than 1% of all enterprises. As seen in Figure 1, SMEs accounted for 99,8% of all enterprises in Turkey in 2013, and large enterprises for 0,2% of the total number of enterprises. According to the same data, 74,2% of total employee was accounted for SMEs worker. Also it can be seen that SMEs create 52,8% of added-value on national economy.
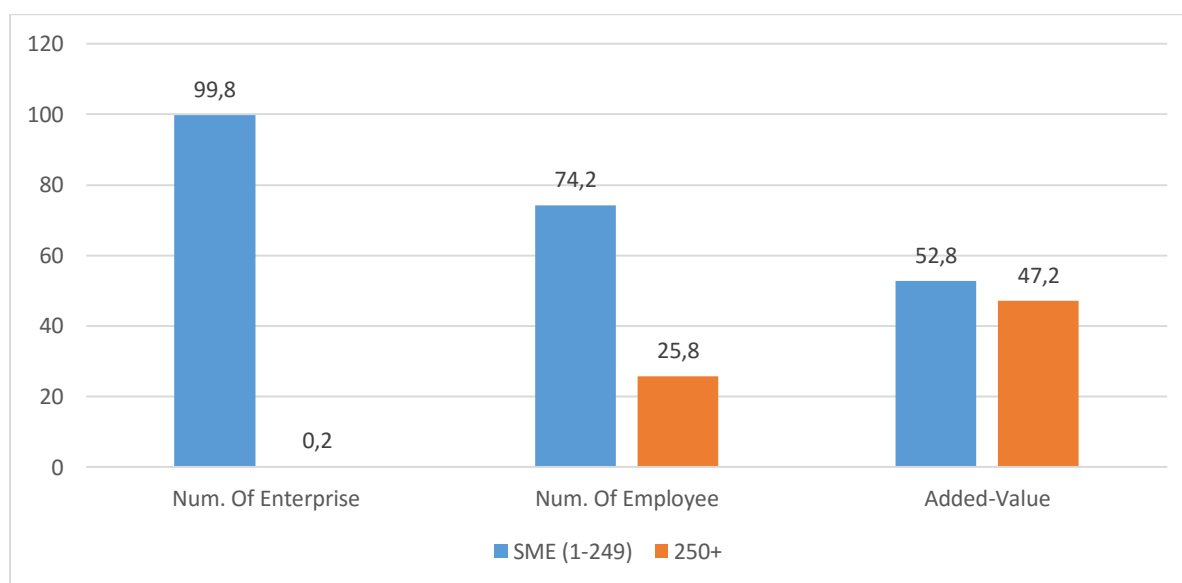
Figure 1. Basic Indicators by Size Group (TURKSTAT, 2013)

Many researchers are observing the importance of SMEs to economic improvement and their capability to support job opportunities to the community, particularly in rural areas (Ismail, 2013; Aziz & Samad, 2016). It is well studied in theory and empirically that SMEs have essential contribution to labor market, levels of international trade, innovation, regional and national development (Zeneli & Zaho, 2014). In these contexts, SMEs have critical role on national and regional economy. Their size allows them to be responsive and adaptive, to be innovative, to be able to reduce costs (Raymond & Blili, 2001). According to Ján (2015), it started to become a subject of structural policy in EU in the 80s because of vital contribution on economic growth, job creation, and regional development.

2.2.Innovation and R&D

Innovation is defined as an intellectual process that advanced to make newness in the form of of a new tangible or a new service or new techniques (Abou-Moghli, Abdallah, &Muala, 2012). There has been critical interest among scholars on the role of innovation and its capability in SMEs performance (e.g., Li&Mitchell, 2009; Rosenbusch et al., 2011). Also, in the literature review, it is seen that R&D activities and cooperations have vital advantages such as reducing uncertianty, realizing cost-saving, realizing economies of scale and scope (Beckers&Peters, 2002; Robertson&Langlois, 1995).

3. METHODOLOGY
This section of the report presents and justifies the research methodology employed.
3. 1 Survey Sample
The methodology used to conduct this study was survey research. Surveys allow researchers to collect a considerable amount of information about a large number of people. This survey focuses on to develop an inventory of SMEs working in high technology or R&D sectors in Gaziantep. This report, aims to summarize and evaluate the findings of this survey, and formulates some key recommendations. The sample used for this study comprised the firms drawn from the database of Chamber of Industry and Chamber of Commerce. For this study, SMEs all firms were defined as firm has less than 250 employees. Data was collected, through online survey. Mostly closed questions were employed for this survey. The researchers elaborated a draft questionnaire in September 2014. Several attempts were made to identify the correct sample of companies to be targeted by the survey. Due to the inconsistencies and severe biases amongst existing company samples of Gaziantep based companies, it was decided that the most appropriate way to proceed was to approach the total population of SMEs in the Gaziantep Province. Working closely with the Chamber of Commerce and Chamber of Industry, the online survey link was sent via email to all members of the two organizations: 3,867 members of the Chamber of Industry and over 14,000 members of the Chamber of Commerce. It is worth noting that by law, all SMEs have to be members of their local Chamber of Commerce.

3.2 Response rate
It is impossible to accurately measure the response rate of the survey as the online survey link was sent to the email accounts that the Chamber of Commerce and Chamber of Industry holds for their members, and several of these emails are no longer in use. However, using the Survey gizmo software, it became apparent that approximately 650 companies clicked on the link to access the on line survey. 306 of them partially completed the survey (47 percent) while 195 of them completed the survey in full. However, it is not possible to know the number of SMEs that actually became aware of this survey.

4. FINDINGS
4.1 Surveyed companies' profile
4.1.1 Position within the company
The first set of survey questions was related to the company's profile and the participant's position and years of experience. The survey participants were asked to identify their role within the company by selecting one of the following options: business owner; general manager; board member; sales manager; R&D manager; marketing manager; other.
Following observations can be made:
Business owner made up 46% of the surveyed population, while 13,6 % were working as a general manager and 8.4% as a board member. Share of R&D managers made up 0.4%. and 4,8% worked as a marketing manager and 26,8% in various positions.

Table 1: *Participant Position's in the SMEs (250 Responses)*

Variable	Frequency	%
Status		
Business Owner	115	46
General Manager	34	13,6
Board Member	21	8,4
R&D Manager	1	0,4
Marketing Manager	12	4,8
OtherErkek	67	26,8

4.1.2 Years of Incorporation

The third question explores how many years the company continues to operate. The question was a closed question with the following options: 1-5 years, 6-10 years, 11-15 years, 16-20 years, 21-25 years, 26 years and more than 26 years.

Table 2: *Operating Time of the Companies (253 Responses)*

Variable	Frequency	%
Years of		
Incorparation	97	38,3
1-5	45	17,8
6-10	44	17,4
11-15	22	8,7
16-20	11	4,3
21-25	34	13,4
26<		

As it can be seen from the Table 3, the highest percentage is showed by the companies which have 1-5 years operating time while the lowest was for companies which have 21-25 years operating time. The findings point that most of companies are new founded. Companies which have 26<, 11-15 years and 6-10 years experience showed similar percentage of operating time with figures of 13,4 %, 17,8 % and 17,4 %, respectively.

4.1.3. Company Size

The forth question indicates that how many labors work in the companies. 1-9 showed the highest figure of 55% followed by 10-24, 25-49, 100<= and 50-99 with figures of (15%), (13%), (10%) and (7%), respectively. It is clear that most of the companies are consist of micro and small enterprises while medium size companies have fewer portions.

Table 3*: Size of the Companies (252 Responses)*

Variable	Frequency	%
Company Size		
1-9	139	55
10-24	38	15
25-49	33	13
50-99	17	7
100<=	25	10

4.1.5 Geographic Market

Collecting information related to geographic market that companies operates is aimed in this section. Turkey national showed a considerable number of geographic market (42,7%), while regional market reached the second biggest share with 24,5%. Neighbouring countries and all other countries showed similar percentage of geographic market with figures of 13,8 and 12,3 percent, respectively. The remaining 6,7% is represented by European countries.

Figure following on the next page

Figure 4: *Geographic Market (253 Responses)*

Variable	Frequency	%
Geopraphic Market		
Regional Market	62	24,5
National Market	108	42,7
Neigbouring Countries	35	13,8
European Countries	17	6,7
Other Countries	31	12,3

4.2 Innovation activities

This part of the survey includes a set of questions related to companies' innovation source, requirement for innovative staff, acquisition of technical knowledge and future R&D plans.
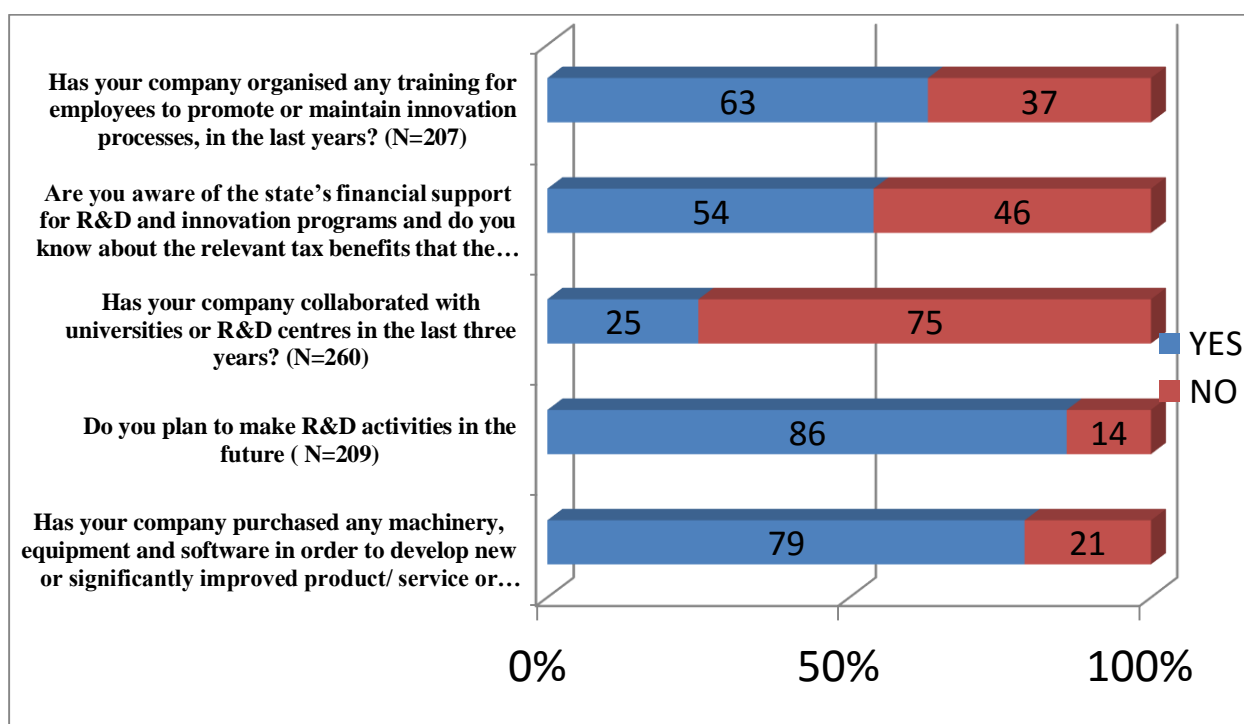
Figure 2: *Innovation activities*

According to the Oslo Manual (2005) the minimum requirement for a change in a firm's products or functions to be considered an innovation is that it is new (or significantly improved) to the firm. 79 percent of the sample companies have invested in machinery, equipment or software in order to introduce a new or significantly improved product in the market.

A significant proposition of the surveyed companies, 63 percent, have organized a training program for their employees in order to promote or maintain innovation processes within the company (this may include training for the use of a new equipment). While, only 31 percent of the surveyed companies acquired any technical knowledge or a patented and unpatented invention licensed by other institutions. Although many companies do not tend to acquire any technical knowledge from other institutions, a striking 86 percent of them responded that they plan to undertake R&D activities in the future.

Only one quarter of the surveyed companies have collaborated with a university or an R&D centre in the last three years. Companies that collaborate with universities or R&D centers tend

to operate in the manufacturing sectors including the carpet industry. Most of the surveyed companies (75 percent) have not collaborated with other organization.

4.3 The Source of Knowledge Innovation
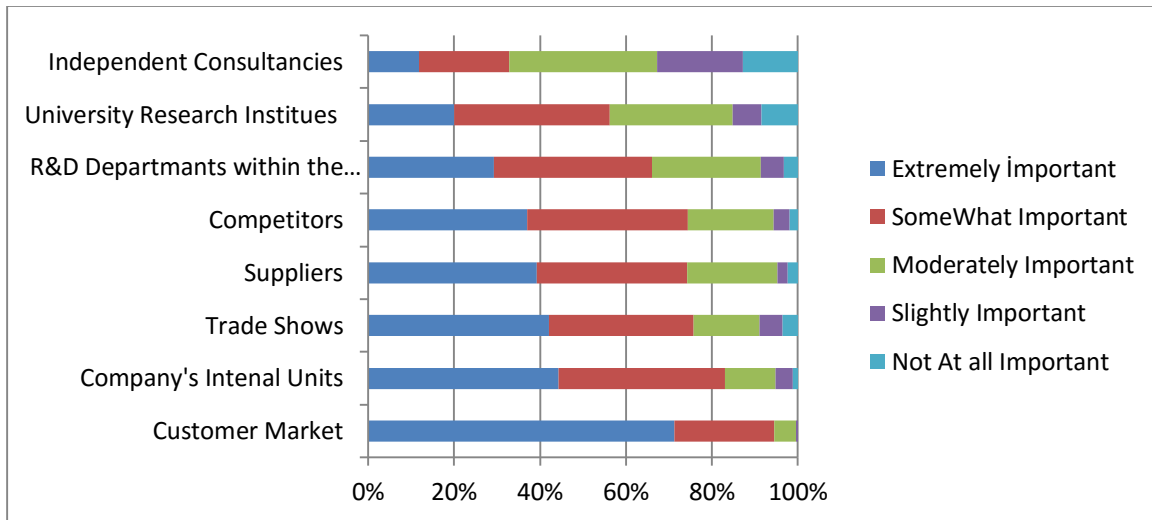
Figure 3: *Ease of access to R&D support*

Customers often have innovative ideas about how their needs could be better met through new products and services. The latest literature suggests that customer lead innovation or user-led innovation is an important aspect of today's innovation management process (see Eric Von Hippel 1986)1. As it can be seen from the Figure 10, 71.2 percent of all surveyed companies consider customer markets as extremely important source for innovation while 21 percent of them consider customers as somewhat important. In fact, customer markets are the most important source of innovation for the surveyed companies. The second most important source of innovation is company's internal units, followed closely by trade shows, suppliers and competitors. **Company's internal units** (e.g. production, purchasing, marketing etc.) are important or extremely important sources of innovation to 83 percent of the surveyed companies. This is in line with the latest thinking in innovation management which argues for the diminishing role of R&D internal department within large corporates and instead provides emphasis on the horizontal approach of innovation where all company personnel have the opportunity to contribute to the innovation performance of the company (e.g. see the example of Google where all employees have the opportunity to submit new ideas to an open portal). **Trade shows** are considered to be an extremely important or important source for innovation for 42 percent and 33.6 percent respectively, of the surveyed companies. Suppliers ,39.3 percent of the surveyed companies consider their suppliers as an extremely important source of innovation, while 35 percent of them consider suppliers as an important source of information. **Competitors** can also be an important source of innovation, provided that companies do not simply imitate the products of the competitors, but analyze them and work out what aspects could be further improved, in order to acquire a market advantage over the competition. Competitors were considered as extremely important or somehow important by three quarters of the surveyed companies. **Internal R&D departments**, Research and development is a mean by which business can create future growth by developing new products or processes to improve and expand their operations. Internal R&D departments are extremely important to only 29.2 percent of the surveyed companies. **Universities,** Working in partnership with universities and

---

[1] Von Hippel, E. (1986), "Lead Users: A Source of Novel Product Concepts", Management Science 32 (7): 791–806

research institutes may provide significant benefits to research projects which may form the basis for future product and process innovations. However, based on the surveyed companies' responses, Universities research institutes considered as extremely important source of innovation by only 20 percent of them and somewhat important to 36.2 percent. **Independent consultancies** companies are considered to be an extremely or somewhat important source of innovation to only one third of the surveyed companies (32.9 percent). In contrast, two third of the surveyed companies consider independent consultancies to be of moderate, slight or no importance source of innovation, making them the least important source for innovation among the surveyed companies.

4.4 Factors hampering innovation

The survey results suggest that 'the lack of qualified personnel' is the most important factor hampering innovation amongst the surveyed companies. More particularly, the majority of the surveyed companies (52 percent) consider the lack of qualified personnel as extremely important for hampering innovation. This is closely followed by 'the lack of financial resources; (49.4 percent). 37.2 percent of the survey companies consider that the recruitment of new and expensive technology is an extremely important reasons that hampers innovation. Finally, only a relatively small proportion of surveyed companies believe that 'resistance to innovation from employees' is an extremely important factor which affects their ability to conduct innovation activities. This is in line with the previous results of the survey that shows that managers are keen to innovate.
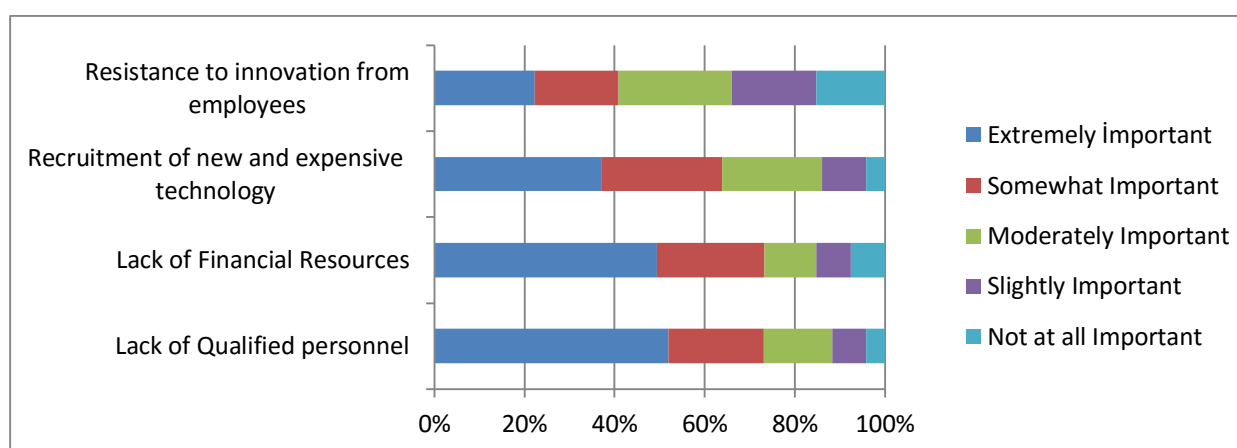
Figure 9: *Factors hampering innovation*

5. CONCLUSION

From the survey it becomes clear that while most participants are business owner, in some other participants are the managers. In more than half of the participants have less experience in their sector (1-5 years experienced (27, 8%), 6-10 years experienced (23, 3 %). Meanwhile most of companies were 1-5 years old. Turkish national market represents a considerable share of the geographical market 43% of the companies in the survey. Manufacturers constitute a large part of the companies. All firms have innovative investments in last 5 years. Most of the companies invested in the innovation of the product and this process lasted 3 years. This indicates that those companies which took part in this research are innovative and change focused. The companies decided that employees need training and they allocated resources for employee training during this 3-year period. There are 11 different knowledge sources. Customer needs, competitors, suppliers, trade shows and intra organizational unites are regarded as being major sources of innovation. Companies assumed that the customers, competitors, employees and the other supply chain components produce the knowledge better than research institutes and

independent consulting companies. However, the owner of patent and independent consulting companies cannot be considered in this regard. The main source of business innovation is directly from employees and customers. The employees know the specific part of the business that they are involved with very well.

Companies need to give importance for information sharing with employees in the supply chain departments to raise innovation operations. Our corporations believe that cooperation with Chamber of Industry, Chamber of Commerce, KOSGEB (Small and Medium Enterprises Development Organization) and Silk Road Agency is not enough.

Although innovation and R&D development has been identified as a key driver for economic development in various regions in Turkey including Gaziantep, the question concerning how to better stimulate such innovation still remains unanswered. The regional stakeholders in Gaziantep have taken initial steps in reaching such objectives, including the establishment of the Gaziantep Technopark, the Technology Transfer Office and various entrepreneurship support measures.

More particularly, there has been a gradual improvement towards a common understanding of the importance of intangible assets and the impact of soft measures in improving Gaziantep's regional competitiveness. The industry sector in Gaziantep is strong, but expenditures in R&D is relative small, and exports are mainly based on low skills and low technology. Lack of qualified personnel tops the list of the most important factors hampering innovation among local SMEs. The role of the Teknopark could be twofold in order to address this problem. First, it could provide suitable training, based on the company's needs and second, it could offer a service to local companies that brings together outside expertise and local companies.

Overall, there is an absence of a vibrant innovation community in Gaziantep, capable of attracting private investors into the market and capitalising on the research outcomes that its main university is undoubtedly capable of producing. In other words, the problem in Gaziantep is not the lack of innovation infrastructure but the limited number of companies that can benefit from such infrastructure.

LITERATURE:
1. Abou-Moghli, A. A., Al Abdallah, G. M., & Al Muala, A. (2012). Impact of Innovation on Realizing Competitive Advantage in Banking Sector in Jordan*.*American Academic & Scholarly Research Journal*, *4*(5), 1.
2. Acosta, M., Coronado, D., & Romero, C. (2015). Linking public support, R&D, innovation and productivity: New evidence from the Spanish food industry. *Food Policy*, *57*, 50–61. http://doi.org/10.1016/j.foodpol.2015.09.005
3. Ayyagari, M., Beck, T., & Demirguc-Kunt, A. (2007). Small and medium enterprises across the globe. *Small Business Economics*, *29*(4), 415–434.
4. Aziz, N. N. A., & Samad, S. (2016). Innovation and Competitive Advantage: Moderating Effects of Firm Age in Foods Manufacturing SMEs in Malaysia. *Procedia Economics and Finance*, *35*, 256–266.
5. Becker, W., & Peters, J. (2002). *Innovation effects of science-related technological opportunities: Theoretical considerations and empirical findings for firms in the German manufacturing industry* (No. 226). Volkswirtschaftliche Diskussionsreihe, Institut für Volkswirtschaftslehre der Universität Augsburg.
6. Cummins, D., Gilmore, A., Carson, D. and O'Donnell, A. (2000), "What is innovative marketing in SMEs? Towards a conceptual and descriptive framework", *AMA Conference Proceedings, July.*

7. Drach-Zahovy, A., Somech, A., Granot, M., & Spitzer, A. (2004). Can we win them all? Benefits and costs of structured and flexible innovation – implementations, *Journal of Organizational Behavior*, *25*, 217–34.

8. Drucker, P. F. (1985). *Innovation and Entrepreneurship*. Butterworth-Heinemann, Oxford.

9. Ismail, M. D.,2013. Learning Orientation and Trust in Small and Medium Enterprise (SME) Export Competitive. Asian Academy of

10. Management Journal, 18(2), 153–179.

11. İraz, R. (2005). *Yaratıcılık ve yenilik bağlamında girişimcilik ve KOBİ'ler*. Konya: Çizgi Kitabevi.

12. Ján, D. (2015). Regional Development of Small and Medium-Sized Enterprises (smes) in the Prešov Region with Focus on Tourism. *Procedia Economics and Finance*, *34,* 594–599. http://doi.org/10.1016/S2212-5671(15)01673-1

13. Johannessen, J., Olsen, B. and Lumpkin, G.T. (2001), "Innovation as newness: what is new, how new, and new to whom?", *European Journal of Innovation Management*, Vol. 4 No. 1, pp. 20-31.

14. Kleindl, B. (1997), "Constituency group innovativeness: an empirical test of individual, firm and environmental innovativeness", Conference Proceedings: Research at the Marketing/ Entrepreneurship Interface, University of Illinois at Chicago, Chicago, IL, pp. 583-96.

15. Knight, R.M. (1995), "Barriers to innovations: a cross cultural comparison", *Conference Proceedings: Research at the Marketing/Entrepreneurship Interface*, *University of Illinois at Chicago, Chicago, IL,* pp. 453-80.

16. Li, X., & Mitchell, R. K. (2009). The Pace and Stability of Small Enterprise Innovation in Highly Dynamic Economies: A China-Based Template*. *Journal of Small Business Management*, *47*(3), 370–397. http://doi.org/10.1111/j.1540-627X.2009.00275.x

17. McAdam, R., Stevenson, P. and Armstrong, G. (2000), "Innovative change management in SMEs: beyond continuous improvement", *Logistics Information Management*, Vol. 13 No. 3, pp. 138-49.

18. OECD. (2005). Oslo Manual. 3rd Edition

19. Örücü, E., Kiliç, R., & Savaş, A. (2011). KOBİ'lerde inovasyon stratejileri ve inovasyon yapmayı etkileyen faktörler: bir uygulama. *Doğuş Üniversitesi Dergisi, 12*(1), 58-73.

20. Raymond, L., & Blili, S. (2001). Organisational learning as a foundation of electronic commerce, in the Network Organisation. *International Journal of Economic Commerce*, *5*(2), 29–45.

21. Robertson, P. L., & Langlois, R. N. (1995). Innovation, networks, and vertical integration. *Research policy*, *24*(4), 543-562.

22. Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, *26*(4), 441–457. http://doi.org/10.1016/j.jbusvent.2009.12.002

23. Scherer, F. M. (1965), 'Firm Size, market structure, opportunity and the output patented inventions', *American Economic Review*, **55**, 1097-1125.

24. Statistical Office of Turkish Republic. (2015). Retrieved 09.03.2016 from http://www.tuik.gov.tr/PreHaberBultenleri.do?id=21864

25. Turkish Government Official Journal. (2012). Retrieved 04.03.2016 from http://www.resmigazete.gov.tr/eskiler/2012/11/20121104-11.htm

26. Zawislak, P. A., Cherubini Alves, A., Tello-Gamarra, J., Barbieux, D., & Reichert, F. M. (2012). Innovation capability: from technology development to transaction capability. *Journal of technology management & innovation, 7*(2), 14-27.

27. Zeneli, F., & Zaho, L. (2014). Financing SMEs in Vlora City, Albania: between Game Theory and Lack of Information. *Procedia - Social and Behavioral Sciences*, *150*, 126–131. http://doi.org/10.1016/j.sbspro.2014.09.016

THE EFFECTS OF PERCEIVED SERVICE QUALITY FOR CUSTOMER LOYALTY IN AIRLINES

Ozgur Ergun
Kocaeli University Turkey
oerg@msn.com

Serap Capuk
Turkish Airlines Turkey
serapcapuk01@hotmail.com

ABSTRACT
Tourism makes a major contribution to the global economy. It directly contributed about $2 trillion to world GDP in 2015 and provided over 105 million jobs globally (3.4% of total employment) by the help of development in transportation features. Growing continuously from the 1950's, airline transportation is extremely important in promoting the country's economy. At first years, air services took a place in people's life as fast, safe and regular but privileged transportation because of high costs. Recently, dizzying improvement in features such as comfort, speed of transport and security with economical prices transformed airline transportation as a mass
Because of its intensive use of infrastructures, the transport sector is an important component of the economy and a common tool used for development. This is even more so in a global economy where economic opportunities have been increasingly related to the mobility of people, goods and information. High quality transport infrastructure is a prerequisite for sustained economic growth and for maintaining competitiveness in a developed economy. In this context, measurement of the expectations and satisfaction of flight passengers has an important role in determining the factors affecting the passenger experience.
In this study, unlike the former studies in the literature, flight service quality will be evaluated through criteria of the most respected airline passenger satisfaction programs compared with a scale to measure the degree of passenger satisfaction. Desired analysis will be applied in order to determine the factors affecting the passenger experience to offer solutions for the prescribed quality.
Keywords: Airlines Industry, Customer Loyalty, , Perceived Service Quality

1 INTRODUCTION

An operator can only capture the competitive advantage due to the importance given to the demands of passengers, at the domestic and international market by fulfilling the services effectively. Airline companies has the obligation to identify the expectations and requirements of the passengers accurately and reflect these demands with technical quality, safety and speed through specific standards, within the lowest cost. In this context, the most important function of the airline business must be taking the right position in marketing. Success of an operator in this competition depends on the effectiveness of marketing activities of flight services.

Measuring service quality is difficult due to its unique characteristics: Intangibility, heterogeneity, inseparability and perishability (Bateson, 1995). Service quality is linked to the concepts of perceptions and expectations (Parasuraman et al., 1985). Customers' perceptions of service quality result from a comparison of their before-service expectations with their actual service experience. The service will be considered excellent, if perceptions exceed expectations; it will be regarded as good or adequate, if it only equals the expectations; the service will be classed as bad, poor or deficient, if it does not meet them (Vázquez et al., 2001). Role of customer loyalty gains more prominence when applied in the context of services due to

561

the higher human involvement in comparison to goods. On the other hand, difficulty to repeat the same services makes it complex as the standard offer. Difficulty of patent protection for the services makes it easy to emulate. The pricing of the service is also much more difficult than the product (Gümüşoğlu et al., 2007). It is also difficult to determine unit cost of services and price / quality relationship for the services companies. The question will also be one of the challenges faced by service businesses as »how much a customer is ready to pay for an excellent service instead of a good service? « (Oral and Yüksel, 2006) A positive relation has also been reported between service quality and willingness to pay higher prices and customer loyalty (Baker and Crompton, 2000).

The quality of service and cost may vary from the manufacturer to the manufacturer, from consumer to consumer and from day to day. Customers usually perceive services as a role of providing staff but service personnel of the company's performance may vary from hours to days or even hours of the day. One reason for the variability of perceived offered service quality is related with the customers' different expectations and experiences. Therefore, the variability of the offered services may also be specified as a result of the interaction between people. This uncertainty can be reduced by carrying out by more accurate selection of employee, education, motivation and control manner. Service companies are trying to standardize the services they offer, in order to reduce variability. For that service businesses attach great importance to selection and education of personnel (Ozturk, 2013: 11).

The aim of this study is; to identify flight services of the airline companies on all aspects and to reveal how and to what extent they meet the requirements of the industry and customers and determine shortcomings to produce solutions. In this regard, primarily, service quality, perceived quality and customer loyalty concepts intended in this study will be explained.

2 SERVICE QUALITY AND PERCEIVED QUALITY

In this research, service quality is presented in the perspective of perceived quality because it is the most commonly used in the services area. Moreover, the research led to a better understanding of the existence or the non-existence of differences between quality and satisfaction. Customer satisfaction is seen as an answer to completion and fulfilment of needs (Oliver, 1996); a psychological state and as an assessment of overall evaluation (Fonseca et al, 2010). Perceived quality is defined as a customer's appraisal of a product's overall excellence or superiority and an appraisal variable and posited it to work as an antecedent in this behavioral intention model (Zeithaml, 1988, Gotlieb, Grewal, & Brown, 1994). Furthermore, as an appraisal, one's determination of perceived quality is primarily cognitive process. Quality is determined by evaluating the performance of service attributes to either expectations or an objective standard. Therefore, quality impacts cognitive satisfaction directly. Perceived quality and satisfaction are highly inter-correlated (Bitner & Hubbert, 1994). Support for quality acting both as an antecedent as well as a consequence of satisfaction exists (Cronin, Brady, & Hult, 2000). However, there is more support for the notion that perceived value leads to satisfaction (Oliver et al, 1997).

Perceived value is defined as an "overall assessment of the utility of a product based on perceptions of what is received and what is given" (Zeithaml, 1988). The total customer experience variables represent the "what is received" by the customer. (A. Parasuraman & Grewal, 2000) refer to this customer benefit as the "get" component of their model of perceived value. It is the bundle of benefits the buyer derives from a seller's offering. Researchers have demonstrated that there is a positive relationship between perceived value and intention to repurchase (Parasuraman and Grewal 2000). However, it is unlikely that even satisfied customers will continue to repurchase if they can get a better value elsewhere.

3 CUSTOMER LOYALTY

The importance of customer loyalty and customer satisfaction has become increasingly apparent to airline industry that has matured during recent years. The value of customer loyalty for service industries has been recognized by many researchers underlined its potential effect on the development of sustained competitive edge for the service organizations. The distinctive nature of services, increased role of technology and higher customer involvement in service delivery processes have furthered the importance of customer loyalty in service industries. As suggested by several researchers (Dean, 2007) there are two types of loyalty; »behavioral and attitudinal«. The behavioral aspects of the customer loyalty were characterized in terms of repurchase intentions, word-of-mouth communication, and recommendations of the organization (Karatepe and Ekiz, 2004; Zeithaml et al., 1996). Liu-Thompkins, et al (2010) defined attitudinal loyalty as a favorable evaluation that is held with sufficient strength and stability to promote a repeatedly favorable response towards a product/brand or a store.

Customer loyalty not only ensures repeat purchases and positive publicity with greater value in terms of reliability, it also leads to host of other significant benefits such as cross buying intentions, exclusive and priority based preference to the company and its products/ services, greater share of wallet and so on which provide a competitive edge to the company. "Customer Loyalty is a psychological character formed by sustained satisfaction of the customer coupled with emotional attachment formed with the service provider that leads to a state of willingly and consistently being in the relationship with preference, patronage and premium" (Rai, K & Medha, 2013).

Customer loyalty is defined as "a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior" (Oliver 1999).

4 FINDINGS

A five - point Likert scale, ranging from "1 = strongly disagree" to "5 = strongly agree" was used. Table 2 lists the constructs and measures used for assessment of customer satisfaction derived from *airline passenger satisfaction programs.*

The study sample is obtained by applying to the survey data, Data was analyzed with the aid of SPSS 21 analysis software. In this context, primarily Barlett's sphericity tests are performed compliance with Factor Analysis, later Factor Analysis and Reliability tests were conducted. Research for the analysis of the data obtained as a result of the frequency analysis, t-test and ANOVA test was made.

Table following on the next page

Table 1. Demographic Findings

		F	**(%)**
Gender	Female	229	56,3
	Male	178	43,7
Age	15-19	40	9,8
	20-29	129	31,7
	30-39	86	21,1
	40-49	83	20,4
	50 or Above	69	17,0
Marital Status	Single	145	35,6
	Married	215	52,8
	Other	47	11,5
Education	Bachelor	151	37,1
	Masters	84	20,6
	High School	78	19,2
	Primary	44	10,8
	PhD	50	12,3
Nationality	Turkish	303	74,4
	Foreign	104	25,6

A total of 407 valid respondents consisting of 178 males (43.7 %) and 229 females (56.3%) participated in the study. The majority age group was between 20-29 years old. Most of the respondents were married (52.8%). The majority of the respondents has bachelor degree (37.1%) and Turkish Citizen (74.4%).

Table following on the next page

Table 2. Scale

	ITEM	Factor Loading	Extracted Variance	Cronbach's Alpha
COMFORT (2.658)	Effective answer given to the passenger calls	0,773	34,588	0,988
	Sink adequacy and cleanliness inside cabinet	0,756		
	Cabin Crew Competence (Information and Language)	0,749		
	Behaviors and appearance of cabin crew	0,741		
	Sink adequacy and cleanliness inside cabinet	0,728		
	Cab interior internet access	0,718		
	Cabin Breaks	0,707		
	In-cab Entertainment Systems	0,697		
QUALITY (1.079)	Behaviors and appearance of personnel	0,800	23,715	0,954
	High quality ground services	0,747		
	Personnel Competence (Information and Language)	0,740		
	Low Baggage Loss and Damage Rate	0,728		
	Age of fleet	0,641		
	Passengers Services During Disruption	0,581		
	Large and Comfortable Seat	0,574		
	Passenger Promotion Programs	0,555		
RELIBILITY (0.719)	Airline Ticket Policies	0,721	23,000	0,960
	Ease of Reservation and Ticketing	0,707		
	Safety of Airlines	0,694		
	High-OTP Rate	0,665		
	Airline Alliance Membership	0,608		
	Tariff Structure	0,579		
Total Variance %81.303				

Table 3. Breakdown of Last Airline - Repeating Preference

		N	Avg.	Sd	t	p
COMFORT	Yes	242	3,947	0,818	18,896	**0,000**
	No	165	2,365	0,846		
QUALITY	Yes	242	3,630	0,901	16,562	**0,000**
	No	165	2,193	0,793		
RELIABILITY	Yes	242	3,926	0,831	16,933	**0,000**
	No	165	2,455	0,902		
Overall Satisfaction of Cabin Services	Yes	242	3,834	0,808	18,358	**0,000**
	No	165	2,338	0,807		

Based on the analysis of the sub-factors of service quality, the most important factor was found as the comfort issues (Table 3). The majority of the respondents indicated that airline company should have a well-developed comfort and reliability solutuions inorder to construct a loyal customer and repeating sales. On the other hand, many interviewees also highlighted the "Overall Satisfaction of Cabin Services" and pure quality perception creates the customer motivation to purchase the service again.

Table 4. Breakdown of Reason To Prefer Airline

		N	Avg	Sd	F	p
COMFORT	Latest Flight Experience	87	4,092	0,899	18,381	0,000
	Travel Agency	137	3,321	1,135		
	Family and Friends	77	3,207	0,977		
	GDS	55	2,935	1,040		
	TV Ads	36	2,502	0,903		
	Airline Internet Site	15	2,398	1,260		
QUALITY	Latest Flight Experience	87	3,914	0,900	25,012	0,000
	Travel Agency	137	3,074	1,089		
	Family and Friends	77	2,958	0,984		
	GDS	55	2,552	0,904		
	TV Ads	36	2,135	0,650		
	Airline Internet Site	15	2,242	1,157		
RELIABILITY	Latest Flight Experience	87	4,061	0,907	17,087	0,000
	Travel Agency	137	3,363	1,110		
	Family and Friends	77	3,265	0,999		
	GDS	55	2,933	1,039		
	TV Ads	36	2,579	0,938		
	Airline Internet Site	15	2,362	1,163		
Overall Satisfaction of Cabin Services	Latest Flight Experience	87	4,022	0,887	21,323	0,000
	Travel Agency	137	3,253	1,079		
	Family and Friends	77	3,143	0,949		
	GDS	55	2,807	0,949		
	TV Ads	36	2,406	0,774		
	Airline Internet Site	15	2,334	1,139		

Presence of successful flight experience with the same airline was found as one of the main important factors to maintain loyal customer and repeating purchases (Table 4). Having successful flight experience was considered as the most important reason in all sub-factors. Analyze between the groups in mean t-test results to determine the difference between the variables were statistically significant in all factors and prove that customers with flight experience with the same company based on satisfaction of customers' expectations during last travel.

Table following on the next page

Table 5 Breakdown Of Last The Airline Recommendation

		N	Ort	Sd	t	p
COMFORT	YES	213	4,124	0,651	23,216	**0,000**
	NO	194	2,407	0,837		
QUALITY	YES	213	3,798	0,797	20,193	**0,000**
	NO	194	2,224	0,772		
RELIABILITY	YES	213	4,091	0,693	20,353	**0,000**
	NO	194	2,493	0,886		
Overall Satisfaction of Cabin Services	YES	213	4,004	0,664	22,572	**0,000**
	NO	194	2,375	0,792		

The difference between the groups in mean t-test results show a significant difference between the variables were statistically significant (table 5). Average points of Passengers for the item "Would you recommend the latest airline company to someone?" proves that high satisfaction levels in both 4 sub-factors would direct the passengers recommend their airline to others.

Based on the results obtained by researcher, the following conclusions are; Customers have high expectations on the quality of service and ticketing issues, the customer's lowest expectations are personnel's (not cabin crew) appearance, behavior and competence with ground services. It must however be noted here that this rating is a comparative assessment and therefore this dimension of service quality scores lower in comparison to, security and reliability issues.

LITERATURE:

1. Baker, D. A., & Crompton, J.L. (2000). *Quality, satisfaction and behavioural variables*. Annals of Tourism Research, 27(3), 785-804

2. Bastos, J A.R., and Gallego, P.M (2008). *Pharmacies Customer Satisfaction and Loyalty: A Framework Analysis.* Journal of Marketing. Universidad de Salamanca

3. Bateson (1995), "*SERVQUAL: review, critique, research agenda*", European Journal of Marketing, Vol. 30 No. 1, 8-32.

4. Bitner, M. J., & Hubbert, A. R. (1994). *Encounter Satisfaction versus Overall Satisfaction versus Quality: The Customer's Voice*. In R. R. a. R. Oliver (Ed.), Service Quality: New Directions in Theory and Research California: Sage, 72-94

5. Cronin, J. J., Jr., Brady, M. K., & Hult, G. T. M. (2000). *Assessing the Effects of Quality, Value and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments.* Journal of Retailing, 76(2), 193-218.

6. Dean, A.M. (2007). "*The impact of the customer orientation of call center employees on customers" affective commitment and loyalty*". Journal of Service Research, Vol. 10 No. 2, 161-73

7. Fonseca F., Pinto S., Brito C, (2010) *International Journal for Quality research* Short Scientific Paper Vol.4, No. 2, 125-130.

8. Gotlieb, J. B., Grewal, D., & Brown, S. (1994). *Consumer Satisfaction and Perceived Quality: Complementary or Divergent Constructs?* Journal of Applied Psychology, 79, 875-885.

9. Gümüşoğlu, Ş., Pırnar, İ., Akan, P., Akbaba, A., (2007) Hizmet Kalitesi Kavramlar, Yaklaşımlar ve Uygulamalar, Ankara: Detay Yayıncılık,

10. Hallowell, R. (1996). *The relationships of customer satisfaction, customer loyalty and profitability: An empirical study*. International Journal of Service Industry Management, Vol. 7 No. 4, 27-42.

11. Karatepe, O.M. and Ekiz, H.E. (2004). *The effects of organizational responses to complaint on satisfaction and loyalty: A study of hotel guests in Northern Cyprus*. Managing Service Quality, 14 (6), 476-86.

12. Naik K., Gantasala B. S., Gantasala V. P. (2010) *Service Quality (Servqual) and its Effect on Customer Satisfaction in Retailing* European Journal of Social Sciences – Volume 16, Number 2 / 231

13. Oliver, R. L. (1999). *Whence Customer Loyalty?* Journal of Marketing, 63(Special Issue), 33- 44.

14. Oliver, R. L., Rust, R. T., & Varki, S. (1997). *Customer Delight: Foundations, Findings and Managerial Insight*. Journal of Retailing, 73(3), 311-336.

15. Oral, S., Yüksel, H., (2006), Hizmet İşletmeleri Yönetimi. İzmir: Kanyılmaz Matbaası

16. Öztürk, S.A.,(2013) Hizmet Pazarlaması, 13. Baskı, İstanbul: Ekin Basım Yayın

17. Parasuraman, A., & Grewal, D. (2000). *The Impact of Technology on the Quality-Value-Loyalty Chain: A Research Agenda.* Journal of Academy of Marketing Science, 28, 168-174.

18. Rai, K., Medha S. (2013). *The Antecedents of Customer Loyalty: An Empirical Investigation in Life Insurance Context Alok,* Journal of Competitiveness June, Vol. 5, Issue 2, pp. 139-163

19. Vazquez (2001), "*Expectations: a comparison standard in measuring service quality: an assessment of a reassessment",* Journal of Marketing, Vol. 58 No. 1, pp. 132-9

20. Zeithaml, V. (1988). *Consumer Perceptions of Price, Quality and Value: A Means-End Model and Synthesis of Evidence*. Journal of Marketing, 52(3), 2-22

IMPACT OF JOB SATISFACTION (JS) FACETS ON INTENT TO LEAVE (ITL) FOR HUMAN RESOURCES EXPERTS (HRE): A STUDY FROM TURKEY

Askin Keser
Prof.Dr.Uludağ University
askin@uludag.edu.tr

Gozde Yilmaz
Assoc.Prof.Dr.Marmara University
gozdeyilmaz76@gmail.com

ABSTRACT
Human Resources Experts (HRE) are responsible for increasing their organization employees job satisfaction and decreasing their intention to leave. However, their job satisfaction has been a relatively understudied area in Turkish literature. This study tried to investigate the HREs job satisfaction (JS) level and its relation to Intention to Leave (ITL).1,100 e-mails were sent to the HREs all over Turkey who are registered on LinkedIn and have the connection with the authors. A total of 317 usable questionnaires were returned (29% return rate). Spector's Job Satisfaction Survey and Cammann et al. Intention to Leave scale were used in the survey. Correlation and regression analyzes were used to identify significant predictors of intention to leave. The correlation analysis showed that HREs job satisfaction factors were negatively associated with their intention to leave [r=-,69, p=0.01]. Further explanations about the job satisfaction factors and regression results will be discussed in the context of this paper.
Keywords: *Job satisfaction, Intention to Leave, Human Resource Department, Human Resources Experts*

1. INTRODUCTION

There have been various studies on job satisfaction and its relationship with intention to leave. The main objective of this study is to understand the relationship between human resource experts' job satisfaction and their intention to leave level since they are responsible for increasing job satisfaction and decreasing turnover among employees. As Schaufeli mentioned; "organizations need engaged workers" [1]. Although this is a task of human resources experts in organizations, their job satisfaction level and intention to leave haven't been studied thoroughly in Turkey. How satisfied they are with their job and their intention to leave is an important concern for the organizations. Thus, it is interesting to find out the satisfaction and intent to leave levels of these workers. HREs are dealing with a double-edged sword on the one side they are responsible for the workers' satisfaction and intention to leave and on the other side, they are also responsible and concerned with their job satisfaction. This paper is trying to understand this phenomenon from the perspective of human resource experts.

This study tries to investigate the relationship between job satisfaction and intention to leave among HRE's from various industries. In this sense, it has the ability to represent the Turkish human resource experts.

2. LITERATURE REVIEW

There has been growing concern in organizations regarding how to increase the productivity of the employees and keep the talented ones. This is the responsibility of human resource management. So job satisfaction of the human resource experts becomes the key as their feelings can be contagious among employees because they are in constant contact with other employees.

Job satisfaction was defined as the employees'feelings towards their jobs (Spector, 1997). Job satisfaction comprises of different dimensions since they are all effective in how a person feels about his/her job experience. According to Spector (1997), these dimensions are pay, fringe benefits, promotion, supervisor, co-workers, work conditions, communication, and the nature of work. All of these dimensions have different effects on job satisfaction.

Job satisfaction has an inverse relation with burnout (McNeese-Smith, 1997) and intention to leave (Egan, Yang & Bartlett, 2004, Mobley, 1977). Among these variables, we are interested in the intention to leave as an intention to leave is a strong predictor of actual turnover (Griffeth et al., 2000; Calisir, Gumussoy&Iskin, 2011; Firth et al., 2004; Kacmar et al., 2006). Higher the job satisfaction, lower the intention to leave among the employees. The competition put pressure on organizations to keep their talented employees.

We aim to investigate the relationship between job satisfaction and intention to leave among human resource experts. Proposed questions were:
- What is the job satisfaction and intention to leave level among HREs in Turkey?
- Is there a negative correlation between job satisfaction and intention to leave?
- Which dimension/dimensions of job satisfaction explained the highest variability on intention to leave?

3. RESEARCH DESIGN AND METHODOLOGY
3.1.Sample
The data used in this study was collected via an e-mail questionnaire sent to 1100 HREs that were registered on Linkedin. Data were collected between April 2015-July 2015. Out of 1100 questionnaires, a total of 317 questionnaires were returned (29% response rate). The sample comprised human resource experts from various industries ranging from SMEs to MNCs. Out of the 317 HREs, seventy-one percent were women and twenty-nine percent were men. Forty-nine percent of the sample has a salary under 3000TL which is a little less than 1000 Euros. Half of the respondents have worked experience between 1-5 years. Twenty-nine percent of respondents had been employed less than a year.

Table 1: Descriptive Statistics of Sample Characteristics

	N	*%*
Gender		
Women	*224*	*71*
Men	*93*	*29*
Marital Status		
Single	*167*	*53*
Married	*150*	*47*
Salary		
Below 2000TL	*63*	*20*
2000-3000 TL	*92*	*29*
3001-4000 TL	*57*	*18*
4001-5000 TL	*44*	*14*
Over 5000 TL	*61*	*19*
Tenure		
Less than 1 year	*93*	*29*
Between 1-5 years	*165*	*52*
Between 6-10 years	*33*	*10*
Between 11-15 years	*12*	*4*
Over 15 years	*14*	*5*

3.2.Measures

As part of a larger study, human resource experts were asked to rate their job satisfaction on a 36 item scale that was developed by Spector (1997) and their intention to leave on 3 item scale developed by Cammann et al. (1979). The Job Satisfaction scale consists of nine subscales which measure satisfaction with pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, colleagues, nature of work and communication. Job Satisfaction was measured on a six-point Likert scale ranging from (1) Disagree very much to (6) Agree very much. Statements regarding the Intention to leave were rated along a 1 = *strongly disagree* to 5 = *strongly agree* on the scale. Factor analysis was run.Internal consistency for each of the scales was examined using Cronbach's alpha. The Cronbach alphas under .60 were not reported. Some of the job satisfaction subscales Cronbach's alpha substantially increased by eliminating some items. These were also done. Spector's 36 statements regarding the job satisfaction were factor analyzed using principal component analysis with Varimax rotation.However, the original factor structure proposed by Spector (1993) can not be retained as our factor analysis' result did not suit the original factor structure. Items which were not loading onto the original sub-dimensions were deleted and other items which were loaded onto a different factor were labeled again. According to the factor analysis, pay and fringe benefits were loaded onto one factor and supervision and rewards were also loaded together in another factor. So these dimensions of job satisfaction were kept according to our factor analysis results. One of these factors was named as pay and fringe benefits while the other was named as supervision and reward.Results of the reliability analysis have shown that the operating conditions and communication dimensions were below the acceptable level. Means and the Cronbach alphas for each measure were presented in Table 1.Due to the page limitation, a detailed factor analysis of the Job Satisfaction scale was not provided. Basic descriptive statistics and values of Cronbach alpha are shown in Table 2.Mean scores were calculated for each of the Job satisfaction sub-scale and intention to leave scale. Higher scores indicated higher job satisfaction and higher scores in intention to leave means an increased tendency to leave the organization.

The mean Job satisfaction score suggested that respondents satisfied with their jobs above the average (M = 3.89, SD = .60) and exhibiting a low level of intention to leave (M = 2.886, SD = 1.09). Also, the satisfaction from supervision and rewards was also above the average. The highest mean score was obtained from the nature of work (M = 4.76, SD = .71).

Table 2: Descriptive Statistics and Cronbach Alpha

Variable	M	SD	Number of items	A
Job Satisfaction	*3.89*	*.60*	*36*	*.89*
Intention to Leave	*2.88*	*1.09*	*3*	*.89*
Pay & Fringe Benefits	*3.56*	*.98*	*8*	*.85*
Supervision & Rewards	*3.84*	*.93*	*8*	*.82*
Nature of Work	*4.76*	*.71*	*4*	*.70*
Communication	*4.03*	*.93*	*3*	
Co-workers	*4.22*	*.79*	*4*	*.68*
Promotion	*3.52*	*1.02*	*2*	*.66*
Operating Conditions	*2.70*	*.87*	*3*	

The data was screened for outliers. 46 out of range cases were identified and excluded from the further analysis. The minimum amount of data for factor analysis was satisfied. *The skewness and kurtosis for each variable were examined and there were no values greater than an absolute value of one, suggesting reasonably normal distributions.*

A Pearson correlation coefficient was computed to assess the relationship between job satisfaction and intention to leave. The job satisfaction dimensions shared negative moderate relationships with the dependent variable intention to leave, except the operating conditions which have no significant relationship with intention to leave. Job satisfaction was negatively correlated with intention to leave $r(271) = -.69$, $p = .001$.

Table 3: Job Satisfaction, Job Satisfaction Dimensions, and Intention to Leave: Correlations

Variables	1	2	3	4	5	6	7	8	9
1.Job Satisfaction	1	-.694**	.786**	.859**	.539**	.781**	.673**	.602**	.233**
2.Intention to Leave			-.570**	-.614**	-.329**	-.482**	-.483**	-.506**	-.119
3.Pay & Fringe Benefits				.609**	.197**	.483**	.354**	.448**	.078
4.Supervision & Rewards					.363**	.595**	.523**	.474**	.137*
5.Nature of Work						.494**	.404**	.189**	.139*
6.Communication							.526**	.430**	.223**
7.Co-workers								.321**	.177**
8.Promotion									-.054
9.Operating Conditions									1

**p≤0.01 level
* p≤0.01

A multiple regression analysis was conducted to determine whether the dimensions of job satisfaction significantly predicted intention to leave among human resource professionals. Pay and fringe benefits dimension were entered in step 1 and supervision and rewards dimension was entered in the second step and in the third step, promotion was entered into the model. In the 4th step, communication and coworkers, nature of work were entered. Using the enter method in the first step, it was found that satisfaction with pay and fringe benefit explained 32,5% of the variance in the intention to leave (R2 = .325, F(1, 269) = 129.56, p < .01). In the second step, satisfaction with the supervision and rewards dimension was added to the model. It was found that supervision and rewards dimension also significantly predicted the level of intention to leave. Adding the supervision and rewards dimension increased the explained variance to 43,4% (F(2, 268) = 104.604, p< .01). Looking at the magnitude of the t-statistics, we can say that the supervision and rewards, (t = -7.35, p < .01). had slightly more impact than pay and fringe benefits (t = -5.39, p < .01).Adding satisfaction with promotion at the third step added a small increase in variance. At the last step, the coworker found to be significant.

Table following on the next page

Table 4: Hierarchical Regression Analysis for Variables Predicting Intention to Leave

Variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE(B)	β
Constant	5.625	.221		6.014	.222		6.673	.264		7.271	.304	
Pay&Benefits	-.714	.056	-.614**	-.493	.067	-.425**	-.410	.068	-.353**	-.308	.072	-.265**
Supervision				-.346	.064	-.311**	-.283	.064	-.255**	-.276	.062	-.248**
Promotion							-.334	.077	-.224**	-.309	.075	-.208**
Coworker										-.261	.070	-.189**
R^2	.32			.43			.47			.50		
ΔR^2	.325**			.113**			.037**			.026**		

*$p< .05.$ **$p< .01.$

5. LIMITATIONS

This study has limitations. Our sample was diverse. While this diversity increases the representativeness of the sample, it can blur the lines between the different sizes of organizations and industries. Further studies can take this reality into account. Also, the environmental conditions should be measured to understand the intention to leave deeply.

6.CONCLUSION

Our study revealed the level of job satisfaction and intention to leave among HREs in Turkey and investigated the relationship between job satisfaction and turnover intention. Job satisfaction is above the average and the intention to leave is low.There is a strong relation between job satisfaction and intention to leave. From the response given to the questionnaire, it is clear that pay and fringe benefit together with the supervision and reward explained the highest variability in job satisfaction.

LITERATURE:
1. Monograph
1. Cammann, C., Fichman, M., Jenkins, D. And Klesh, J. (1979). *The Michigan Organizational Assessment Questionnair*e. Unpublished Manuscript, University of Michigan, Ann Arbor, Michigan
2. Spector, P. 1997. *Job Satisfaction: Application, Assessment, Causes, and Consequences.* California: Sage.

2.Monograph Chapter, Journal Article
1.Calisir, F., Gumussoy, C.A., and I. Iskin (2011). "Factors Affecting Intention to Quit among IT Professionals in Turkey". *Personnel Review*, 40 (4), 514-533.
2.Egan, T. M., Yang, B., & Bartlett, K. R. (2004). "The Effects of Organizational Learning Culture and Job Satisfaction on Motivation to Transfer Learning and Turnover Intention". *Human Resource Development Quarterly*, 15(3), 279–301.

3.Firth L., Mellor, D.J., Moore, K.A. & Loquet, C. (2007). *"*How Can Managers Reduce Employee Intention to Quit?*"*, *Journal of Managerial Psychology*, 19 (2): 170-187.

4.Kacmar, K.M., Andrews, M.C., Van Rooy, D.L., Steilberg, R.C., & Cerrone, S. (2006). "Sure, Everyone Can Be Replaced...But At What Cost? Turnover As a Predictor Of Unit-Level Performance". *Academy of Management Journal*, 49(1), 133-144

5.Lumley, E.J., Coetzee, M., Tladinyane R. & Ferreira N. (2011). "Exploring The Job Satisfaction and Organisational Commitment of Employees in The Information Technology Environment"*, Southern African Business Review*, 15 (1), 100-118

6.McNeese-Smith, D. K. (1997). "The Influence of Manager Behavior On Nurses' Job Satisfaction, Productivity, and Commitment", *Journal of Nursing Administration*, 27 (9), 47-55

7.Schaufeli W.B. & Salanova M., (2008). "Enhancing Work Engagement Through The Management Of Human Resources". In, K. Näswall, M. Sverke And J. Hellgren (Eds.), *The Individual in The Changing Working Life*, Cambridge: Cambridge University Press, 2008, 380-404.

8.Spector, P. E. (1985). "Measurement Of Human Service Staff Satisfaction: Development Of The Job Satisfaction Survey". *American Journal of Community Psychology*, *13*, 693-713.

ACCOUNTING RESPONSIBILITY – ENHANCING ITS ROLE IN RISK MANAGEMENT – AN EMPIRICAL STUDY OF A TRADE BANK OF IRAQ

Abdulaziz Eshwaish
Tikrit University – Iraq
azizshwaish@yahoo.com

Wisam Neema Hussein
Sent Istvan University – Hungary
Iuaa05001@yahoo.com

Zead Mshhain Abdullah
Tikrit University – Iraq
zeadmshhain@yahoo.com

ABSTRACT

Management accounting is one of modern social science, and accounting that will help the administration in each of the planning, control and performance evaluation and to take appropriate administrative decisions, which are supported, based on information extracted from the accounting information system in the enterprise (Hussein, 2000.132). Under the development of economic and industrial growth, which led to the large size of the facility, which in turn led to the expansion of the organizational structure, it became difficult for the facility management to take all administrative decisions related to their work, so it has become a need to delegation of authority lower administrative levels, and determining their responsibilities by working on the basis of the decentralization system and activate the sectoral integration system and accountability these levels for business results within the limits of its responsibilities. The division of activities and distribute them to positions of responsibility also makes it easier determine the risks faced the administration and distributed to those centers which facilitates risk diagnosis process, and thus the accounting responsibility can be approach for the risk management.
Keywords: Accounting Responsibility, Risk Management

1. INTRODUCTION
1.1. Problem
The study seeks to find an approach to diagnosis and measurement risk and linking them with the responsibility centers in the bank, the problem of research division the following questions:
1. Is accounting responsibility system represent an approach for diagnosis and measurement of banking risks and limit?
2. What the impact range of the accounting responsibility for risk management in the banking system institutions?

1.2. Hypothesis
Hypothesis of study can be formulated as follows:
1. The accounting responsibility system represent an approach for diagnosis and measurement of banking risks and limit.
2. There is impact range of the accounting responsibility for risk management in the banking system institutions.

1.3. Search limits
Place of study: TBI (Trade Bank of Iraq).
Period of study: The available financial reports for the years 2009-2010.

2. ACCOUNTING RESPONSIBILITY
2.1. Concept of responsibility accounting system
Is the responsibility centers a way to guide efforts in monitoring and performance evaluation for the purpose of determining the negative deviations and evaluating and adopting deviations positive development, premature is considered key to measuring the economic unit, where they lead to confirmation of the desire, determination and the ability to challenge through the development of the spirit of innovation and the optimization of the energy or the resources available (Juma , 2011, 325). In general it can be said that the accounting liability system is a determining performance of individuals responsible for the sub-units of the organization and measuring and reporting for the application of what is known as centers of responsibility (Nassif et al., 2013.30).

2.2. Important of responsibility accounting system
The importance of accounting responsibility in terms of oversight and evaluation of the performance of the economic system of units come under the Provisions of the measures to monitor the implementation of the actual performance within the framework of the performance scheme is, they start with the beginning of the development of the planned performance in force and continue with him to identify deviations and identify people responsible for them and take appropriate administrative decisions as soon as possible to correct and work on research into the causes of their occurrence and thus prepare the necessary reports and submit them to the various administrative levels to take appropriate measures in question, that's mean we can say that censorship is the result of an inevitable or whether I want to put responsibility in the accounting system into effect.

2.3. Responsibility accounting system requirments
The practical application of the accounting method of decentralization in management decision-making and performance evaluation and reporting that responsibility. The accounting responsibility based on the delegation of the senior management of the minimum departments to take administrative decisions with the right to keep the accounting system or the accountability of these levels with the results. Based on the progress the application of accounting liability system is comprised of several components, including accounting, administrative and behavioral common and that the system's success in achieving its objectives requires the integration of these components in one application (Hashim, 1988.230), in short we can say that the application of the system requirements are determine the scope of authority and responsibility are clearly defined, taking into account to determine the rates of performance in advance and train managers on the use of reporting results and must submit these reports to managers at the right time, there is to be a benefit of the information they contain and contain these reports aspects that must heed its managers.

3. RISK MANAGEMENT BANKING
3.1. Concept of risk management
Risk is the possibility of something serious consequence not expect output surrounding the implementation of the operation into effect, and the causes of hazards is the uncertainty caused by the multiplicity of variables relevant to decision-making, which arise because of the confusion and unpredictability, and risk management it is only based on the scientific method a set of principles and foundations and styles installed and assumptions that help in decision-

making to confront the dangers that are likely to be exposed the organization or individuals alike through hazard identification and working to measure and classification and determine the results and find out its causes in order to avoid it or reduce the consequences that occurred, and that the administration risks are involved in purely dangers which produce only loss. (Manal Mansour, 2009.3). As well as the definition of risk as be subjected to loss, or are likely to occur is undesirable, such as the probability of subjected to the loss of enterprise owners of their shares (Abdul Hamid, 1999, 33).

3.2. Important of risk management

The importance of a pop-up risk of the importance of goals, which is seeking to achieve through the application of a set of procedures and scientific methods and purpose of taking appropriate administrative decisions to identify, measure and classify the dangers that may be exposed to established or individuals and to identify appropriate means to confront management. (Tariq, 2003.46), as well as they contribute to the new interpretations of the variables status is not recognized by helping to identify and quantify potential risks.

The importance of risk management is that it works to prevent the occurrence of the risk and follow the best means to protect the facility and its employees from potential financial losses and work to educate the workers to perform their jobs the way they prevent the occurrence of danger and risk assessment and hedging them as designed to ensure the profitability of established as well as working on a policy and strategy is working on the report of the results arising from the risk that occurred to ensure the continuation of its work in the facility and build an organizational structure and the development of scientific policies and the process of coping with risks and reduce the effects in the future that have occurred.

3.3. Types of banking risks

The financial risks are considered in the world of globalization and rapid changes of the biggest challenges facing communities and directly affect the economic progress and civilization and that these risks vary depending on the activities and actions that are accompanied. In addition, the departments of banks to take risk management into account and their types as if it wants to achieve optimum yield.

In general, can the risks to the bank into three main sections divided are:
1. Financial Risk (Financial Risks).
2. The risks of activities outside the budget (Off- Balance Sheet Activities Risks
3. Technical and operational risks (Technology and operational risks).

4. RISKS RELATED TO BANKING RESPONSBILITY
4.1. Risks related to credit

Comprising the assets of this section of the loans and advances and banking facilities represent assets in this section bulk of the investments by the bank, which have the largest share in achieving the bank's revenues of the benefits of loans and advances, facilities and other income resulting from the Activity section and there are many risks to the assets of this section the most important risk credit arising from the inability or reluctance or evade the borrower to repay the loan provided by the bank has been a commodity loan or credit facility as debt in this case will turn into a late debt payment and thus cause a deficit in the liquidity of the bank and the loss of revenue as well as the risk of inflation affect this asset section where inflation is a benefit to the debtor and creditor losses (the bank).

4.2. Risks related to liquidity

This risk is the inability of the bank to meet its financial obligations incurred by him when due, as well as the inability of the bank to get cash from the asset side without having to liquidate

some of those assets at low prices or resorting to high-cost sources of funding. The Bank is unable to meet its short-term obligations is the beginning of a bank's insolvency, which could lead to bankruptcy phenomenon. Liquidity risk refers to the extent of balancing the cash requirements of the bank to meet the cash outflow as processes and lending requests to withdraw deposits, cash flow inward due to the increase in deposit and liquidation of assets.

4.3. Risks related to capital

It is known that the head of the property the money should be enough to cope with banking risks but in practice is difficult to determine the extent of capital commercial bank per adequacy or until the banking system as a whole, due to lack of knowledge of the behavior of depositors and borrowers in the future accurately.

5. THE PRACTICAL PART

For identifying how risk management according to the responsibility centers approach were selected Trade Bank of Iraq a field for practical application because this bank is divided the responsibility centers administratively and functionally in clear way, and has a department for risk management and apply of initiative governance risk management, and compliance.

The bank's risk management applications become clear according to the following methodology:

5.1. Risk credit

The function of lending of great importance in terms of economic activity and the activities of banking services, for the role they play in saving money and packaged in all investment and economic fields where the aim of lending is to make a profit, which is in reality the difference between the interest paid for deposits time and savings deposits and interest earned by the beneficiaries of the credit facilities. And the risks associated with lending are that (Hammad, 2001.71):

1. Inflation risks.
2. Interest rate risk.

The following tables show the details of these risks:

Table 1: Asset balances at risk (TBI reports)

Details	2009	2010
Due from banks	6514.47	5859.75
Loans and advances to customers	0.00	0.00
Consumer Credits	1.78	2.44
Residential Mortgage	1.64	2.58
Loans to companies	0.00	0.00
Large Companies	1014.49	689.18
Small and medium enterprises	2.72	29.59
Treasury Bills	0.00	0.00
Financial assets at fair value	0.00	91.26
Financial assets available for sale	0.02	1.21
Other assets	32.53	21.77
Total Assets	7568.01	6697.79
Off-balance sheet items	0.00	0.00
Letters of Guarantee	2142.79	2257.47
Documentary Credits	11169.39	12358.38
Total	13312.18	14615.85
Total budget	20880.19	21313.64

Table 2: Banking facilities distributed according to sectors extending credit granted by the degree of risk (TBI reports)

2010	Consumer	Credit Mortgage	Companies	SME	Government Sector	Total
Low risk	0.00	0.00	0.00	0.00	1497.76	1497.76
Acceptable risk	1.91	2.58	566.48	17.17	0.00	588.14
Watch List	0.54	0.00	32.74	0.16	0.00	33.44
Non-performing	0.00	0.00	0.00	0.00	0.00	0.00
Substandard	0.00	0.00	84.77	12.25	0.00	97.02
Total	2.44	2.58	683.99	29.59	1497.76	2216.36
Minus loan losses	0.00	0.00	86.40	7.00	0.00	93.80
Net	2.44	2.58	597.18	22.59	1497.76	2122.56

Table 3: Guarantees for credit at their fair value (TBI reports)

2010	Consumer Credit	Housing loans	Corporate loans	SME	Total
Acceptable risk	1.91	2.58	566.48	17.17	588.14
Watch List	0.54	0.00	32.74	0.16	33.44
Non-performing	0.00	0.00	0.00	0.00	0.00
Substandard	0.00	0.00	84.77	12.25	97.02
Total	2.44	2.58	683.99	29.59	718.60
This includes:	0.00	0.00	0.00	0.00	0.00
Letters of Guarantee	0.00	0.00	84.88	0.00	84.88
Real estate	2.44	2.58	683.99	29.59	627.98
Shares and Equity	0.00	0.00	2.05	0.00	2.05
Vehicles and machines	0.00	0.00	3.69	0.00	3.69
Total	2.44	2.58	683.99	29.59	718.60

Table 4: Financial assets according to their geographical distribution (TBI reports)

2010	Iraq	Asia and the Middle East	Europe	USA	Total
Cash at Central Bank	5845.65	0.00	0.00	0.00	5845.65
Due from banks	36.31	1595.44	3264.93	963.08	5895.75
Loans and advances	0.00	0.00	0.00	0.00	0.00
Consumer credit	2.44	0.00	0.00	0.00	2.44
Residential Mortgages	2.58	0.00	0.00	0.00	2.58
Corporate lending	0.00	0.00	0.00	0.00	0.00
Major companies	597.18	0.00	0.00	0.00	597.18
Middle and small enterprises	22.59	0.00	0.00	0.00	22.59
Lending to the public sector	1497.76	0.00	0.00	0.00	1497.76
Treasury and Bonds	0.00	0.00	0.00	0.00	0.00
Financial assets held to maturity	1021.20	0.00	0.00	0.00	1021.20
Financial assets at fair value	0.00	0.00	91.26	0.00	91.26
Financial assets available for sale	1.21	0.00	0.00	0.00	1.21
Other assets	21.77	0.00	0.00	0.00	21.77
Total2010	9048.70	1595.44	3356.19	903.08	14963.41
Total2009	6401.27	917.77	3231.93	2278.67	12829.64

Table 5: Financial assets by economic sector before taking into consideration guarantees (TBI reports)

	Local	Industrial	Property	Commercial	Consumer	Government	Total
Fund / Central Bank	5845.65	0.00	0.00	0.00	0.00	0.00	5845.65
Due from banks	5859.75	0.00	0.00	0.00	0.00	0.00	5859.75
Consumer Lending	0.00	0.00	0.00	0.00	2.44	0.00	2.44
Residential Mortgages	0.00	0.00	0.60	1.98	0.00	0.00	2.58
Large companies	0.00	23.37	44.29	529.53	0.00	0.00	59.78
Medium and small enterprise	0.00	2.33	0.00	20.26	0.00	0.00	22.59
Government sector	0.00	0.00	0.00	0.00	0.00	1497.76	1497.76
Financial assets to maturity	0.00	0.00	0.00	0.00	0.00	121.20	121.20
Financial assets at fair	0.00	0.00	0.00	0.00	0.00	91.26	91.26
Financial assets Sublet	1.21	0.00	0.00	0.00	0.00	0.00	1.21
Other assets	21.77	0.00	0.00	0.00	0.00	0.00	21.77
Total2010	11728.39	25.70	44.89	551.77	2.44	2610.22	14963.41
Total2009	10394.10	220.99	0.69	705.73	1.76	1506.37	12829.64

Table 6: Credit risk indicators (TBI reports)

Risk Type	2008	2009	2010
Provision for loan / total loan losses	0	0,037	0,044
Doubtful / total assets	0٬008	0,007	0,004
Doubtful / capital	0	0,07	0,064
Total loans / deposits	0,16	0,12	0,17

From the previous tables (1-6) shows us that the bank shows the assets in accordance with the methodology reflects the risk categories in each category of distribution categories. This is mean the accounting responsibility system represent an approach for diagnosis and measurement of banking risks and limit, that proving the first hypothesis for this study.

5.2. Liquidity risk
It's the risk arising from the bank's inability to meet the demands of depositors withdrawing, or financial obligations, the following tables show the details of these risks:

Table 7: Bank liabilities of dues as at 31/12/2010 (TBI reports)

2010	Less than one month	1-3 months	3-6 months	6-12 months	1-3 years	more than three years	Total
Due to customers	5757.21	1638.03	1147.60	1038.11	3246.73	246.42	13074.07
Margin accounts	49.44	61.80	135.96	0.00	0.00	0.00	247.21
Other liabilities	21.91	26.29	42.92	43.82	11.12	0.00	146.07
Total Liabilities	5828.56	1726.12	132.49	1081.93	3257.85	246.42	13467.38
Total Assets	6004.54	2383.38	1938.16	1134.01	3501.90	28.62	14990.62
2009							
Due to customers	20.58	25.51	5.10	47.42	7.65	0.00	106.26
Margin accounts	4148.72	2515.07	220.91	2395.45	596.95	0.00	11864.98
Other liabilities	5284.71	2804.71	2376.01	2489.41	13.35	8.82	12977.04
Total Liabilities	4148.72	2515.07	2209.15	2445.47	596.59	0.00	11916.00
Total Assets	5284.71	2804.71	2376.06	2489.41	13.35	8.82	12977.04

Table 8: Paragraphs of dues outside the budget (TBI reports)

2010	Less than one year	1-5 years	Total
Letters Credits	8054.95	4312.43	12358.38
Letters of guarantee	1025.08	1232.39	2257.47
Total	9071.03	5544.82	14615.85
2009			
Letters Credits	1773.91	368.87	2142.79
Letters of guarantee	9174.07	4138.11	13312.18
Total	9174.07	4138.11	13312.18

Table 9: Liquidity risk (TBI reports)

Years	2008	2009	2010
Cash at banks / total assets	0‹68	0,80	0,78
Cash assets and government securities / total assets	0‹80	0‹81	0‹85
Monetary assets / total deposits	0‹81	0‹90	0‹88

5.3. Capital risk
The main objective of capital management is to ensure that the bank meets the requirements of the Central Bank, and it maintains a strong credit rating and a good proportion of the capital, the following tables show these risks:

Table 10: Installation of capital (TBI reports)

Years	2009	2010
Paid Capital	427.35	427.35
General Reserves	3.50	3.50
Retained earnings	720.62	1081.27
Total	1151.47	1512.12
The total risk-weighted assets	6431.69	6255.84

Table 11: Risk capital (TBI reports)

Years	2009	2010
Basel ratio	0.18	0.24

The previous tables (7-11) clearly reflect the risk ratings according to asset classes. Risk has been introduced in each category and each responsibility center, enabling management to clear diagnosis of the risk, and thus take the necessary procedures to hedge. It's mean there is impact range of the accounting responsibility for risk management in the banking system institutions, that proves the second hypotheses of the study.

6. CONSLUSION
The accounting responsibility system is an effective control Tires and evaluate the performance of economic units, it also facilitates the identification of costs and expenses and revenues in a more detailed procedures and achieve coherent accounting system with the administrative structure, and provide a suitable framework for the diagnosis and the fragmentation of the risks faced by the organization with the possibility of linking activities with officials by enabling of clearly defined powers and responsibilities. The efficient banking risk management to ensure the success and profitability of the bank and standing generally intense competition, and that the division of the Bank's activities on the basis of the responsibility centers gives the management of the bank's ability to diagnose and isolate and manage risks in a better way,

where the Trade Bank of Iraq advanced the practice of risk management, by adopting a curriculum responsibility centers and distribution centers in accordance with these risks and measure these risks in several ways and presented in the annual reports.

LITERATURE:

1. Abdul Hamid, Abdul Aziz Schweich, (1999), "Islamic banks and investment management / An Empirical Study," unpublished doctoral dissertation of Baghdad, Al-Mustansiriya University.
2. Juma, Ahmed Helmy (2011) "standard cost accounting", 1st edition, Dar Al Safa for Publishing and Distribution, Amman, Jordan.
3. Hammad, Tareq Abdel Aal (2001) "Evaluation of the performance of the commercial banks, the analysis of risk and return," University House in Alexandria Part III.
4. Hashim, Ahmed Mohamed Bassiouni (1988), "Managerial Accounting" National Library for printing and publishing, the University of Mosul, Iraq.
5. Hussein Ahmed Hussein Ali (2000), "Advanced Management Accounting", 1st edition, Dar University, Alexandria.
6. Nassif, Jassem et al (2013) "Management Accounting", 2nd edition.
7. Tariq Khan, Habib Ahmed, (2003) "risk analysis management issues in the Islamic financial industry," the Islamic Development Bank / Islamic Institute for Research and Training.

THE RELATIONSHIP BETWEEN DIVERSIFICATION STRATEGY AND FIRM PERFORMANCE IN DEVELOPED AND EMERGING ECONOMY CONTEXTS: EVIDENCE FROM TURKEY, ITALY AND NETHERLANDS

Onur Akpinar
Kocaeli University, School of Tourism and Hotel Management, Kocaeli-Turkey
onur.akpinar@yahoo.com, onur.akpinar@kocaeli.edu.tr

Ihsan Yigit
Marmara University, Business Faculty, İstanbul-Turkey
ihsanyigit@marmara.edu.tr

ABSTRACT
The aim of this study is to determine whether there is a difference between types of diversification and performance comparing Turkey, Italy and Netherlands. There are studies with the conclusion that the indicators of the relationship between diversification strategies and firm performance of developed countries differ from the indicators of developing countries. The data of 166 firms in Netherlands, 265 firms in Italy and 128 firms in Turkey were analyzed. The data of 2007-2011 was used in the research. Return on Assets (ROA) and Return on Sales (ROS) for financial performance and Entropy Index for diversification were used. According to the results, there is no correlation between total entropy and a performance criterion ROA and ROS in Italy and Netherlands. On the other hand, in Turkey, it is understood that there is a low-level positive correlation between total entropy and firm performance.
Keywords: Diversification Strategy, Entropy Index, Organizational and Financial Performance.

1. INTRODUCTION
Diversification strategy can be defined as "Expanding or entering in new markets which are different from the firm's existing product lines or markets" (Jhonson and Scholes, 2002; Rumelt, 1982a). Diversification is subdivided into two groups. *Related Diversification* is market expansion into new areas within the sector that comprises. *Unrelated diversification* refers to the strategy where a business enters in a new market having no relation with the existing one (Jhonson and Scholes, 1999).
In the emerged countries, a total of 82 prior researches were subjected to content analysis in a research carried out in 2000 (Palich, Cardinal and Miller, 2000). It is argued in the earlier literature that the relationship between diversification strategy and organizational performance is an inverted U-shaped curve. As a result, while performance and diversification will increase at the same time until the degree of diversification increases up to an optimum level, a decrease in the performance level will began. This relationship is positively influenced by the market sharing, joint and more efficient use of available resources and capacities, use of a similar product and process technology, production facilities, management capabilities, business programs and such factors (Nayyar, 1992; Palich, Cardinal and Miller 2000; Markides, 1994, 1995).
The fact of diversification strategy and organizational performance has been studied by Chang (2007), Khanna and Palepu (1997, 2000a, 2000b, 2005), Lins and Servaes (2002), Shyu and Chen (2009), and many other researchers. As a result of the recent strategy research in emerging country environments (Chang and Hong, 2002; Hoskisson, Eden, Lau and Wright, 2000; Khanna and Palepu, 1997; Wan and Hoskisson, 2003) how country differences have an effect on the antecedents and results of firm diversification began to be questioned (Chakrabarti, Singh

and Mahmood, 2007). Khanna and Palepu argues that different from the developed countries, the enterprises adopted diversification strategies can get benefit from corporate environment factors like gaps in the developing country markets, business government relations, production markets and labour markets (Khanna and Palepu, 1997, 2000a, 2000b, 2005).

This study aims to compare the results of analysis made using Entropy Index measures of the relationship between diversification strategy and firm performance in Turkey, Italy and Netherlands. Thus, the first part includes a literature review about this relationship. Finally, the 2007-2011 data of the firms in Turkey, Italy and Netherlands were used to test the hypotheses.

2. LITERATURE
Resources, Skills of a Firm as an Internal Capital Market in Emerged Countries

The resource-based view (RBV) of the firm and the concept of core competencies that is less formal and more management-oriented derivative has become the most important research subject in strategic management (Zajac, Kraatz and Bresser, 2000). Contrary to the '(industry) structure-conduct-performance paradigm' of industrial organization economics (Porter, 1991), the competitive advantage of firms are explained mainly by their internal capabilities and resources, i.e. factors that exist essentially in heterogeneous firms (Duschek, 2004).

There are lots of arguments about how and why diversification can provide higher profits. Mostly they are connected to the firm's RBV (Schilling and Steensma, 2002). Specifically, a firm is considered to have a stack of resources, which can become unproportional in relation to the present level of production (Argyres, 1996). In other words, some resources are usually available more than needed (Hislop, 1997). Penrose expresses that a business has an internal encouragement to diversify to take advantage of the excess resource when met with an amount of a particular resource that is more than expected, such as marketing (Li and Greenwood, 2004).

As resources have a naturally medium level position in the chain of causality, the relation of resources with activities is even more important. Overtime activities and acquisition from outside or both in a way can make resources arisen. Previous managerial choices are shown by both. Internal skills and routines increasing over a period of time as well as external assets are brought about by performing an activity or a number of interdependent activities in course of time. For instance, reputation of a business is a function of its marketing background and customer service activities meanwhile. Internal and external assets lose their value, yet, except if they are livened up by continuing activities. The degree of losing value looks to be very different across different types of assets, and can be quick. Then, businesses increase the number of resources as a result of differing strategies and configuration of activities. Resources and activities can be identified as duals of each other (Porter, 1991).

Underlying the physical base of relatedness is a concept of firms or industries as collections of material resources and physical processes. Raw materials, physical processes, plant and equipment, manuals and blueprints, and computer hardware and software, among others are the parts of these collections (Farjoun, 1998; Liu and Liu, 2011). Advantageous physical resources can be defined as the resources like the production area and technical equipment which are for common use in diversified businesses. Industries need to be related or similar to each other to use these resources commonly (Chatterjee and Wernerfelt, 1991). In diversification the effect of physical resources based performance is seen in two ways. First, it can be essential to identify the possible relationship between strategic business units and make the usefulness of the resource better and grater to be used by all the strategic units. Second, especially throughout the production process, the present products complementing each other can be shared. Thus, cost savings for strategic business units can be supplied by using physical resources collectively (Farjoun, 1998).

According to RBV, one of the basic advantages of diversification strategy is organizational slack which is explained as the organizational sources existing in businesses but not used and probably beneficial if used. There can be kinds of organizational slack like financial slack. The portfolio manager of a diversified business can manage the financial resource which is needed by one of the strategic business units and not used by the other units evenly. Otherwise, organizations can't make this resource useful (Harrison and John, 1994).

Businesses or industries are considered as sets of interrelated bodies of human knowledge which join during providing goods and services by the human skill base concept. The differences between physical and skill resources and activities have clear and exact effects on firm diversification. Human skills aren't identified easily. Individuals cannot show their knowledge clearly, and the new domains to which their knowledge can be applied as desired are uncertain. Moreover, learning ability, improving services, transference of knowledge and combining resources in more efficient ways are the features distinguishing individuals from physical resources. Unlikely, physical resources can be observed and identified more easily than skills (Farjoun, 1998). This can be the reason of focusing the search for diversification outlets firstly on applications for physical artifacts. As physical resources are more product-specific than other resources in general, the range of industries to which they can be applied is more limited (Chatterjee and Wernerfelt, 1991).

This theory predicts that managers can behave selfish when they are not watched closely. In this case, the board of directors or shareholders will want to inspect the managers for their own interests, but, the managers will not accept this control with the delegation of power. The top executives and shareholders will have difficulties in controlling these units because of the increase in number of business units owing to diversification strategy. These are a brief summary of the reasons for this power attorney based problem: Each managers and shareholders will desire to increase their own interests. Actually, the problem will exist at this point. For example, the business can be presented more useful by the manager responsible to shareholders; short-term benefits can be preferred to the strategic benefits and to obtain his individual interest the manager can behave immorally. The researches state that the ownership structure affect diversification strategy, but performance problems exist in diversified companies with delegation problem (Lane, Cannella and Lubatkin, 1998; Denis, Denis and Sarin 1999).

Corporate environmental factors as an external capital market in emerging countries
The findings of recent studies in developed countries such as US, Germany, Britain and Japan show that firm value isn't increased by diversification strategies after the optimal level. Conversely, costs of diversification strategies begin to rise, become more than benefits after the optimal level. Also, performance level is influenced by the probable benefits and costs caused by diversification and also other criteria in emerging markets (Lins and Servaes, 2002). Dealing with resource allocation can have more efficient results in internal capital markets than external capital markets so diversified businesses with this reasoning have an advantage because they can create large internal capital markets. Internal capital markets should turn into attraction because of inefficiencies in the external capital market as in many emerging economies (Stein, 1997; Williamson, 1981).

The most ideal firm structure will be contingent on the institutional context. Strong and well developed institutions with efficient product, labour and capital markets are seen in most developed economies. Therefore, the market structure would be a more efficient mechanism for transactions. From this perspective, higher costs connected with diversified firm structure exist and therefore conglomerates are thought to be insufficient performers in strong and mature market. Underdeveloped institutions and weak capital, labour and product markets are the main qualities of emerging markets. According to transaction costs theory diversified group structure is ideal for emerging economies. Interestingly there are comprehensive researches about the

diversification literature mainly attributing the value gain/loss arguments to transaction costs rationale and the institutional gaps argument in the finance and strategic literature in both emerging and developed market context (Williamson, 1981).

India is classified as one of the most important emerging markets. Imperfection and underdevelopment of the capital market structure and the labour, capital and product markets are assumed in emerging markets. According to transaction cost theory, internal capital markets would be an effective choice when such conditions occur. Hence, business will have motives for diversification. Also, diversified firms may perform better than focused firms in imperfect markets. Therefore, the higher performance of diversified business groups is regarded as likely in Indian business environment. Due to the predicted positive effects of diversifying as a strategy, it follows that the market would value firms having a dominant diversified structure more. In India the group structure executes diversification strategy typically though a number of focused business entities also emulate the group structure (Khanna and Palepu, 1997). Industrial groups are often seen in emerging markets. Therefore, firm value can be affected by group affiliation positively (Khanna and Palepu 1998, 2000; Lins and Servaes, 2002).

The potential agency costs associated with diversification gets increased by the severe market imperfections in developing economies. Management and large shareholders can easily derive benefit from the firm for their own goals through higher asymmetric information. Concentrated ownership, particularly by management group, can both provide advantages and cause harm to diversified firms. Under the convergence-of-interest hypothesis, diversifying is the behavior of firms in imperfect market. Heterogeneity in firm resources, environmental opportunities, and managerial motivations are the other reasons for diversifying (Hoskisson and Hitt, 1990).

3. METHODOLOGY
Aim and universe of the study
The aim of this research is to determine whether there is a significant difference between types of diversification and performance values comparing Turkey, Italy and Netherlands. The research aimed to identify the effect of institutional diversification on organizational performance was carried out on the firms in Turkey, Italy and Netherlands, so the data of the firms operating in Turkey were obtained from www.imkb.gov.tr and www.kap.gov.tr and the data of firms operating in Netherlands and Italy were obtained from Bloomberg data base. The data of 166 firms in Netherlands, 265 firms in Italy and 128 firms in Turkey were analyzed. The data of 2007-2011 were used in the research.

Variables and measurement methods of the research
The independent variable of the research is measure of diversification and dependent variable is organizational performance.

Diversification measure
Entropy Index: To measure diversification, Entropy approach as a continuous count method is used. Managerially meaningful elements of total diversification (unrelated and related diversification are separated by this measure (Jacquemin and Berry, 1979).

The entropy measure of total diversification can be shown as follows:

$$DT = \sum_{i=1}^{N} P_i \ \text{In} \ (1/P_i) \qquad (1)$$

Where: P_i= Proportion of firm activity (sales) in SIC code "i", for a corporation with "N" different 4-digit SIC businesses.

Related Entropy: Interestingly entropy measure recognizes a third dimension of diversity which means the degree of relatedness among the different segments in which a firm operates. In order to understand this, an industry group can be defined as a set of related segments. It is probable that the segments across groups are less related to each other than the segments with

in an industry group. Let the N industry segments of the firm aggregate into M industry groups, (N≥M).

DR_j can be defined as the related diversification emerging out of operating in many segments within an industry group. Based on the definition of the entropy measure, DR_j can be formulated as:

$$DRj = \sum_{i\&j}^{M} P_i^j \ln (1 / P_i^j) \qquad (2)$$

Where P_i^j stands for the share of the segment i for group and j in the total sales of the group. As our firm operates in many industry groups, its total related diversification DR is a function of $DR_{j,}$ J =1…, M. We can design it as:

$$DR = \sum_j^M DRj\ P^j \qquad (3)$$

Where P^j represents the share of the Jth group sales in the total sales of the firm. Be careful that DR refers to the weighted average of the related diversification within all the M groups. Each group gets a weighted average equal to its share, a measure of its importance in the total operations of the firm.

Unrelated Entropy: The related component of the entropy index can be obtained from dividing total entropy into its related and unrelated parts (Robins and Wiersema, 2003). Unrelated entropy (DU) is calculated similarly using 2-digit SIC data:

$$DU = \sum_{j=1}^{M} P^j \ln (1 / P^j) \qquad (4)$$

$$DT = DR + DU \qquad (5)$$

Where: Pj= Proportion of business activity (sales) in SIC code "j", for a corporation with "M" different 2-digit SIC businesses.

In this study, the SIC classification codes are used to define the industry segments and groups. SIC industries at the two-digit level are treated as the industry groups. SIC industries at the four-digit level are treated as the industry segments.

Organizational Performance: Analysis to measure organizational performance, financial measures utilized and reasons for using these measures are summarized below.

Researches in which Performance is measured by ROA (Return on Assets): ROA is accepted as an important indicator to measure the effectiveness of management by the researchers that measure organizational and financial performance by ROA only. In addition, external shareholders and firm managers who need the performance of the business organization express that ROA is a sufficient criterion to evaluate the performance of organization (Tihanyi, 2003; Dubofsky, 1987; Kim and others, 2004; Ravichandran, 2009; Hill and others, 1992). On the other hand, according to Rumelt, Christensen and Montgomery ROA is a standardized measure of performance (Dubofsky, 1987).

Researches in which Performance is measured by ROS (Return on Sales): The reason that researchers use the ROS only or with other financial measures for organizational performance is that the ROS is calculated after deducting taxes and other expenses. The ROS is accepted as an important factor in measuring the efficiency of operational activities (Palepu, 1985; Markides and Williamson, 1994; Markides, 1995; Markides, 1996).

The hypotheses of the study

Turkey as an emerging country and Italy and Netherlands as developed countries were studied in this research. As stated in literature, emerged countries diversify focusing on resources and skills and these factors increase performance. However, environmental opportunities are more dominant and they increase performance because of the reasons such as imperfect competition

conditions and government-employer relations in emerging countries. In general terms, internal factors in developed countries are dominant and the performance of related diversification is expected to be high. On the other hand, external factors increase performance in emerging countries and the performance of unrelated diversification is expected to be high. According to this information, the hypotheses of the study are as below:

H$_1$: While a positive relationship exists between performance and related entropy index based diversification in Italy and Netherlands, there is not such a relationship in Turkey.

H$_2$: While a positive relationship exists between performance and unrelated entropy index based diversification in Turkey, there is not such a relationship in Italy and Netherlands.

H$_3$: While a positive relationship exists between performance and total entropy index based diversification in Turkey, there is not such a relationship in Italy and Netherlands.

4. RESULTS

Diversification measure based analysis is used in the research to see the performance-diversification relation of the firms in Turkey, Italy and Netherlands. In order to decide on which statistical test will be used in analyzing, normal distribution analysis (one sample KS; and histograms) was applied. As the results were normal, parametric analysis was chosen.

Related entropy degree, performance criteria

In order to understand the relationship between organizational performance and related entropy, correlation analysis was applied. Table 1 demonstrates that there is no correlation between related entropy and a performance criterion ROA and ROS in Italy, Turkey and Netherlands. Accordingly, there is not a relationship between related diversification and an organizational performance criterion ROA and ROS.

Table 1. Related Entropy Index, ROA and ROS Correlation (Pearson) Analysis

Related Entropy Index / Performance		**TURKEY**			**ITALY**			**NETHERLANDS**		
		Related Entropy	ROA	ROS	Related Entropy	ROA	ROS	Related Entropy	ROA	ROS
Related Entropy	Pearson	1	-.001	-.125	1	-.072	.107	1	.014	.024
	Sig(2-tailed)	.	.996	.481	.	.581	.411	.	.930	.876
N		34	34	34	61	61	61	44	44	44

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Unrelated entropy degree, performance criteria

Table 2 demonstrates that there is no correlation between unrelated entropy and a performance criterion ROA and ROS in Italy and Netherlands. Also, while there is not a correlation between ROA and total unrelated entropy, it is understood that there is a low-level positive correlation (p=0, 05) between unrelated entropy and ROS in Turkey.

Table 2. Unrelated Entropy Index, ROA and ROS Correlation (Pearson) Analysis

Unrelated Entropy Index / Performance		**TURKEY**			**ITALY**			**NETHERLANDS**		
		Unrelated Entropy	ROA	ROS	Unrelated Entropy	ROA	ROS	Unrelated Entropy	ROA	ROS
U. Entropy	P. C.	1	.306	.368(*)	1	.036	-.126	1	-.045	-.033
	Sig	.	.078	.032	.	.784	.334	.	.770	.833
N		34	34	34	61	61	61	44	44	44

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

After identifying correlation relationship, regression analysis will be applied to identify the effect of unrelated diversification degree on performance in Turkey. Table 3 demonstrates the linear regression analysis results intended for understanding how ROS, a performance criterion, is explained by unrelated diversification strategy.

Table 3. Diversification Degree ROS Regression Analysis Results in Turkey

Model	R	R Square	Adjusted R Square	F
	.368(a)	.135	.108	5.002
	B	**Beta**	**T**	**Sig**
(Constant)	0.068		2.325	.027
Unrelated Entropy	.134	.368	2.236	.032

Dependent Variable: ROS - Independent Variable: Unrelated Entropy

So the research model between ROS, the dependent variable and unrelated diversification , the independent variable was designed as: It is understood that ROS = 0,068 + 0,134* Unrelated Diversification. According to the research model, % 13.5 of the performance value is explained by unrelated diversification.

Total entropy degree, performance criteria

Table 4 demonstrates that there is no correlation between total entropy and a performance criterion ROA and ROS in Italy and Netherlands. On the other hand, in Turkey, it is understood that there is a low-level positive correlation (p=0.05) between total entropy and ROS, ROA.

Table 4. Total Entropy Index, ROA and ROS Correlation (Pearson) Analysis

Total Entropy Index / Performance		**TURKEY**			**ITALY**			**NETHERLANDS**		
		Total Entropy	ROA	ROS	Total Entropy	ROA	ROS	Total Entropy	ROA	ROS
Total Entropy	Pearson Sig(2-tailed)	1 .	.384(*) .025	.374(*) .029	1 .	-.010 .939	-.051 .695	1 .	-.033 .833	-.019 .905
N		34	34	34	61	61	61	44	44	44

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

After identifying correlation relationship, regression analysis will be applied to identify the effect of total diversification degree on performance in Turkey. Table 5 demonstrates the linear regression analysis results intended for understanding how ROS, a performance criterion, is explained by total diversification strategy.

Table 5. Diversification Degree ROS Regression Analysis Results in Turkey

Model	R	R Square	Adjusted R Square	F
	.374(a)	.140	.113	5.216
	B	**Beta**	**T**	**Sig**
(Constant)	0.001		0.031	.976
Unrelated Entropy	.171	.374	2.284	.029

Dependent Variable: ROS   Independent Variable: Total Entropy

So the research model between ROS, the dependent variable and total diversification, the independent variable was designed as: It is understood that ROS = 0.171 * total diversification. According to the research model, 14% of the performance value is explained by total diversification. Table 6 demonstrates the linear regression analysis results intended for understanding how ROA, a performance criterion, is explained by total diversification strategy.

Table 6. Diversification Degree ROA Regression Analysis Results in Turkey

Model	R	R Square	Adjusted R Square	F
	.384(a)	.148	.121	5.542
	B	**Beta**	**T**	**Sig**
(Constant)	0.005		0.341	.736
Unrelated Entropy	.051	.022	2.354	.025

Dependent Variable: ROA   Independent Variable: Total Entropy

So the research model between ROA, the dependent variable and unrelated diversification, the independent variable was designed as: It is understood that ROA= 0.051* total diversification. According to the research model, % 14.8 of the performance value is explained by total diversification.

5. CONCLUSION

When the results were evaluated in terms of Hypothesis 1, there was not a correlation between organizational performance and related diversification in Turkey, Italy and Netherlands for related entropy, one of the organizational performance measures. This is an expected situation for Turkey but the hypotheses were rejected for Italy and Netherlands. The last worldwide economic crisis may have affected the result because the last economic crisis affected all developed countries especially Italy, Greece and Spain negatively.

When the results were evaluated in terms of Hypothesis 2, it was seen that unrelated diversification affect performance positively in Turkey. There was not any significant relationship for Italy and Netherlands so the hypothesis was rejected. When the results were evaluated in terms of Hypothesis 3, it is understood that total diversification affects both performance indicators positively in Turkey. The findings about hypothesis 2 and hypothesis 3 support the literature.

As emphasized by the researches mentioned above concerning the developing countries, the reason for such insignificance appears to stem from conditions that are thought to be differentiated in Turkey. The relationship between diversification and performance is thought to be affected by factors such as some of the privatization policies in Turkey, working conditions, crises conditions that coincide with the period of research, absence of perfect competition conditions, markets in Turkey, some sectors in developing countries being at the end of product life cycle curve while being at point of entry in Turkey.

Within the framework of the results emerging from this study, the following recommendations are proposed to researchers and executives:

- Also, some variables such as crisis conditions, agency problems, firm growth, national income and trend rate of gross national product growth can be considered in another study.
- The same studies can be carried out using only Rumelt's diversification measure or both Rumelt's diversification measure and Entropy Index.
- In order to separate related and unrelated diversification 2-digit SIC was used in this study. Another study where 3-digit is used for this separation can be carried out.
- The same study can be carried out including more countries.

LITERATURE:

1. Argyres, N. (1996). *Capabilities, Technological Diversification and Divisionalization*, Strategic Management Journal, 17:395-10.
2. Chakrabartı, A., Singh, K. and Mahmood I. (2007). *Diversification and Performance: Evidence from East Asian Firms.* Strategic Management Journal. 28:101-20.

3. Chang, J. (2007). *International Expansion Path, Speed, Product Diversification and Performance among Emerging Market MNEs: Evidence from Asia-Pacific Multinational Companies.* Asian Business & Management. 6:331-53.

4. Chatterjee, S., and Wernerfelt, B. (1991). *The Link between Resources and Type of Diversification: Theory And Evidence*. Strategic Management Journal. 12-1:33-48.

5. Christensen, H. K. and Montgomery, C. (1981). *Corporate Economic Performance: Diversification Strategy versus Market Structure*. Strategic Management Journal. 2:327-343.

6. Denis, D.J., Denis, D.K. and Sarin, A. (1999), *Agency Theory and the Influence Of Equity Ownership Structure On Corporate Diversification Strategies*. Strategic Management Journal. 20:1071-76.

7. Duschek, S. (2004). *Inter-Firm Resources and Sustained Competitive Advantage*, Management Revue. 15-1:53-73.

8. Farjoun, M. (1998). *The Independent and Joint Effects of the Skill and Physical Bases of Relatedness In Diversification*, Strategic Management Journal. 19:611-30.

9. Harrison, J. S. and St. John, C. H. (1994). Strategic Management of Organization and Stakeholders Theory and Cases, New York: West Publishing Company.

10. Hill, C. W.L., Hitt, M. A. and Hoskisson, R. (1992). *Cooperative versus Competitive Structures In Related and Unrelated Diversified Firms*. Organization Science. 3-4:501-21.

11. Hislop, D., (1997). *Capabilities, Strategy and Environment: The Adaptation of the UK Military Aircraft Industry to the Post-Cold War Environment*, Technology Analysis & Strategic Management. 9-1:3-16.

12. Hoskisson, R. E., Hitt, M. A. (1990). *Antecedents and Performance Outcomes Of Diversification: A Review and Critique of Theoretical Perspectives*", Journal of Management. 16-2:461-09.

13. Hoskisson, R. E., Eden, L., Lau, C. M. and Wright, M. (2000). *Strategy in Emerging Economies*" Academy of Management Journal. 43: 249-67.

14. Jacquemin, A. P. and Berry, C. H. (1979). *Entropy Measure of Diversification and Corporate Growth*. Journal of Industrial Economic. 27-4: 359–69.

15. Johnson, G. and Scholes, K. (2002). Exploring Corporate Strategy Text and Cases. Edinburg: Pearson Education Press.

16. Khanna, T. and Palepu, K. (1997). *Why Focused Strategies May Be Wrong For Emerging Market*. Harvard Business Review, July-August: 41-51.

17. Khanna, T. and Palepu, K. (2000). *Is Group Affiliation Profitable In Emerging Markets? An Analysis of Diversified Indian Business Group*, The Journal of Finance. 55-.2: 867-91.

18. Khanna, T. and Palepu, K. (2000). *The Future of Business Groups in Emerging Markets: Long-Run Evidence from Chile*. Academy of Management Journal. 43-3: 268-85.

19. Khanna, T. and Palepu, K. (2005). *Strategies That Fit Emerging Markets*. Harvard Business Review. June:63-76.

20. Kim, H., R. E. Hoskisson, and Wan. W. P. (2004). *Power Dependence, Diversification Strategy, and Performance in Keiretsu Member Firms*. Strategic Management Journal. 25-7:613-36.

21. Lane, P.J., Cannella A. A. and Lubatkin, M. H. (1998). *Agency Problems As Antecedents To Unrelated Mergers And Diversification: Amihud And Lev Reconsidered*. Strategic Management Journal. 19:555-78.

22. Lins K. V. and Servaes, H. (2002). *Is Corporate Diversification Beneficial In Emerging Markets?* Financial Management. 31-2:5-31.

23. Li, S. X. and Greenwood, R. (2004). *The Effect of Within-Industry Diversification on Firm Performance: Synergy Creation, Multi-Market Contact and Market Structuration*. Strategic Management Journal. 25:1131-53.

24. Liu, H. and Liu, F. (2009). *The Process of Competence Leveraging in a Related Diversification: A Case of Technology Management at a Composite-Material Company*. Technology Analysis & Strategic Management. 23-2:193-11.
25. Markides, C. C. (1992). *Consequence of Corporate Refocusing: Ex Ante Evidence*. Academy of Management Journal. 35-.2:398-12.
26. Markides, C. C. and Williamson, P. J. (1994). *Related Diversification, Core Competences and Corporate Performance*. Strategic Management Journal. 15:149-65.
27. Markides, C. C., (1995). *Diversification, Refocusing and Economic Performance*. Strategic Management Journal. 16-4:76-89.
28. Markides, C. C., (1995). *Diversification, Restructuring and Economic Performance*. Strategic Management Journal. 16-2:101-18.
29. Markides, C. C. and Williamson, P. J. (1994). *Related Diversification, Core Competences and Corporate Performance*. Strategic Management Journal. 15:149-65.
30. Nayyar, P. R. (1992). *On The Measurement of Corporate Diversification Strategy: Evidence from Large U.S. Service Firms*. Strategic Management Journal. 13-3:219-35.
31. Palepu, Krishna, (1985). *Diversification Strategy, Profit Performance and the Entropy Measure*. Strategic Management Journal. 6:239-255.
32. Palich, L. E., Cardinal L. B. and Miller, C. C. (2000). *Curvilinearity in the Diversification Performance Linkage: An Examination of Over Three Decades Of Research*, Strategic Management Journal. 21: 155-174.
33. Porter, M. E. (1991). *Towards A Dynamic Theory of Strategy*. Strategic Management Journal. 12: 95-117.
34. Ravichandran, T., Shu Han, Y. L. and Hasan, I. (2009). *Diversification and Firm Performance: Exploring the Moderating Effects of Information Technology Spending*. Journal of Management Information Systems. 25-4, 205-240.
35. Robins, J. A. and Wiersema, M. F. (2003). *The Measurement of Corporate Portfolio Strategy: Analysis of the Content Validity of Related Diversification Indexes*. Strategic Management Journal. 24-1:39–59.
36. Rumelt, R. P. (1982). *Diversity and Profitability*. Strategic Management Journal. 3-4:24-36.
37. Rumelt, R. P. (1982), *Diversification, Strategy and Profitability*, Strategic Management Journal. 3 359-69.
38. Schilling, M. A., and Steensma, H. K. (2002). *Disentangling the Theories of Firm Boundaries: A Path Model and Empirical Test*. Organization Science. 13, No.4:387-01.
39. Shyu, J. and Chen, Y. (2009). *Diversification, Performance, and the Corporate Life Cycle*. Emerging Markets Finance & Trade. 45-6:57–68.
40. Stein, J.C. (1997). *Internal Capital Markets and the Competition for Corporate Resources*. Journal of Finance. 52-1:111-33.
41. Tihanyi, L., Johnson, R.A. Hoskisson R. E. and Hitt, M.A. (2003). *Institutional Ownership Differences and International Diversification: The Effects of Boards of Directors and Technological Opportunity*", Academy of Management Journal. 46-2:195-11.
42. Wan, W. P. and Hoskisson, R. E. (2003). *Home Country Environments, Corporate Diversification Strategies, and Firm Performance*. Academy of Management Journal 46-1:27-45.
43. Williamson, O.E. (1981). *The Economics Of Organization: The Transaction Cost Approach*", American Journal of Sociology. 87:548-77
44. Zajac, E. J. Kraatz, M.S., Rudi K. and Bresser, F. (2000). *Modeling the Dynamics Of Strategic Fit: A Normative Approach To Strategic Change*. Strategic Management Journal. 21-4:429–53.

593

Entrepreneurship Caught Between Creativity and Bureaucracy

OVERVIEW OF THE OBSTACLES AND FACILITATORS OF LEARNING AND ACQUIRING KNOWLEDGE IN STRATEGIC ALLIANCES – AN EMPIRICAL STUDY

Maja Klindzic
University of Zagreb, Faculty of Economics and Business, Croatia
mklindzic@net.efzg.hr

Sanda Rasic Jelavic
University of Zagreb, Faculty of Economics and Business, Croatia
srasic@efzg.hr

Ivana Nacinovic Braje
University of Zagreb, Faculty of Economics and Business, Croatia
ivana.nacinovic@efzg.hr

ABSTRACT
In this paper we address the issue of knowledge transfer between organizations in partnerships as well as the role of the knowledge exchange in building successful cooperation. Given its many positive effects on the business performance, such as creativity, innovativeness and flexibility needed in modern business environment, it was of the utmost importance to investigate different factors that either contribute or constrain learning in alliances. After the theoretical background on the aforementioned topic was given, an empirical research and its main conclusions were described in the paper. A study of the alliances in Croatian context revealed that organizational characteristics exhibit the most pronounced influence on the knowledge transfer success which was especially highlighted in domestic alliances. The level of integration, the primary area of cooperation and the previous experience in forming alliances between partners did not change the extent to which different factors influenced knowledge transfer.
Keywords: Contextual variables, Knowledge transfer, Strategic alliances

1. INTRODUCTION
For the last few decades a number of various types of collaboration between independent firms have been growing steadily (Harbison & Pekar, 1998, Anand & Khanna, 2000), and many of these collaborations have been developed under the umbrella of strategic alliances. In highly competitive global market, especially with the recession over last decade, strategic alliance has become an important way in achieving sustainable competitive advantage and strategic success (Parkhe, 1991). Strategic alliance can be analyzed as an organizational form in which independent organizations share the benefits of partnership in key strategic areas such as product design, production, marketing, distribution, technology (Arend & Amid 2005, Gulati 1998) and thus share the risk and costs of ongoing collaboration. Alternatively, strategic alliance is based on voluntary cooperative agreements of two or more firms to reach a common goal entailing the pooling of their resources and facilities (Parkhe, 1993).

Alliance can take different forms varying from simple agreement with no joint equity ownership such as contractual alliance to more complex agreement that involve joint equity ownership and managerial control. Regardless of the alliance type, it is assumed that alliances have advantages over conventional contracts because firm's capabilities are usually based on tacit knowledge which makes it difficult to draft simple contracts that determinate the scale of licensing such capabilities (Mowery *et al*, 1996). Consequently, cooperation in strategic alliance tends to be

more associated with assistance and resource exchange among partners then is in other linkages like buyer-supplier ties (Scott-Kennel, 2007).

The first alliances in the form of joint ventures primarily aimed to access to natural resources (Mowery *et. al*. 1996), but in the last few decades, there was a shift toward other important motives of alliance formation such as the knowledge transfer (Iyer, 2002). Among different resources, knowledge has been recognized as particularly important in achieving added value and strategic objectives. R&D alliance, for example, provides specialized knowledge that may be difficult if not impossible to bring into the firm (Bercovitz & Feldman, 2007). It is especially important if knowledge transfer creates the base for creativity, innovativeness and flexibility needed in modern business environment. Knowledge-based resources refer to skills, abilities and learning capacity that can be developed through experience, personal relations and strategic partners (DeNisi *et al,* 2000).

Researchers increasingly stress that knowledge transfer does not influence organizational performance by itself but it has important mediating role between antecedents of knowledge transfer and performance outcomes of knowledge transfer (van Vijk *et al*, 2008; Martinkenaite, 2011). In order to make this process more effective it is of crucial importance to be aware of the different obstacles and facilitators of the knowledge exchange process between the partners, which is exactly what we attempt to achieve in this paper. Firstly, we make and an in-depth literature review on competition and cooperation research, as well as their role in organizational theory in general. Secondly, we give a theoretical background on the research undertaken in the area of knowledge transfer between partners in strategic alliances, i.e. different factors that can facilitate or prevent learning and knowledge exchange. We discuss the independent characteristics of strategic alliances undertaken in Croatia, after which we analyze factors that influence knowledge transfer in strategic alliances undertaken in Croatia. Finally, we draw conclusions from the previously analyzed cross-sectional examination and make suggestions for both researchers and strategic alliances managers.

2. THEORETICAL BACKGROUND

Cooperation refers to similar or complementary coordinated actions taken by firms in interdependent relationship to achieve mutual outcomes or singular outcomes with expected reciprocation (Anderson & Narus, 1990). Cooperation is usually associated with flexibility, information exchange, shared problem solving and restraint in the use of power (Heide & Miner, 1992). Additionally, recent empirical research showed positive association between cooperation of alliance partners and the amount of knowledge transferred between partners (Christoffersen, 2013).

Although cooperation is the central feature of strategic alliances, other factors influence the knowledge transfer in alliance partnership as well. The context showed here draws heavily on the well-developed literature of knowledge management, particularly on knowledge transfer. Inter-organizational learning refers to process of learning from the experience and the knowledge of other organizations. It is therefore associated with the knowledge transfer from entities outside organization. Inter-organizational knowledge transfer is defined as movement or flow of knowledge across organizational boundaries (Easterby-Smith *et al,* 2008; van Vijk *et al,* 2008), knowledge sharing (Appleyard, 1996), diffusion of knowledge within the inter-organizational relationship network (Spencer, 2003).

The context for knowledge transfer presented here draws on a recent knowledge transfer framework developed by Easterby-Smith *et al* (2008). The framework shows how cooperation

between alliance partners affects the knowledge flow considered. According to prior research, key factors that determinate the extent to which firms acquire and utilize knowledge of their alliance partners are: (1) knowledge attributes (2) organizational attributes and (3) inter-organizational dynamics (e.g. Kogut & Zander, 1992, Mowery *et al*, 1996, Tsang *et al*, 2004).

The first determinant in presented model is the nature of the knowledge transferred. Among these knowledge attributes researchers put: ambiguity (usually explained in terms of tactitness and knowledge complexity) and institutional embeddedness (e.g. Kogut & Zander, 1992; Nonaka, 1994; McEvil & Chakravarthy, 2002). High ambiguity and institutional specificity can act as barriers as they impede the speed and efficiency of knowledge transfer (Nonaka, 1994). This directly influences the transfer mechanisms that should be used in the knowledge exchange process. More specifically, the higher the degree of *tacitness*,[1] the more personalization strategy and person-based mechanism of knowledge transfer are used, such as training, seminars, visits, committees, meetings; and on the contrary, the lower the degree of tacitness the more codification strategy and information-based knowledge mechanism are used, such as reports, fax, e-mail, intranet, internet, database etc. (Vindsperger & Gorovaia, 2010). Another characteristic of knowledge is *knowledge complexity* and refers to the level of interdependence of subcomponents of a piece of knowledge (Simonin, 1999). High knowledge complexity may act as an additional barrier as it is not easy to learn distinct and multiple types of competencies that are combined and interact. But, if successfully transferred, tacit and complex knowledge may help achieving better performance of the firm. Finally, *institutional embededness* is additional knowledge attribute that refers to embededness of knowledge in institutional environment so organizational routines that are used and work in one country may not be readily transferred to another country (Szulansky *et al,* 2004). These difficulties are created due to differences in the technological infrastructure, economic development, culture, language etc.

Next important determinants of knowledge transfer are the *characteristics of the sender* (source or the donor company) and the *receiver of the knowledge*. These organization attributes include: absorptive capacity, motivation to learn and teach and knowledge capability (Easterby-Smith *et al*, 2008). Sender uses his *capacity* to appreciate the potential value of knowledge that is intended to transfer and teach, while the recipient needs capacity to absorb the knowledge. Absorptive capacity can be defined as firm's ability to internalize, assimilate and replicate new knowledge obtained from external sources (alliance partner) in order to help their innovative activities (Cohen & Levinthal, 1990). Absorptive capacity may be determined by recipient's prior knowledge and experience, the adaptability of recipient, trust and compatibility among partners, diversity and characteristic of external knowledge source, external knowledge complementarity, quantity and quality of training provided by the source firm and social interactions (Lane & Lubatkin, 1998; Zahra & George, 2002). *The motivation of partners to teach and learn* can help partners in process of knowledge transfer (Martinkanaite, 2011). Sometimes the source (donor) may not be willing to share its competences, especially if its competitive advantage is based on these competences and that can inhibit knowledge transfer. Firms can be more protective over their knowledge when partner has similar resources and capabilities (Norman, 2002). In transition economies, the motivation of recipient firm to learn may be more important than the motivation of donor to share knowledge (Steensma *et al*, 2005). *Knowledge capability* is additional factor that facilitate knowledge transfer. Knowledge capability may depend on organizational structure and employed learning mechanisms (Martinkenaite, 2011). Appropriate organizational structure in terms of configuration of position, job duties and lines of authority can facilitate knowledge transfer (De Nisi *et al*, 2000).

---

[1] As for the specific types of alliances, researchers argue that equity-based joint ventures are more effective for transfer of tacit knowledge than other contract-based alliance types (e.g. Mowery *et al*, 1996).

In favor may be modern organizations with organic structure like network organization, technology based organization, learning organization, virtual organization, team organization, hypertext and other types that facilitate learning.

Finally, important determinant of knowledge transfer is also *the dynamics of donor-recipient relationships* that influence how effectively alliance partners cooperate to achieve common interests. Inter-partner dynamics is based on: power relations, trust and risk, commitment, social ties and structure of inter-organizational relationship (Easterby-Smith *et al,* 2008). In the presented framework of knowledge transfer, some researchers (Lyles & Salk, 1996; Mowery *et al,* 1996; Hofstede *et al,* 2010) added an additional determinant that includes factors such as: *cultural compatibility* (level of cultural similarity and congruence between partners), *operational compatibility* (congruence in the partners' managerial skills, operative procedures and technical capabilities) and *flexible policies* (intellectual property, patent policies, and licencing agreements). Cultural and operational incompatibility can cause detrimental effects ranging from information flow to the knowledge transfer as they create difficulties for managers to work together and develop common values (Lyles & Salk, 1996, Mowery *et al,* 1996). In case of cultural incompatibility managers must spend more time to communicate, design compatible work routines and develop common managerial approaches (Olk, 1997, in Lakpetch & Lorsuwarannarat, 2012). This is particularly present in international strategic alliances. For the previously mentioned reasons we decided to explore the following contextual variables that inhibit or encourage knowledge transfer: initial knowledge bases of partners, operational style of conducting businesses, management styles, organizational structures, organizational cultures, national cultures, language, business ethics, conflicts among partners, motivation to learn/ teach and protection of knowledge.

3. EMPIRICAL RESEARCH ON STRATEGIC ALLIANCES ACTIVITY IN CROATIA
In order to analyze the activity and the characteristics of strategic alliances undertaken by Croatian companies; an empirical research was conducted during the year 2013. In this part of the paper, we briefly describe the problems closely related to sampling procedure that we had encountered during the research, as well as the results generated by the primary data.

3.1. Research methods and sampling
The first step in designing our research was to define a sampling procedure. The fundamental problem that soon arose was closely connected to the one of the most prevailing problems in alliance research – the non-existence of the data base that would cover the strategic alliance modalities. The problem has in main part been overcome by making the secondary data analysis. Namely, through the extensive desk research we were able to make a data base that, logically, would not be the most comprehensive or exhaustive one, but it would represent the only data base of that kind in the Republic of Croatia. Following the example of Subramanian & Venkatraman (2001), a desk research and analysis of various information sources, such as business magazines, stock markets announcements or several government agencies` reports, the initial list of 159 strategic alliances was created in round 1. The criteria on which we based our search were threefold: (1) the beginning of strategic alliance design process (any time between 1995 and 2010), (2) the number of strategic alliance participants (bilateral strategic alliance or dyads were exclusive objects of interest), (3) the character of the companies involved (both parties profit-oriented).

The second round of desk research involved a closer examination of previously gathered items. After all 159 potential strategic alliances were double-checked, as many as 57 items were eliminated from the further analysis for some of the following reasons: (1) an alliance was

undertaken in order to make an acquisition, (2) at least one of the companies involved in alliance was a non-profit organization, (3) at least one of the companies involved in alliance was an organization of a municipal character (so the most of these "strategic alliances" were public-private partnerships), (4) at least one of the companies involved in alliance was a higher-education institution (university, a graduate school, or a polytechnic), (5) at least one of the parties involved in alliance was a cluster, a group, or a consortia, (6) although stated that way, the relationship between the parties was not essentially a strategic alliance (e.g., the relationship was in its essence a classical market transaction or an outsourcing arrangement), (7) the strategic alliance was announced but it never performed as such. After eliminating all previously mentioned items, the final list of strategic alliances came down to 102 items.

After the sampling procedure was finished, the questionnaire was sent to all the potential respondents. Given the nature of the topic of interest, a relatively high percentage of response was expected (between 30 and 40%). However, given the number of items in the final database (N=102), a minimum of 30 responses was perceived as a prerequisite for a valid statistical analysis. The questionnaires consisted of several questions about strategic alliance characteristics which will later be discussed, as well as other sections that are not of interest in this paper. The questionnaires were sent by e-mail to top managers of the companies involved in strategic alliances, and where possible, to strategic alliance managers. The questionnaires were sent in May 2013, than a first reminder followed in June, and a second one in September. After the expectations on response rate were met (31.35%), the statistical analysis was conducted with SPSS 18.0. The following figure depicts respondents' characteristics in terms of age and gender.

Table 1: Independent characteristics of respondents

Independent characteristic	Distribution of data
Gender	M – 53%, F – 47%
Age	Less than 36 – 28%, from 36 to 50 – 69%, more than 50 – 3%
Level of education	Secondary education – 3.13%, college degree – 3.13%, bachelor degree – 59.38%, Master of PhD degree – 33.38%
Position in the company	Top management – 43.75%, middle level – 37.50%, low level management – 12.50%, non-managerial position – 6.25%

As it can be seen from the Table 1, men and women participated in this research almost equally (53% and 47% respectively). As for the age structure, approximately one third of respondents were in the 41-45 age groups, while the majority of the respondents (69%) are in the range from 36 to 50 years of age. The next figure shows the level of education as well as respondents' position in company. As for the education level, approximately 60% of respondents had completed tertiary education level, and additional 34.5% of them had masters or even higher degree. We found this particular characteristic to be of the utmost importance since it can be presumed that higher education level would be associated with higher understanding of concepts analyzed in this research. We assumed that the position in company would probably be as equally important. Almost 44% of respondents held top management positions, while 37% additional respondents held middle management positions. In this research we were aiming specifically at top and middle management levels since the area of interest i.e. knowledge about strategic alliance activity, characteristics and design is presumably concentrated at the upper levels of management. In sum, the overall profiles of respondents were found satisfactory, so the analysis of the alliance characteristics followed, as shown and discussed in the next section.

The items in the sample were examined in several aspects: first, the primary area of cooperation was analyzed; secondly, different types of strategic alliances were examined (strategic alliances based on the level of integration as well as strategic alliances based on the origin of the partner); thirdly, analysis of previous experience in forming strategic alliance was given. The next figure shows the primary area of cooperation in the alliance.

Table 2: Independent characteristics of strategic alliances

Independent characteristic	Distribution of data
Primary area of cooperation	Business services – 43.75%, R&D – 6.23%, market development – 15.63%, production – 15.63%, marketing – 3.13%, other – 15.63%
Type of alliance by origin of the partners	Domestic – 53%, cross-border – 47%
Type of alliance by level of integration	Contractual – 56%, equity – 44%
Previous experience in forming alliances	No previous experience – 25%, one alliance previously formed – 31.30%, two or more alliances previously formed – 43.70%

Almost 44% of examined strategic alliances were formed for the purpose of business services development, while additional 15.6 3% were formed for the purpose of market development, the same percentage for the purpose of production, as well as other areas of cooperation (e.g. inter-organizational learning, knowledge transfer etc.). A dominant percentage of strategic alliances undertaken in services might be the reflection of the post-industrial era we are living in. The focus that was once on physical objects and resources in production processes has shifted to more abstract ones. Apart from primary area of cooperation, two more types of alliances were examined. There are 53% of domestic strategic alliances, as opposed to 47% international alliances in the sample. The number of international partnerships intensified during the 1980s and 1990s when the globalization started to shape business decisions more than any other element of the organizational environment. From the standpoint of international company, partnership with a domestic company seems to be especially adequate possibility of entering into new markets when international organizations do not have enough funds for a standalone strategy of conquering the market (Elmuti & Kathawala, 2001). On the other hand, international partnerships are often formed when a company wants to enter a new market, and usually possesses capital funds, but lacks knowledge on local customs, clients and market in general, which a domestic partner can easily provide (Casson & Mol, 2006). The latter holds even more when it comes to markets that have been long out of reach for many Western companies. At the same time, the post-transitional economies could be interested in gaining new knowledge and skills from their international partners – in that way, if properly institutionalized, the knowledge transfer could serve as a primary motivation for Croatian companies to form alliances with international partners. With respect to level of integration, the research revealed that there were 56% of contractual alliances whilst 44% of them involved equity integration. One of our topics of interest was previous experience in forming strategic alliances. We find previous experience to serve as a learning mechanism that can be beneficial for future cooperation. Almost one third of all examined partner companies had at least one partnership formed before the one analyzed in this research. Additional 15.6% of them had accumulated experience from two strategic alliances while 28.1% of them had three or more strategic alliances formed before the one analyzed in our research. A quarter of all examined companies had no experience in forming partnerships with other organizations. The question of accumulated experience is a valuable one, and at the same time, the one that generated research with ambivalent outcomes and guidelines. On one hand, it can be also hypothesized that greater experience or learning by doing would increase the performance of future alliances (Kale & Singh, 2007).

3.2. Research results and discussion

The items in the sample were examined in several aspects: first, we asked the respondents to assess (by using Likert-type scale) the extent to which several contextual variables influenced the knowledge transfer between the partners, which is depicted in Table 1. After that, we attempt to find statistically significant differences in previously mentioned influence with regard to independent characteristics of the alliances.

Table 3: The influence of contextual variables on knowledge transfer between partners

Contextual variable	Mean	Median	Std. Dev.
Differences in knowledge bases	2.66	3.00	1.18
Operational style of conducting businesses	**3.00**	3.00	1.02
Management styles	**3.16**	3.00	1.11
Organizational cultures	**3.09**	3.00	1.09
Organizational structures	2.84	3.00	1.05
National cultures	1.66	1.00	0.79
Business ethics	2.13	2.00	0.79
Language	1.75	1.50	0.98
The knowledge was protected by the partner	2.16	2.00	1.05
Conflicts among partners	2.41	2.00	1.13
Our company had no intention to acquire knowledge from the partner	2.06	2.00	1.01
The partner had no intention to transfer knowledge to our company	2.09	2.00	1.00

As it can be seen from Table 3, variables that are more closely related to characteristics of the donor and the sender of the knowledge, i.e. organizational and managerial characteristics result in the greatest influence on knowledge transfer between partners. According to respondents assessment, operational styles of conducting businesses ($\bar{x} = 3,00$, $\sigma = 1,02$), management styles of both partners ($\bar{x} = 3,16$, $\sigma = 1,11$) as well as organizational cultures of respective companies ($\bar{x} = 3,09$, $\sigma = 1,09$) were found to influence knowledge transfer the most out of observed variables (all other variables were assesses as not having a lot of influence in the process). Interestingly, the research revealed that motivation to teach and learn did not influence the process as much, which can also be interpreted as a scenario in which there was no knowledge hiding and where partners' intentions were straightforward and honest. In a way, inter-partner dynamics seems to be of crucial importance in harvesting results from learning and knowledge exchange in partnerships. Overall, as recent research has shown, *cultural compatibility* and *operational compatibility* do the most pronounced impact on knowledge flows in strategic alliances. Shared values such as trust, commitment, adaptability and communication have been found to be increasingly important (Cullen, 2000; Dolan & Garcia, 2002) to prevent cultural conflicts. Cultural values and norms of the two partners like attitudes towards quality, ability to accept differences, goal horizons, strategic direction, open communication, involvement of senior management and others (Meirovich, 2010) will surely support the success of the cooperation. Differences in the level of centralization, formalization and participation in decision making impede communication and might create problems between partners (Meirovich, 2010). Furthermore, it has been pointed out that the importance of cultural differences varies depending upon the activity around which the cooperation activity was designed (Schultz, 1998:109 after Lajara, Lillo & Sempere, 2003)

Since the data in Table 3 showed some variability (standard deviations greater than 1) we aimed at analyzing potential differences with regard to independent characteristics of the alliances.

Non-parametric tests were performed for all four independent characteristics for which the summary is given in the table below.

Table 4: The influence of contextual variables on knowledge transfer between partners

Independent characteristic	Differences	Test
Primary area of cooperation (1-business services, 2-other)	*No differences found*	Mann-Whitney
Type of alliance by origin of the partners (1-domestic, 2-cross-border)	Organizational culture, organizational structure, national culture, language	Mann-Whitney
Type of alliance by level of integration (1-contractual, 2-equity)	*No differences found*	Mann-Whitney
Previous experience in forming alliances (1-no experience, 2-one alliance, 3-two or more alliances)	*No differences found*	Kruskal-Wallis

There were no statistically significant differences in the extent to which these factor influence knowledge transfers in strategic alliances when it comes to primary area of cooperation, type of alliance by level of integration or previous experience in forming alliances. Statistically significant differences were found organizational culture ($p=0,05$) and organizational structure ($p=0,005$) where managers in domestic strategic alliances reported more influence in the process of knowledge transfer. Similarly, national culture ($p=0,02$) and language ($p=0,004$) were found to statistically significantly influence knowledge transfer in international alliances more than in domestic alliances. National culture has already been recognized as a determinant for the success of the cooperation (Dong & Glaister, 2007), where culture management programs can be implemented to increase the trust between partners and the success of cooperation (Dong & Glaister, 2007).

4. CONCLUSION
Business practice shows constant growth in the collaboration between independent organizations, many of these being in the form of strategic alliance. Although such inter-organizational practices can occur for several reasons, in the last few decades knowledge transfer has been recognized as an important motive of alliance formation.

The focus of our research was to examine several contextual variables that influence the knowledge transfer between partners in strategic alliances. Existing research recognizes knowledge attributes organizational attributes and inter-organizational dynamics as key factors impacting knowledge transfer. Our research results show that knowledge transfer between partners was most influenced by operational styles of conducting businesses, management styles of both partners as well as organizational cultures of respective companies. These findings support and complement previous empirical research that emphasized operational styles of conducting business and corporate culture as important determinants in knowledge exchange.

Additional non-parametric tests were used to assess potential differences in knowledge transfer between partners with regard to independent characteristics of the alliances (primary area of cooperation, type of alliance by origin of the partners, type of alliance by the level of integration or previous experience in forming alliances). We show that the only variable were some statistically significant differences were found is type of alliance by the origin of partners. Based on the statistically significant differences found, we can argue that organizational culture

and organizational structure have stronger influence in the process of knowledge transfer in domestic strategic alliances. Similarly, in international alliances managers assigned higher impact to national culture and language. Based on this finding, we can confirm the importance of corporate culture in any interfirm alliance, to be more precise, national culture in cross-border alliances and organizational culture in domestic alliances.

LITERATURE:
1. Anand, B., Khanna, T. (2000.). Do Firms Learn to Create Value? The Case of Alliances. *Strategic Management Journal*, 21(3): 295-315.
2. Anderson, J. C., Narus, J.A. (1990). A model of distributor firm and manufacturer firm working partnership. *Journal of Marketing*, 54(1): 42-58.
3. Appleyard, M. M. (1996). How does knowledge flow? Interfirm patterns in the semiconductor industry. *Strategic Management Journal*, Vol. 7, Winter special issue: 137-154.
4. Arend, R. J., Amid R. (2005). Selection in strategic alliance activity: effects on firm performance in the computing industry. *European Management Journal*, 23(4): 361-381.
5. Bercovitz, J., Feldman, M. (2007). Fishing upstream: firm innovation strategy and university research alliances. *Research Policy*, Vol. 36: 930-948.
6. Cadden, T., Humphreys, P., McHugh, M. (2010). The influence of organisational culture on strategic supply chain relationship success. *Journal of General Management*, 36(2): 37-64.
7. Casson, M., Mol, M. (2006). Strategic Alliances: A Survey of Issues from an Entrepreneurial Perspective. In Shenkar, O., Reuer, J. (eds.), *Handbook of Strategic Alliances*. Thousand Oaks: SAGE Publications, pp. 17-37.
8. Christoffersen, J. (2013). Cooperation in International Strategic Alliances and Impact on Host Economies: Knowledge Transfer and Diffusion to Local Firms. *European Journal of Development Research,* 25(4): 518-536.
9. Cohen, W., Levinthal, D. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35: 128-152.
10. De Nisi, A. S., Hitt, M., Jackson, S. E. *(*2000). The knowledge-based approach to sustainable competitive advantage. In Lakpetch, P., Lorsuwarannarat, T. (2012). Knowledge transfer effectiveness of university-industry alliance. *International Journal of Organizational Analysis*, 20(2): 128-186.
11. Dong, L., Glaister, K. W. (2007) The Management of Culture in Chinese International Strategic Alliances, *Asian Business & Management*, 6: 377–407.
12. Easterby-Smih, M., Lyles, M. A., Tsang, E. W. K. (2008). Inter-organizational knowledge transfer: current themes and future prospects. *Journal of Management Studies*, 45(4): 677-690.
13. Elmuti, D., Kathawala, Y. (2001.). An overview of strategic alliances. *Management Decision*, 39(3): 205- 217.
14. Gulati, R. (1998). Alliances and networks. *Strategic Management Journal*, 19(4): 293-317.
15. Harbison, J., Pekar, P. (1998.). Institutionalizing Alliance Skills: Secrets of Repeatable Success. McLean: Booz Allen Hamilton
16. Heide, J. B., Miner, A. S. (1992). The shadow of the future: Effects of anticipated interaction and frequency of contract on buy-seller cooperation. *Academy of Management Journal*, 35(2): 265-291.
17. Hofstede, G., Hofstede G. J., Minkov, M. (2010). Cultures and organizations: Software of the mind. In Ksamseh, H. M., Jolly, D. (2014). Knowledge transfer in alliances: the moderating role of the alliance type. *Knowledge Management Research and Practice*, 12: 409-420.

18. Iyer, K. (2002.). Learning in Strategic Alliances: An Evolutionary Perspective. *Academy of Marketing Science Review*, 10: 1-14.

19. Kale, P., Singh, H. (2009.). Managing Strategic Alliances: What do We Know, and Where Do We Go from Here? *Academy of Management Perspectives*, 23(3): 45-63.

20. Kogut, B., Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3(3): 383-397.

21. Lajara, B. M., Lillo, F. G., Sempere, V.S. (2003). Human resources management: A success and failure factor in strategic alliances. *Employee Relations,* 25(1/2): 61-80.

22. Lakpetch, P., Lorsuwarannarat, T. (2012). Knowledge transfer effectiveness of university-industry alliance. *International Journal of Organizational Analysis*, 20(2): 128-186.

23. Lane, P. J., Lubatkin, M. (1998). Relative absorptive capacity and interorganizational learning. *Strategic Management Journal*, 19(5): 461-477.

24. Lyles, M. A., Salk, J. E. (2006). Knowledge acquisition from foreign partners in international joint ventures. *Journal of International Business Studies*, 27: 905-927.

25. Martinkanaite, I. (2011). Antecedents and Consequences of inter-organizational knowledge transfer: Emerging themes and openings for future research. *Baltic Journal of Management*, 6(1): 53-70.

26. McEvily, S. K., Chakravarthy, B. (2002). The persistence of knowledge-based advantage: an empirical test for product performance and technological knowledge. *Strategic Management Journal*, 23: 285-305.

27. Meirovich, G. (2010). The impact of cultural similarities and differences on performance in strategic partnerships. *Journal of Management & Organization*, 16(1): 127-139.

28. Mowery, D. C., Oxley, J. E., Silverman, B. S. (1996). Strategic alliances and interfirm knowledge transfer. *Strategic Management Journal*, Vol. 17, Winter special issue: 77-91.

29. Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1): 14-37.

30. Norman, P. M. (2002). Protecting knowledge in strategic alliance: Resource and rational characteristics. *Journal of High Technology Management Research*, 13(2): 177-202.

31. Parkhe, A. (1991.). Interfirm Diversity, Organizational Learning, and Longevity in Global Strategic Alliances. *Journal of International Business Studies,* 22(4): 579–601.

32. Parkhe, A. (1993). Strategic alliance structuring: A game theoretic and transaction cost examination of interfirm cooperation. *Academy of Management Journal*, 36(4): 794-829.

33. Scott-Kennel, J. (2007). Foreign direct investment and local linkages: An empirical investigation. *Management International Review*, 47(1): 51-77.

34. Simonin, B. (1999). Ambiguity and the process of knowledge transfer in strategic alliances. *Strategic Management Journal*, Vol. 20: 595-623.

35. Spencer, J. W. (2003). Firms knowledge-sharing strategies in the global innovation system: empirical evidence from the flat panel display industry. *Strategic Management Journal*, Vol. 24: 217-233.

36. Steensma, H. K., Tihanyi, L., lyles, M. A., Dhanaraj, C. (2005). The evolving value of foreign partnerships in transitioning economies. *Academy of Management Journal,* Vol. 48: 213-235.

37. Subramaniam, M., Venkatraman, N. (2001.). Determinants of Transnational New Product Development Capability: Testing the Influence of Transferring and Deploying Tacit Overseas Knowledge. *Strategic Management Journal,* 22(4): 359-378.

38. Szulantsky, G., Capetta, R., Jensen, R. J. (2004). When and how trustworthiness matters: knowledge transfer and the moderating effects of casual ambiguity. *Organization Science*, Vol. 15: 600-613.

39. Tsang, E. W. K., Nguyen, D. T., Erramilli, M. K. (2004.). Knowledge acquisition and performance of international joint ventures in the transition economy of Vietnam. *Journal of Information Marketing*, 12(2): 82-103.

40. van Vijk, R., Jansen, J. J. P., Lyles M. A. (2008). Inter- and intra-organizational knowledge transfer: a meta-analytic review and assessment of its antecedents and consequences. *Journal of Management Studies*, 45(4): 830-853.

41. Vindsperger J., Gorovaia, N. (2010). Knowledge and Trust as Determinants of the Knowledge Transfer Strategy in Networks. *Proceedings of the Fifth International Conference of the School of Economics and Business in Sarajevo (ICES2010)*.

42. Zahra, S.A., George, G. (2002). Absorptive capacity: a review, reconceptualization, and extension. *Academy of Management Review*, Vol. 27: 185-203.

THE RELATIONSHIP BEETWEEN R&D AND EXPORT DECISION OF TURKISH FIRMS

Ciler Sigeze
Çukurova University, FEAS, Department of Econometrics, Adana, Turkey
csigeze@cu.edu.tr

Esra Balli
Çukurova University, FEAS, Department of Economics, Adana, Turkey
esraballi@cu.edu.tr

Mehmet Fatih Tras
Çukurova University, FEAS, Department of Econometrics, Adana, Turkey
mftras@cu.edu.tr

ABSTRACT
The relationship between Research and Development (R&D) decision has been of great interest in the firm level studies. Expanding R&D expenditure within firms is regarded as one of the main strategies to deal with globalization challenge. Theoretical and empirical studies link a positive relationship between R&D ability and export capability of firms. This paper focuses on two types of relationships depicted in literature. In the first place we attempt to examine how the firm's R&D decision and export decision are determined based on the firm's specific characteristics, namely labor productivity, firm size, age, skill, capital intensity, and foreign ownership of the company. Secondly, we consider the interaction between R&D and export decisions for Turkish manufacturing firms, using World Bank Enterprise Survey, conducted in a cross-section study of 2013 through face to face interviews. To test the aforementioned relationships, we utilize Bivariate Probit estimation approach. This method is particularly useful for taking the consideration of two-dimensional nature of the data. Our main findings present that R&D and the firm's export decision are positively correlated in Turkey. Besides government subsidies increase the probability of firm's export decision as expected. Furthermore, both export and R&D decisions differ on the basis of firm characteristics.
Keywords: Research and Development, Export decision, bivariate probit estimation approach Turkey

1 INTRODUCTION

The relationship between Research and Development (R&D) decision has been of great interest in the firm level studies. Expanding R&D expenditure within firms is regarded as one of the main strategies to deal with globalization challenge. Theoretical and empirical studies link a positive relationship between R&D ability and export capability of firms. This paper focuses on two types of relationships depicted in literature. In the first place we attempt to examine how the firm's R&D decision and export decision are determined based on the firm's specific characteristics, namely labor productivity, firm size, age, skill, capital intensity, and foreign ownership of the company. Secondly, we consider the interaction between R&D and export decisions for Turkish manufacturing firms. Besides, export is important to enter in international markets, in the determination of firm's competition level, sustaining growth as well as to obtain a more advanced technology. Therefore, exhibiting the factors determining R&D decision for companies becomes crucial to make well-targeted policies both in government and firm levels. Most empirical studies have agreed that R&D plays an important role in the firm's productivity. Hall and Mairesse (1995) investigated the role of R&D on productivity for French manufacturing firms and reported that a sustained R&D expenditures causes productivity gains.

Crépon et al (1998) confirming Hall and Mairesse (1995) finds a positive correlation between R&D and productivity. Basile (2001) tests the relationship between innovation and export behavior of Italian manufacturing firms using Tobit model. In the study, export behavior is used as a probability for a firm to export and as the propensity to export for the exporting firms. The results indicate that innovation activities measured by R&D expenditure are important and make an explanation of heterogeneity in export behavior of Italian firms. Bernard and Jensen (1999) found that firms with higher productivity are inclined to be exporter and that plant size is positively associated with exporting decision, despite the gains of exporting for the firms are ambiguous in terms of productivity and wage growth. Griffith (2003) also investigated whether R&D expenditures enable firms to utilize from discoveries and concluded that R&D affects both innovation and the ability of adapting newly introduced technologies of the companies in the same sector. Correspondingly, Roper and Love (2002) reported that while UK and German manufacturing establishments are differing in the determinants of export performance, product innovation is found to have profound effect on probability and propensity to export in both countries. Besides, they also agree that innovative and non-innovative establishments display differences in their ability of absorption of spill-over effects. Aw et al (2007) found that firm productivity leads to export decision and there is an evidence of positive, statistically significant and robust relationship between export participation and future productivity of the firms. Girma et al. (2008) examines the two-way relationship between R&D and export activity using a bivariate probit estimation technique for firm level databases for Great Britain and the Republic of Ireland. They found that previous exporting experience increase the innovative capability of Irish firms. Caldera (2010) analyses the relationship between innovation and the export behavior of firms appliying random effects probit model using firm-level survey data for the period 1990–2002 for Spanish firms over the period 1991–2002. R&D intensity is used one of the innovation inputs in this study. The empirical results show that innovation has a positive effect on the firm's export decision. Aw, Roberts, and Xu (2011) analysis a dynamic structural model of a producer's decision to invest in R&D and export for the Taiwanese electronics industry for the period of 2000-2004. The results show that export decisions and invest in R&D or technology are intercorrelated and affect the firms' future profitability. Braymen, Briggs, and Boulware, (2011) test the factors that affect new firms to export within the first four years of operation for the period of 2004-2007 in United States utilizing bivariate probit model. The results show that there is a positive relationship between a new firm's R&D decision and firm's export decision. Yang and Chen (2012) investigated examines the relation between productivity and exports and in addition, the determinants of R&D activity in Indonesian manufacturing firms and found that R&D has a significant impact on both productivity and exports. Esteve-Pérez and Rodríguez (2013) investigate exports and R&D using bivariate probit model for small and medium-sized enterprises in Spanish manufacturing for the period of 1990–2006. The results provide clear interdependence between export and R&D activities. Lööf et al (2015) tested joint effect of exports, innovation and external knowledge on total factor productivity growth for Swedish manufacturing firms and found that persistent innovators and persistent exporters can achieve higher productivity growth through learning by exporting relative to temporary innovators and exporters.

The paper is organized as follows. The next section presents data and variables, the third exhibits empirical strategy, the fourth show the empirical results and the fifth concludes.

2 DATA AND VARIABLES

Data extracted from the World Bank's Turkey-Enterprise Survey conducted in 2013 and 2014 in a cross-section study through face-to-face interviews with the establishments. In this survey total number of samples selected based on industry, establishment size and region stratification is 1344. However, after omitting observations with missing and outlier responses on the

variables involved in the empirical model, we end up with the sample size of 694. The advantage of the data used in this study lies in that it constitutes the most recent sample set available, reflecting the behaviors of firms from different dimensions such as industry, establishment size and regions in Turkey. Table 1 presents descriptive statistics and definitions of the variables.

Table 1. Variable definitions and summary statistics

Variable	Definitions	mean	Std. Dev.
R&D	Dummy R&D: Dummy variable equals 1 if firm has performed export	0.063	0.243
EXPORT	Dummy Export: Dummy variable equals 1 if firm has performed export	0.546	0.498
lnKL	Capital intensity: total sales per employee	4.840	0.836
SIZE	Total employee	119	384
SKILL	Ratio of university graduates to total employees	10.5	14.713
MNC	Firm's Foreign ownership	0.051	0.221
LPR	Labor productivity: as a ratio of total sales to working hours	14436.49	237686.4
GovSupport	If the firm has received any supports from the national, regional or local governments or European Union sources within last three years	0.110	0.314
AGE	Age of the firm	19	13

3 EMPRICAL STRATEGY

In this paper, we investigate the possible two-way relationship between export decision and R&D decision. Following Aw et al. (2005), Girma et al. (2007) and Aristei et al. (2013) we employ bivariate probit estimation approach. Bivariate probit estimates a maximum likelihood two-equation probit model to obtain parameters of the two simultaneous equations.
The empirical model takes the following form:

$$EXPORT_i = \begin{cases} 1 & if \quad EXPORT_i^* > 0 \\ 0 & if \quad EXPORT_i^* < 0 \end{cases} \quad and \quad R\&D_i = \begin{cases} 1 & if \quad R\&D_i^* > 0 \\ 0 & if \quad R\&D_i^* < 0 \end{cases}$$

$$\begin{cases} EXPORT^* = \gamma_0 + \gamma_1 R\&D + \gamma_2 \ln KL + \gamma_3 SKILL + \gamma_4 AGE + \gamma_5 GovSupport + \gamma_6 LPR + \gamma_7 SIZE \\ R\&D^* = \alpha_0 + \alpha_1 EXPORT + \alpha_2 \ln KL + \alpha_3 SKILL + \alpha_4 AGE + \alpha_5 MNC + \alpha_6 GovSupport + \alpha_7 LPR \end{cases}$$

This strategy allows the correlation between the two dependent variables and the error terms with N (0, 1) nature. Here ρ denotes the covariance of the error terms in two simultaneous equations and takes the value of 0 if two decisions in the equations are taken separately. Hence ρ is defined as follows:

$$\begin{pmatrix} \varepsilon_{1i} \\ \varepsilon_{2,} \end{pmatrix} \sim N \begin{bmatrix} \begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 1 & \rho \\ \rho & 1 \end{pmatrix} \end{bmatrix}$$

4 EMPRICAL RESULTS

Table 2 presents bivariate probit regressions results. First we estimate simultaneously the determinants of the R&D decision and export decision. The results show that export decision has a positive and significant effect on R&D decision. Additionally, capital intensity (lnKL) computed as a total sales per employee is positively associated with R&D decision.

Furthermore, we reject the null hypothesis that lnKL has no impact on R&D decision with 99% confidence. Besides, firms' age negatively and significantly associated with R&D decision. This finding implies that younger firms are more inclined to initiate with R&D activities. On the other hand, given the data set and econometric techniques applied there is no sign that government support plays a stimulating role in R&D decision for Turkish firms. However, government support increases export decision of Turkish firms. What is more, firms performing R&D activities are more likely to take part in exporting. In addition, skill measured as a ratio of university graduates to total employees and firm age have significantly positive and negative affects respectively. This finds show that the more experienced firm in terms of year of establishment tend to export decision more relative to younger firms. Lastly, firms employing university graduates are more likely to engage in export decision. This may stem from the fact that for exporting human capital is an important factor in reaching to international markets.

Table 2: Bivariate Probit Regressions Results

	R&D Decision	Export Decision
Constant	-2.875***	-0.260
	(0.409)	(0.329)
R&D		1.618***
		(0.165)
EXPORT	1.664***	
	(0.125)	
lnKL	0.244***	-0.054
	(0.081)	(0.068)
SKILL	0.002	0.005*
	(0.003)	(0.003)
AGE	-0.014**	0.016***
	(0.006)	(0.004)
MNC	-0.004	
	(0.009)	
GovSupport	-0.090	0.436***
	(0.168)	(0.158)
LPR	-0.00001	0.000006
	(0.00001)	(0.00005)
SIZE		0.001***
		(0.0003)
Wald chi2	366.32	
Number of observations	694	

Figures in the parentheses are standard deviations, ***,** and * denote coefficient are significant at 1%,5%, and 10% statistical levels, respectively .

5 CONCLUSION

In this paper we investigate the causal relationship between R&D decision and exporting activity by using data from the World Bank's Turkey-Enterprise Survey conducted in 2013 and 2014 in a cross-section study through face-to-face interviews with the establishments using Bivariate Probit estimation approach. In particular, we focus on the relationship between R&D and export decision.

Given the data set and econometric techniques applied, the empirical results show that R&D and the firm's export decision are positively interrelated in Turkey. Besides government subsidies increase the probability of firm's export decision as expected. In other words, government support encourages firms to participate into export. Accordingly, this finding signals that government support for small firms in particular can be employed as a cope mechanism against the obstacles posing limitations on small firms to take an export decision in Turkey. Our finds are in agreement with that of Esteve-Pérez et al. (2013) arguing that the interrelation between R&D and export should be considered by policy makers.

LITERATURE:

1. Aristei, D., Castellani, D., & Franco, C. (2013). Firms' exporting and importing activities: is there a two-way relationship?. Review of World Economics, 149(1), 55-84.
2. Aw, B. Y., & Hwang, A. R. M. (1995). Productivity and the export market: A firm-level analysis. *Journal of development economics*, *47*(2), 313-332.
3. Aw, B. Y., Roberts, M. J., & Winston, T. (2007). Export market participation, investments in R&D and worker training, and the evolution of firm productivity.The World Economy, 30(1), 83-104.
4. Aw, B. Y., Roberts, M. J., & Xu, D. Y. (2011). R&D investment, exporting, and productivity dynamics.American Economic Review,1312-1344.
5. Basile, R. (2001). Export behaviour of Italian manufacturing firms over the nineties: the role of innovation. Research policy, 30(8), 1185-1201.
6. Bernard, A. B., & Jensen, J. B. (1999). Exceptional exporter performance: cause, effect, or both?. *Journal of international economics*, *47*(1), 1-25.
7. Braymen, C., Briggs, K., & Boulware, J. (2011). R&D and the export decision of new firms. *Southern Economic Journal*, *78*(1), 191-210.
8. Caldera, A. (2010). Innovation and exporting: evidence from Spanish manufacturing firms. Review of world Economics, 146(4), 657-689.
9. Clerides, S. K., Lach, S., & Tybout, J. R. (1998). Is learning by exporting important? Micro-dynamic evidence from Colombia, Mexico, and Morocco.*Quarterly journal of Economics*, 903-947.
10. Crépon, B., Duguet, E., & Mairessec, J. (1998). Research, Innovation And Productivity: An Econometric Analysis At The Firm Level. *Economics of Innovation and New technology*, *7*(2), 115-158.
11. Damijan, J. P., Kostevc, Č., & Polanec, S. (2010). From innovation to exporting or vice versa?. The World Economy, 33(3), 374-398.
12. Esteve-Pérez, S., & Rodríguez, D. (2013). The dynamics of exports and R&D in SMEs. Small Business Economics, 41(1), 219-240.
13. Girma, S., Görg, H., & Hanley, A. (2008). R&D and exporting: A comparison of British and Irish firms. Review of World Economics, 144(4), 750-773.

14. Golovko, E., & Valentini, G. (2011). Exploring the complementarity between innovation and export for SMEs' growth. *Journal of international business Studies*, *42*(3), 362-380.

15. Griffith, R., Redding, S., & Van Reenen, J. (2003). R&D and absorptive capacity: Theory and empirical evidence*. The Scandinavian Journal of Economics, 105(1), 99-118.

16. Hall, B. H., & Mairesse, J. (1995). Exploring the relationship between R&D and productivity in French manufacturing firms. *Journal of econometrics*, *65*(1), 263-293.

17. Lööf, H., Larijani, P. N., Cook, G., & Johansson, B. (2015). Learning-by-exporting and innovation strategies. Economics of Innovation and New Technology, 24(1-2), 52-64.

18. Roper, S., & Love, J. H. (2002). Innovation and export performance: evidence from the UK and German manufacturing plants. Research policy, 31(7), 1087-1102.

19. Yang, C. H., & Chen, Y. H. (2012). R&D, productivity, and exports: Plant-level evidence from Indonesia. Economic Modelling, 29(2), 208-216.

ON SOME IDEAS FOR IMPROVEMENT OF IDENTIFICATION AND RECORDING GAINS/LOSSES

Jaan Alver
Tallinn University of Technology, Estonia
jaan.alver@ttu.ee

Lehte Alver
Tallinn University of Technology, Estonia
lehte.alver@ttu.ee

ABSTRACT
The aim of paper is to analyze the definitions and recording process of revenues and gains. The authors of current paper have worked out some suggestions for improving the reporting process taking into account the definitions of income, revenue, gains, losses and profit. Analyzing the inconsistency in two pairs of opposite terms (Profit and Loss and Gain and Loss) the authors came to conclusion that the amount named gain/loss in disposal of property, plant and equipment is rather correction or adjustment of previous miscalculation of depreciation expense due to the formula. To make aforementioned adjustments and show them separately a Contra depreciation expense account or Depreciation adjunct account is recommended.
Keywords: *income, gain, loss, profit, transaction approach*

1 INTRODUCTION

Accounting is the systematic and comprehensive recording of financial transactions for pertaining to a business. An accounting information system collects and processes transaction data and then disseminates the financial information to interested parties. Accounting information systems are designed to support accounting functions and related activities. Financial accounting focuses on the reporting of an organization's financial information, including the preparation of financial statements, to external users of the information, such as investors, regulators and suppliers. For better results, it is important to have common understanding of basic terms and ways to process transactions. We agree with Mourier (2004) that accounting is a challenging subject requiring much specialist background knowledge, and financial reporting is an area with distinct terminology characteristics.

At the heart of the IFRS Conceptual Framework for Financial Reporting (hereafter the IFRS Framework) are the elements of financial statements (paras. 47–81), namely, *assets*, *liabilities*, *equity*, *income* and *expenses*. The IFRS Framework adopts a 'balance sheet approach' in that the definitions of liabilities, equity, income and expenses all follow inexorably from the definition of assets: liabilities are defined to be the opposite of assets, equity is the residual interest in assets having deducted liabilities, and income and expenses are defined as, respectively, increases and decreases in net assets (other than from transactions with equity holders). This balance sheet approach can be viewed simply as an application of the logic of double-entry accounting, which is that assets are sources of value that are necessarily equal to the claims on those sources, namely, equity and liabilities. The aim of current paper is to analyze the definitions and recording process of revenues and gains. The authors of current paper have worked out some suggestions for improving the reporting process taking into account the meanings of *income*, *revenue*, *gain* and *profit*.

2 INCOME, REVENUE AND GAIN

Income may have several meanings. First, income can be used interchangeably with revenue. Second, income may refer to the revenue from sources other than main operating activities (as a secondary type of revenue); for example, interest income, rent income, or commission income. Third, net income refers to the excess of income over expenses. According to the IFRS Framework p. 4.25 "Income is increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from equity participants."
In accordance with the IFRS Framework p. 4.29:

> *The definition of income encompasses both revenue and gains.*

According to the IFRS Framework para. 4.29 "Revenue arises in the course of the **ordinary activities** of an entity and is referred to by a variety of different names including sales, fees, interest, dividends, royalties and rent". In IAS 18 (para. 7) revenue is defined as "The gross inflow of economic benefits during the period arising in the course of ordinary activities of an entity when those inflows result in increases in equity, other than increases relation to contributions from equity participants". After 1 January 2017, IFRS 15 will replace IAS 18. According to IFRS 15 (Appendix A: Defined terms) revenue is "income arising in the course of an entity's ordinary activities". Because the definition of income will not change, revenue can be defined as the gross amount of economic benefit flowing to an entity from its ordinary business activities that results in increases in equity other than from contributions made by equity holders (Burton, Jermakowicz, 2015, p. 467). Therefore, revenue is understood to be that part of a company's income resulting from its main (= operating) activities. In pure accounting terms, revenue is an increase in assets or decrease in liabilities on the company's books.

Gain is defined in many dictionaries. Business dictionaries (Collin 1997, Oxford Dictionary of the Business World 1993, Collins 2013, Friedman 2007, 2012, Scott 2009) emphasize the increase in profit, price or value, also increase of wealth or amount of money that is made by a company when selling a non-inventory asset for more than its value. More specific and comprehensive are Banking and Finance Dictionaries (Collin, 1994; Collins, 2013; Downes, Goodman, 2014; Oldham, 1993; Briscoe, Fuller, 2007; Munn, Garcia, Woelfel, 1993; Wuite, 2009; QFinance, 2013) where gain is defined as the increase in the value of an asset that had been bought. Special attention is paid on stock and shares. The most exhaustive approach is taken by Munn, Garcia and Woelfel (1993) who have defined gains as "increases in equity (net assets) from peripheral or incidental transactions of an entity and from all other transactions, events, and circumstances affecting the entity during a period except those that result from revenues or investments by owners. Gains often arise from events and circumstances that may be beyond the control of an enterprise or its managements. Gains can result from such activities as sale of investments in marketable securities, dispositions of used equipment, the settlement of liabilities at other than their carrying amounts, or the winning of a lawsuit". In Accounting Dictionaries (Nobes, 2002; Mooney, 2008; Siegel, Shim, 2005; 2010; French, 1994) the authors have pointed out the difference between gains and revenues. French (1994) has emphasized that "gains are usually contrasted with revenues. Gains and revenues together are called 'income'". In accordance with the IFRS Framework p. 4.30 "Gains represent other items that meet the definition of income and may, or may not, arise in the course of the ordinary activities of an entity". Gains represent increases in economic benefits and as such are no different in nature from revenue. Hence, they are not regarded as constituting a separate element in the IFRS Framework (para. 4.30). We agree with J. M. Flood that "Gains are increases in equity resulting from transactions and economic events other than those that generate revenues or are

investments from owners. … . Gains often result from transactions and other events that involve no earnings process. In terms of recognition, it is more significant that the gain be realized or realizable than earned." (Flood, 2015, p. 74)

Gains are commonly distinguished from revenues for three reasons (see Table 1).

Table 1: Gains vs revenues (Flood, 2015, p. 73)

Differences	Revenues	Gains
Connection with entity's activities	Usually result from an entity's central operations	Result from incidental or peripheral activities of the entity.
Earning process	Are usually earned.	Often result from nonreciprocal transactions (such as winning a lawsuit or receiving a gift) or other economic events for which there is no earnings process.
Reporting	Are reported gross.	Are reported net.

Comments to Table 1. Gains are secondary type of income, referring to incidental and nonrecurring transactions. According to the IFRS Framework p. 4.31, gains include, for example, those arising on the disposal of non-current assets. Gain on the disposal of fixed assets is called a gain because sale of fixed assets does not take place regularly. The definition of income also includes unrealized gains. When gains are recognized in the income statement, they are usually displayed separately because knowledge of them is useful for making business decisions. The distinction between revenues and gains once was a subject of considerable controversy. One school of thought believed that only revenues should be reported on income statements. The secondary or peripheral nature of gains means that they did not represent recurring income from the entity's main area of income-producing activities and therefore should be excluded from the income statement. This school of thought has been called the *current operation income concept* (Wolk, 2001, p. 393). The competing position was called *all-inclusive income concept*. Its proponents believed that all revenues and gains, regardless of source, should be included in the income statement (Wolk, 2001, p. 393). There has been an evolution away from the current operating concept to the all-inclusive concept.

In accordance with the IFRS Framework p. 4.33:

The definition of expenses encompasses losses as well as those expenses that arise in the course of the ordinary activities of the entity.

According to the IFRS Framework para. 4.34 "Losses represent other items that meet the definition of expenses and may, or may not, arise in the course of the ordinary activities of the entity". Losses represent decreases in economic benefits and as such they are no different in nature from other expenses. Hence, they are not regarded as constituting a separate element in the IFRS Framework (para. 4.34).

Losses are commonly distinguished from other expenses for three reasons (see Table 2):

Table following on the next page

Table 2. Losses vs other expenses (Flood, 2015, p. 73)

Differences	Other expenses	Losses
Connection with entity's activities	Usually result from an entity's central operations.	Result from incidental or peripheral activities of the entity.
Earning process	Often incurred during earnings process.	Often result from nonreciprocal transactions (such as thefts or fines) or other economic events unrelated to an earnings process.
Reporting	Are reported gross.	Are reported net.

Comments to Table 2. Losses are secondary type of expenses, referring to incidental and nonrecurring transactions. The definition of expenses also includes unrealized losses. When losses are recognized in the income statement, they are usually displayed separately because knowledge of them is useful for making business decisions. To the user of IASs/IFRSs written in English, it seems that authors of the individual standards have applied whichever English terminology they are used to, and this terminology then becomes the IAS/IFRS English terminology. For example, Northern American accountants frequently talk about *net income* or *earnings* instead of *profit*. Although named the *income* statement, the format shown in the appendix to IAS 1 employs the term *profit* rather than *income* to individual items. In some countries (for example, Germany, Russia, Finland) in local language the same word is used for profit/gain as well as for their two counterparts – losses. For example, in IFRS, the concept of income encompasses both revenues and gains whereas in Finnish language does not differentiate between income and revenues, or between revenues and gains in a like manner. According to IFRS Framework para. 4.60 "Profit is the residual amount that remains after expenses have been deducted from income. If expenses exceed income the residual amount is loss". Based on this axiom we can formulate following postulates:

1. **Profit/Loss is not defined in IFRS.** Instead of definition, calculation formula is indicated: Profit/Loss is the residual amount that remains after expenses have been deducted from income.

2. **Profit/Loss is difference between income and expenses.** Since the Profit/Loss cannot be measured directly as income and expenses are, they must be calculated mathematically as difference between income and expenses. Consequently, we cannot find profit/loss from transactions, from accounting entries; they are only subtotals or total in the income statement.

   NB! Income and expenses have definitions. As profit/loss is calculated as difference between income and expenses, it is not necessary to define profit/loss. Therefore, profit/loss are only technical terms.

3. **Profit cannot arise without income(s), loss without expense(s).** Revenues and expenses are primary (measurable) indicators for profit/loss calculations. **Profit/loss is the secondary indicator, not measurable directly but computable**, derived from income(s) and expense(s). **It is reason-consequence relation, where income(s) and expense(s) are reasons and profit/loss is consequence**.

4. Besides of income(s) and expense(s) the final amount of Profit/Loss can be affected by several corrections and adjustments which can be caused, for example, by revaluations, usage of different formulas (for example, for calculation of depreciation, amortization) etc. Finally, all these affect Profit/Loss through special form of Income/Expense called GAIN/LOSS.

   NB! As *profit* and *gain* are not identical (have different content), their opposite terms *loss* and *loss* are not identical too (have different content). We think this is a big shortcoming

in terminology because resulted in many countries usage terms *profit/loss* instead of *gain/loss*.

5. **Because profit/loss do not appear in journal entries, it is not possible to correct or adjust them directly.** Corrections and adjustments will be made with help of corresponding entries by using gain(s) and loss(es).

3 GAINS AND LOSSES AS CORRECTIONS AND ADJUSTMENTS

The authors of current paper have worked out an example to show how to understand, identify and record Gains/Losses from sale of Property, Plant and Equipment (PPE).

3.1. Example

A piece of equipment was bought in beginning of the year for 10,000 EUR. The estimated usage life is 5 years. The expected residual value (terminal value) is 0. One year after purchase, the piece of equipment was sold for 7,000 EUR (for simplicity assume that net proceeds received are 7,000 EUR). The journal entry for recording the purchase of equipment:

Dr: Equipment 10,000
    Cr: Bank account 10,000

The depreciation is computed by using
    1) straight-line method;
    2) 150% declining balance (diminishing balance, reducing balance) method (depreciation rate is 30%);
    3) double declining (double diminishing) balance method.

3.1.1 Journal entries when using straight-line method for depreciation (depreciation rate 20%)

Dr: Depreciation expense   2,000
    Cr: Accumulated depreciation   2,000
 At the end of the first year:
 Equipment   10,000
 Accumulated depreciation   (2,000)
 Book value (depreciated cost)   8,000

Sale of equipment:

Journal entry	EUR	Explanation
Dr: Accounts Receivable	7,000	Invoice to the buyer. This is not sales revenue!
Dr: Accumulated depreciation	2,000	Accumulated depreciation is eliminated.
Dr: *LOSS*	1,000	Because according to this formula the depreciation expense was computed only 2,000 EUR, this resulted the book value of 8,000 EUR. So, it is necessary to adjust expenses by 1,000 EUR. Here *LOSS* is opposite to *GAIN*.
Cr: Equipment	10,000	The equipment is written off.

Comment

The steps in composing compound journal entry are following:

1. Invoicing the buyer (Dr: Accounts Receivable 7,000).

2.–3. Derecognition of piece of equipment from balance sheet (Dr: Accumulated depreciation 2,000 and Cr: Equipment 10,000).

4. Balancing of debits and credits (Dr: *LOSS* 1,000).

The term *LOSS* is not the same as in interconnection Profit/Loss because **it is not computed as difference – revenue minus expense**.

3.1.2 Journal entries using of 150% declining balance method for depreciation (depreciation rate is 30%)

Dr: Depreciation expense   3,000
   Cr: Accumulated depreciation   3,000

At the end of the first year:
Equipment   10,000
Accumulated depreciation   (3,000)
Book value (depreciated cost)   7,000

Sale of equipment:

Journal entry	EUR	Explanation
Dr: Accounts Receivable	7,000	Invoice to the buyer. This is not sales revenue!
Dr: Accumulated depreciation	3,000	Accumulated depreciation is eliminated.
Cr: Equipment	10,000	The equipment is written off.

Comment. The steps in composing compound journal entry are following:

1. Invoicing the buyer (Dr: Accounts Receivable 7,000).

2.–3. Derecognition of piece of equipment from balance sheet (Dr: Accumulated depreciation 3,000 and Cr: Equipment 10,000).

The book value of equipment **is equal to the sales price**. It means that **there is no need for adjustment**.

3.1.3 Journal entries using of double-declining balance method for depreciation (depreciation rate is 40%)

Dr: Depreciation expense 4,000
   Cr. Accumulated depreciation   4,000

At the end of the first year:
Equipment   10,000
Accumulated depreciation   (4,000)
Book value (depreciated cost)   6,000

Sale of equipment:

Journal entry	EUR	Explanation
Dr: Accounts Receivable	7,000	Invoice to the buyer. This is not sales revenue!
Dr: Accumulated depreciation	4,000	Accumulated depreciation is eliminated.
Cr: Equipment	10,000	The equipment will be written off.
Cr: *GAIN*	1,000	Because according to this formula the depreciation expense was computed 4,000 EUR (more than needed), this resulted the book value of 6,000 EUR. Therefore, it is necessary to make adjustment by 1,000 EUR.

Comment. The steps in composing compound journal entry are following:
1. Invoicing the buyer (Dr: Accounts Receivable 7,000).

2.–3. Derecognition of piece of equipment from balance sheet (Dr: Accumulated depreciation 4,000 and Cr: Equipment 10,000).

4. Balancing of debits and credits (Cr: *GAIN* 1,000).

Gain appeared in the compound journal entry is not profit, **because it is not difference between income(s) and expense(s)**.

3.2. General comments to example

The same initial numerical data were applied for all three versions:
- The same piece of equipment was acquired.
- The piece of equipment was bought for 10,000 EUR.
- The estimated usage life of piece of equipment was 5 years.
- The expected residual value (terminal value) was 0.
- One year after purchase the piece of equipment was sold for 7,000 EUR.
- All data above relate to the same company.

> **Conclusion:** If do not think in terms of accounting, all versions are identical. The only difference is in formulas used.

Ideally the depreciation which is accumulated up to the time of disposal, will have reduced the book value down to the disposal value. Usually, however, this does not occur, and the company must recognize a gain or loss on the disposal.

In the first version (straight-line method was used) depreciation was computed less than needed. Instead of balancing debits and credits by correction of depreciation expense, another expense (*LOSS*) was indicated.

In the second version (150% declining balance method was used) formula used guaranteed exact amount of depreciation and no correction/adjustment was needed.

In the third version (double-declining balance method was used) depreciation was computed more than needed. Instead of balancing debits and credits by correction of depreciation expense, additional income (*GAIN*) was indicated.

> Therefore, imprecisions of formulas used in versions 1 and 3 were corrected with two wrongdoings.

In comparison with version 2 in version 1 structure of expenses has been changed (*LOSS* is added). Depreciation expense is understated. In comparison with version 2 in version 3 income is overstated (*GAIN* is added) and depreciation expense is overstated. Although amounts of

617

profits in income statement are exactly the same for all three versions, there are differences in income statements' structure and items as well as in grand totals of incomes and expenses. It is necessary to emphasize that although the income statement items used for balancing debits and credits have been named *LOSS* (version 1) and *GAIN* (version 3), to be exact, they are just what they are – items balancing debits and credits in compound journal entry.

We agree with Jaana Kettunen that "The interrelationship between the terms corresponding to *gains* and *profit* … might to be based on the idea that in accordance with to the flow based approach it may be argued that gains are in nature to a certain extend similar to profit because *gain* is a "net concept" of positive value (otherwise it would be a loss) while *revenue* is gross." (Kettunen, 2011, p. 14) Influenced by such similarity gains and profits are often equated. For example, Collings notes: "Among other things, gains often include profits arising on the disposal of non-current assets." (Collins, 2013, p. 152) Here is appropriate to note that gain is explicitly defined (as some kind of income) yet profit not. "Gross versus net" concept or approach is quite popular and has been used by many researchers (Barker, 2010; Nobes, 2012 and others). For example, Barker points out that "Revenue is a gross concept. That is, it does not involve the deduction of an expense or of the carrying value of a disposed asset. By contrast, the Standards that deal with gains require net measurements, that is, a gain is calculated as the difference between two values." (Barker 2010) According to "net concept" before making of journal entry GAIN/LOSS on the disposal of PPE should be calculated by formula

$$GAIN\ (LOSS) = Net\ proceeds\ received - \ PPE's\ net\ book\ value$$

The positive amount is determined as *GAIN* and negative amount as *LOSS*. Thereafter the journal entry will be made.

According to IAS 16 the derecognition of an item of property, plant and equipment is also based on "net concept": "The gain or loss arising from the derecognition of an item property, plant and equipment shall be determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item." (IAS 16 para. 71) Illogicality of this requirement lies in the need to make calculation. If calculation as secondary method of measurement is acceptable in case of profit[1] it is not understandable in case of Gain/Loss. Recall that the definition of income encompasses both revenue and gains and according to the IFRS Framework para. 4.30 gains represent other items that meet the definition of income. Therefore, gain should correspond to the definition of income. Similarly, the definition of expenses encompasses losses as well as those expenses that arise in the course of the ordinary activities of the entity and according to the IFRS Framework para. 4.34 losses represent other items that meet the definition of expenses. Therefore, loss should correspond to the definition of expense. Unfortunately, there is nothing stated in IAS 16 as well as in the other IFRSs how to test compliance of Gain/Loss with the definition of Income/Expense.

According to "transaction approach" used by the authors of this paper there is no need to make calculations. The need for balancing items in journal entries is caused by understated (versions 1) and overstated (version 3) depreciation expense. Therefore, items balancing debits and credits in compound journal entry are rather adjustments than GAINS/LOSSES. To make aforementioned adjustments and show them separately a *Contra depreciation expense* account or *Depreciation adjunct account* should be used.

---

[1] Profit is not defined in IFRSs. Instead of definition, calculation formula is indicated: profit is difference between income (revenues) and expenses.

Approach recommended by the authors of this paper guarantees identicalness of all three final income statements.

5 CONCLUSION
Through the process of analyzing the definitions and recording process of revenues and gains the authors of current paper worked out suggestions for improving the reporting process. In the paper inconsistency in two pairs of opposite terms: 1) Profit and Loss, and 2) Gain and Loss is shown. As profit and gain are not identical (have different content), their opposite terms loss and loss are not identical too (have different content). In paper seven postulates about profit and loss are formulated. These postulates are illustrated by means of transaction approach where different examples are worked out to show how to understand, identify and record gains/losses. According to the IFRS Framework gain should meet the definition of income as well as loss should meet the definition of expense. Unfortunately, there is nothing stated in IAS 16 as well as in other IFRSs how to test compliance of Gain/Loss with the definition of Income/Expense. In further development of examples the authors of current paper came to conclusion that the amount named gain/loss in disposal of PPE is rather correction or adjustment of previous miscalculation of depreciation expense due to the formula. To make aforementioned adjustments and show them separately a *Contra depreciation expense* account or *Depreciation adjunct account* is recommended.

LITERATURE:
1. Barker R. (2010). On the Definitions of Income, Expenses and Profit in IFRS. *Accounting in Europe*, 7 (2), pp. 147–158.
2. Briscoe, S., Fuller, J. (2007). *Harriman's Financial Dictionary*. Hampshire: Harriman House.
3. Burton G. F, Jermakowicz E. K. (2015). *International Financial Reporting Standards: A Framework-Based Perspective*. New York: Routledge.
4. Collin, P. H. (1994). *Dictionary of Banking and Finance.* Teddington: Peter Collin Publishing.
5. Collin P. H. (1997). *Dictionary of Business.* 2nd ed. Teddington: Peter Collin Publishing.
6. Collings S. (2013). Frequently Asked Questions in IFRS. Chichester: Wiley.
7. Collins COBUILD Key Words for Accounting. (2013). Glasgow: HarperCollins Publishers.
8. Downes, J., Goodman, J. E. (2014). *Dictionary of Finance and Investment Terms.* 9th ed. New York: Barron's.
9. Flood J. M. (2015): *Wiley GAAP 2015: Interpretation and Application of Generally Accepted Accounting Principles 2015*. Chichester: John Wiley & Sons Ltd.
10. French, D. (1994). *Dictionary of Accounting Terms*. London: Croner Publications.
11. Friedman J. P. (2007). *Dictionary of Business Terms.* 4th ed. New York: Barron's.
12. Friedman J. P. (2012). *Dictionary of Business and Economics Terms.* 5th ed. New York: Barron's.
13. IAS 1 Presentation of Financial Statements (2014). Retrieved 10.02.2016 from http://eifrs.ifrs.org/eifrs/bnstandards/en/2015/ias01.pdf
14. IFRS 15 Revenue from Contracts with Customers (2015). Retrieved 10.02.2016 from http://eifrs.ifrs.org/eifrs/bnstandards/en/2015/ifrs15.pdf
15. IAS 16 Property, Plant and Equipment (2014). Retrieved 10.02.2016 from http://eifrs.ifrs.org/eifrs/bnstandards/en/2015/ias16.pdf
16. IAS 18 Revenue (2012). *IFRS 2012.* London: IFRS Foundation Publication

17. Kettunen J.(2011). *Translation of IFRS Standards into Local Languages: Understanding Problematics of Translation*. Retrieved 14.03.2016 from http://www.lse.ac.uk/accounting/pdf/kettunen.pdf

18. Mooney, K. (2008). *The Essential Accounting Dictionary*. Naperville (IL): Sphinx Publishing.

19. Mourier, L. (2004). *Communicating financial reporting across continents.* Retrieved 15.03.2016 from download1.hermes.asb.dk/archive/download/h32_07.pdf

20. Munn G. G., Garcia F. L., Woelfel C. J. (1993). *Encyclopedia of Banking & Finance*. 9th ed. Chicago: Probus Publishing Company.

21. Nobes C. (2012). On the Definitions of Income and Revenue in IFRS. *Accounting in Europe*, 9 (1), pp. 85–94.

22. Nobes, C. (2002). *The Penguin Dictionary of Accounting*. London: Penguin Books.

23. Oldham, G. E. (1993). *Dictionary of Business and Finance Terms*. New York: Barnes & Noble Books.

24. *Oxford Dictionary for the Business World*. (1993). Oxford: Oxford University Press.

25. *QFINANCE: The Ultimate Resource*, 4th ed. (2013). London: Bloomsbury.

26. Scott D. L. (2009). *The American Heritage Dictionary of Business Terms*. Boston: Houghton Mifflin Harcourt.

27. Siegel, J. G., Shim, J. K. (2005). *Dictionary of Accounting Terms*. 4th edition. New York: Barron's.

28. Siegel, J. G., Shim, J. K. (2010). *Accounting Handbook*. New York: Barron's.

29. The Conceptual Framework for Financial Reporting (2010). Retrieved 10.02.2016 from http://eifrs.ifrs.org/eifrs/bnstandards/en/2015/framework.pdf

30. Wolk H. I., Tearney M. G., Dodd J., L. (2001): *Accounting Theory. A Conceptual and Institutional Approach.* Ohio: South-Western College Publishing.

31. Wuite, R. (2009). *South African Dictionary of Finance*. Northcliff: Rollerbird Press.

ASSESSING THE VIABILITY OF ADOPTING CORPORATE SOCIAL RESPONSIBILITY PRACTICES IN SME TOURISM AND LODGING FACILITIES

Alexia Franzidis
University of North Carolina Wilmington, USA
601 South College Road, Wilmington, NC, 28401
franzidisa@uncw.edu

ABSTRACT

There has been an increased awareness of the environmental and social consequences of human activity particularly in business operations (de Grosbois, 2012), and many businesses have begun to adopt Corporate Social Responsibility (CSR) initiatives to appease such concerns (de Grosbois, 2012). Within tourism and hospitality enterprises, CSR has gained momentum (Kucukusta, Mak & Chan, 2013), with larger lodging chains implementing CSR practices into their daily operations (Goeldner & Ritchie, 2006). Such organizations see it as a competitive strategic tool to increase brand image, customer loyalty, and satisfaction (Kucukusta et al., 2013).

Due to the initial investment associated with its implementation (Kang, Stein, Heo, & Lee, 2012), smaller and medium enterprises (SMEs) are hesitant to implement CSR efforts. SMEs play an instrumental role in tourism and hospitality but often suffer from problems caused by their lack of size and resources (OECD, 2015). As such, many operators are unsure whether CSR initiatives will be financially feasible and/or beneficial (Kang et al., 2012). One suggested method to assist with its implementation is to charge premiums however, few studies have assessed consumer attitudes of CSR practices and their relationship with pricing, and those that have show mixed results (Kang et al., 2012; Baker, Davis & Weaver, 2013).

The purpose of this study is twofold: first, to assess consumer attitudes on the level of importance placed on CSR practices when choosing lodging facilities, and second, to assess consumers' willingness to spend on such facilities. An online survey was conducted and a total of 233 responses were collected in April 2015. Findings revealed a significant number of tourists are willing to spend more on accommodation providers that adopt CSR principles, as well as the importance they place on specific CSR practices. It is hoped the findings will assist SMEs with their decision to adopt CSR practices.

Keywords: *Consumer attitudes Corporate Social Responsibility, Smaller and Medium Enterprises, Willingness to spend*

LITERATURE:
1. Baker, M. A., Davis, E. A., & Weaver, P. A. (2013). Eco-friendly attitudes, barriers to participation, and differences in behavior at green hotels. *Cornell Hospitality Quarterly*, 1938965513504483.
2. de Grosbois, D. (2012). Corporate social responsibility reporting by the global hotel industry: Commitment, initiatives and performance. *International Journal of Hospitality Management*, 31(3), 896-905.
3. Goeldner, C. R., & Ritchie, J. B. (2006). *Tourism: Principles, practices, philosophies*. John Wiley & Sons.

4. Kang, K. H., Stein, L., Heo, C. Y., & Lee, S. (2012). Consumers' willingness to pay for green initiatives of the hotel industry. *International Journal of Hospitality Management*, 31(2), 564-572.

5. Kucukusta, D., Mak, A., & Chan, X. (2013). Corporate social responsibility practices in four and five-star hotels: Perspectives from Hong Kong visitors. *International Journal of Hospitality Management*, 34, 19-30.

6. Organisation for Economic Co-operation and Development (OECD). (2015).

Full paper is not published at the Author's request

INNOVATIVE MARKETING IN SMEs AND LARGE SCALE ENTERPRISES: GAZIANTEP SAMPLE

Hasan Aksoy
Department of International Trade and Logistics, Gaziantep University, Turkey
haksoy@gantep.edu.tr

Erol Cengiz
Department of International Trade and Logistics, Gaziantep University, Turkey
erolcengiz@gantep.edu.tr

ABSTRACT
Most of innovative marketing definitions concentrate on new ideas concerning new products or services, improvements in existing products and refining these ideas to a market opportunity to meet the market demand in a new way.
The purpose of this paper was to investigate the concept of innovative marketing and how it exposes itself in the context of small-to medium-sized and large scale enterprises. The literature relating to the characteristics of SMEs, large scale enterprises and innovative marketing are reviewed to identify the key elements of innovative marketing, SMEs and large scale enterprises. This review and the key elements identified contribute to an overall conceptualisation of innovative marketing for SMEs and large scale enterprises and the differences of aspect of innovative marketing for SMEs and large scale enterprises. The discussion considers and provides a description of innovative marketing in SMEs and large scale enterprises. Innovative marketing does not just relate to products, new product development, and technological development but is also evident in other aspects of marketing related activities and decisions and is very specific to the context and needs of the SME and large scale enterprises.
The sample used for his study comprised the database of Chamber of Industry and Chamber of Commerce including all their numbers. Data was collected though online survey. Mostly closed questions were employed for the survey. Approximetely, 650 companies clicked on the link access the online survey. 250 of SMEs and 100 of large scale companies completed the survey in full. The responses analysed using SPSS and STATA.
Keywords: Small to medium-sized enterprises, Large scale enterprises, Innovative marketing

1. INTRODUCTION

Following the process of globalization, in today's business environment, enterprises have to make important innovation activities in order to be permanent and provide profitable growth. Due to advances in technology, major changes in customer demands and needs are observed, it is impossible for businesses to ignore this changes. It is not enough just to produce as well as products and services based on these needs, it must be acted with the understanding that direct the customers to create new demands. Innovation is one of the basic component use by the corporate as a stretegy to improve productive manufacturing processes, to be able to compete in the market and to establish good reputation to gain positive status in customers's perception. Small and medium enterprises (SMEs) have been recognized one of the 'propulsive forces' of modern economies due to their various contributions with regards to technological innovations, employment generation, export promotion, etc. Therefore, SMEs has the potential to incite progress of individual businesses at the micro level and accumulate sectors at the macro level. Indeed, innovative activities for SMEs has recently become a subject of much interest to academics and managers alike.

The marketing function in SMEs is hindered by constraints such as poor cash flow, lack of marketing expertise, business size, tactical customer-related problems, and strategic customer-related problems (Gilmore et. al., 2001; Torlak&Uçkun, 2005; Ferneley&Bell, 2005). That's why smes need to make some newness through their operations. Large scale enterprises can allocate more resources to their R&D activities because of their strong capital structure and they can give priority to their innovation activities. As a consequence of large scale enterprises' ungainly structure and late adoption for demand changes, larges scale enterprises has been adversely affected about innovation. With the help of flexible structure, intense customer relations and effective process control about products/services, smes become more successful in innovation (Örücü et. al., 2011). OECD (2005) defined inovation as "an innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations".

A marketing inovation is a new method of marketing which involving product design and packaging, product positioning and promotion or significant pricing changes (Özen&Bingöl, 2007). The improvement of new marketing applications plays an crucial role in the change of industries. In the recent years, following technological developments, firms are enable to reach consumers more effectively.

This study examines innovative marketing concept and its exposion in the context of small-to medium-sized and large scale enterprises and focuses on organisational innovation and innovation cultures of SMEs and large scale companies.

2. LITERATURE REVIEW
2.1.Organisational Innovation
Fundamentally, there are two types of innovations: product and process innovations (Dosi,1988; Teece, 1989; Utterback & Abernathy, 1975). These are not mutually influential, but depend on each other in a major degree. Process innovations can be divided into organisation and technology, organisation meaning new market organisation and internal company organisation. By technology is meant human products. These can be sorted as three subheading (Gehlen, 1980): instrument, machine and automaton.

Optimisation of organisational structure will make vital contribution in effective and efficient management of innovation. Current studies show that extrinsic environment, and organisational factors as well as business-specific characteristic influence innovation in companies.

Operational excellence, market advantage, and employee satisfaction as among positive outcomes of organisational innovation (Simpson et al., 2006). In a meta-analysis of organisational innovation, Damanpour (1991) outlined innovation as the "adoption of an internally generated or purchased device, system, policy, program, process, production or service that is new to the adopting organization."

2.2.Innovation Culture
According to Jassawalla and Sashittal (2002) innovation culture is a "firm's social and cognitive environment, the shared view of reality, and the collective belief and value systems reflected in a consistent pattern of behaviors among participants". As Eric Draxler discusses in McKinsey *What Matters* article (2009), there are three key factors to determine a society's technological future and one is culture which "supports change and hungers for it".

An innovation culture means a hypothetical resource that grants to increased levels of innovation (Higgins & McAllaster, 2002). Therefore, innovation culture contributes a direction to think and act which helps innovation.

2.3.Innovative Marketing

Marketing's aspect in innovation is to support tools, ideas and infrastructure to close the gap between innovation and market positioning in order to achieve sustainable competitive advantage.

According to O'Dwyer et al. (2009), in defining innovative marketing as "doing something new with ideas, products, service, or technology and refining these ideas to a market opportunity to meet the market demand in a new way". It demonstrate that even though innovation can contain new-product improvements, it also incorporates innovative developments in other aspects of marketing.

3. METHODOLOGY

This section of the report presents and justifies the research methodology employed.

3.1. Survey Sample

The methodology used to conduct this study was survey research. Surveys allow researchers to collect a considerable amount of information about a large number of people. This survey focuses on to develop an inventory of SMEs and large scale enterprises working in various sectors in Gaziantep. This report, aims to summarize and evaluate the findings of this survey, and formulates some key recommendations. The sample used for this study comprised the firms drawn from the database of Chamber of Industry and Chamber of Commerce. For this study, SMEs firms were defined as firm has less than 250 employees and for large scale enterprises more than 250. Data was collected, through online survey. Mostly closed questions were employed for this survey. The researchers elaborated a draft questionnaire in September 2014. Several attempts were made to identify the correct sample of companies to be targeted by the survey. Working closely with the Chamber of Commerce and Chamber of Industry, the online survey link was sent via email to all members of the two organizations: 3,867 members of the Chamber of Industry and over 14,000 members of the Chamber of Commerce. It is worth noting that by law, all SMEs have to be members of their local Chamber of Commerce.

3.2 Response rate

It is impossible to accurately measure the response rate of the survey as the online survey link was sent to the email accounts that the Chamber of Commerce and Chamber of Industry holds for their members, and several of these emails are no longer in use. However, using the Survey gizmo software, it became apparent that approximately 650 companies clicked on the link to access the online survey. 306 of them partially completed the survey (47 percent) while 195 of them completed the survey in full. However, it is not possible to know the number of enterprises that actually became aware of this online survey.

4. FINDINGS

4.1. Surveyed Companies' Profile

The first set of survey questions was related to the company's profile. The survey participants were asked to identify their role within the company by selecting one of the following options: business owner; general manager; board member; sales manager; R&D manager; marketing manager; other.

Following observations can be made for SMEs and large scale enterprises:

Business owner made up 46% of the surveyed population, while 13,6 % were working as a general manager and 8.4% as a board member. Share of R&D managers made up 0.4%. and 4,8% worked as a marketing manager and 26,8% in various positions. On the other hand, for large scale enterprises, business owner made up 0% of the surveyed population, while 5,4% were working as a general manager and 35,2% as a board member. Share of R&D managers made up 5.4%. and 41,9% worked as a marketing manager and 1,4% in various positions.

Table 1*: Participant Position's in the SMEs (250 Responses)*

Variable	Frequency	%
Status		
Business Owner	115	46
General Manager	34	13,6
Board Member	21	8,4
R&D Manager	1	0,4
Marketing Manager	12	4,8
Other	67	26,8

Table 2*: Participant Position's in the Large Scale Enterprises (66 Responses)*

Variable	Frequency	%
Status		
Business Owner	-	-
General Manager	4	5,4
Board Member	26	35,2
R&D Manager	4	5,4
Marketing Manager	31	41,9
Other	1	1,4

4.2. Years of Incorporation

The second question explores how many years the company continues to operate. The question was a closed question with the following options: 1-5 years, 6-10 years, 11-15 years, 16-20 years, 21-25 years and more than 26 years.

Table 3: *Operating Time of the SMEs (253 Responses)*

Variable	Frequency	%
Years of Incorporation		
1-5	97	38,3
6-10	45	17,8
11-15	44	17,4
16-20	22	8,7
21-25	11	4,3
26<	34	13,4

Table 4: *Operating Time of the Large Scale Enterprises (74 Responses)*

Years of Incorporation		
1-5	**3**	**4,1**
6-10	**6**	**8,1**
11-15	**33**	**44,6**
16-20	**4**	**5,4**
21-25	**8**	**10,8**
26<	**20**	**27,0**

As it can be seen from the Table 3 and Table 4, the highest percentage is showed by the SMEs which have 1-5 years operating time while the lowest was for companies which have 21-25 years operating time. However, by the large scale enterprises, it can be seen that highest percentage is 11-15 years operating time while the lowest was for companies which have 16-20 years operating time.

4.3. Innovative Marketing Activities

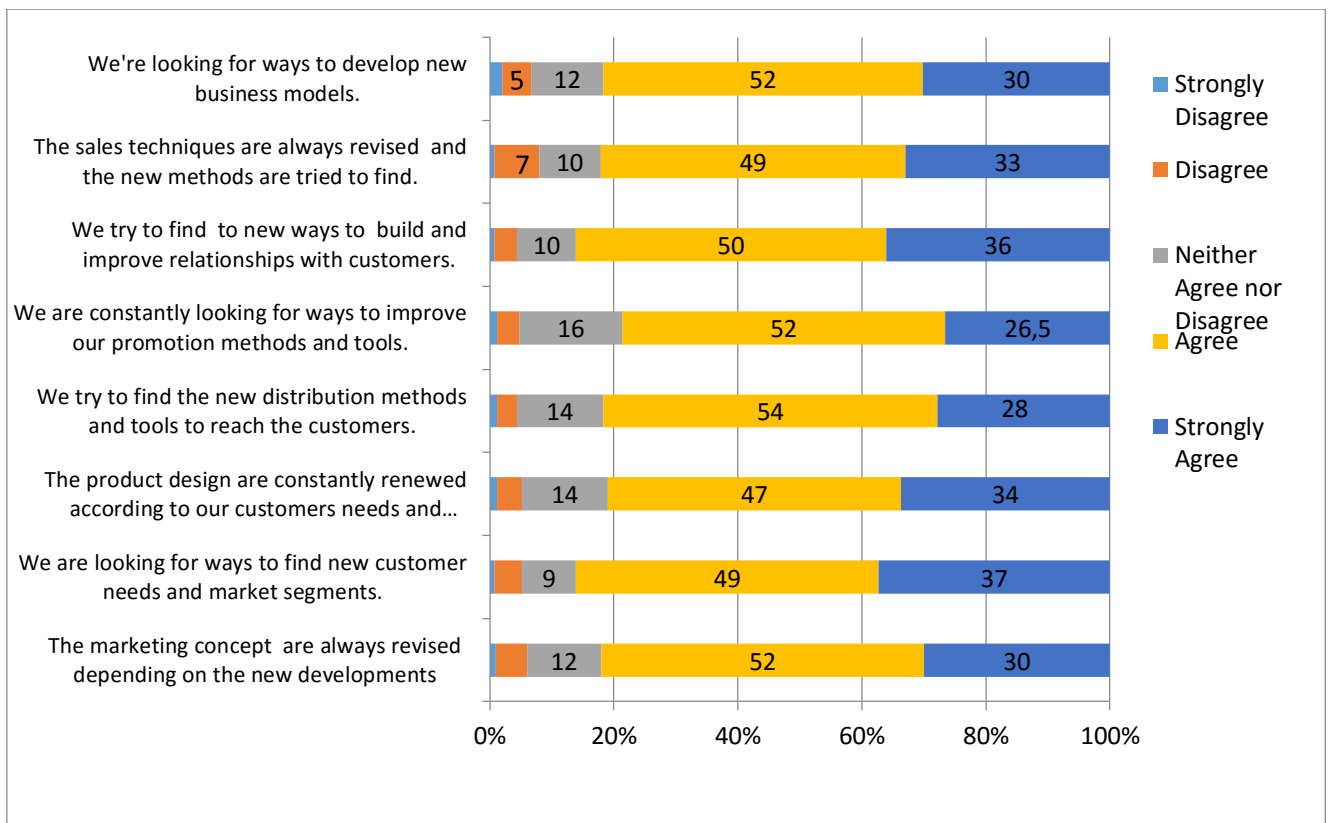This part of the survey includes a set of questions related to companies' innovative marketing activities.

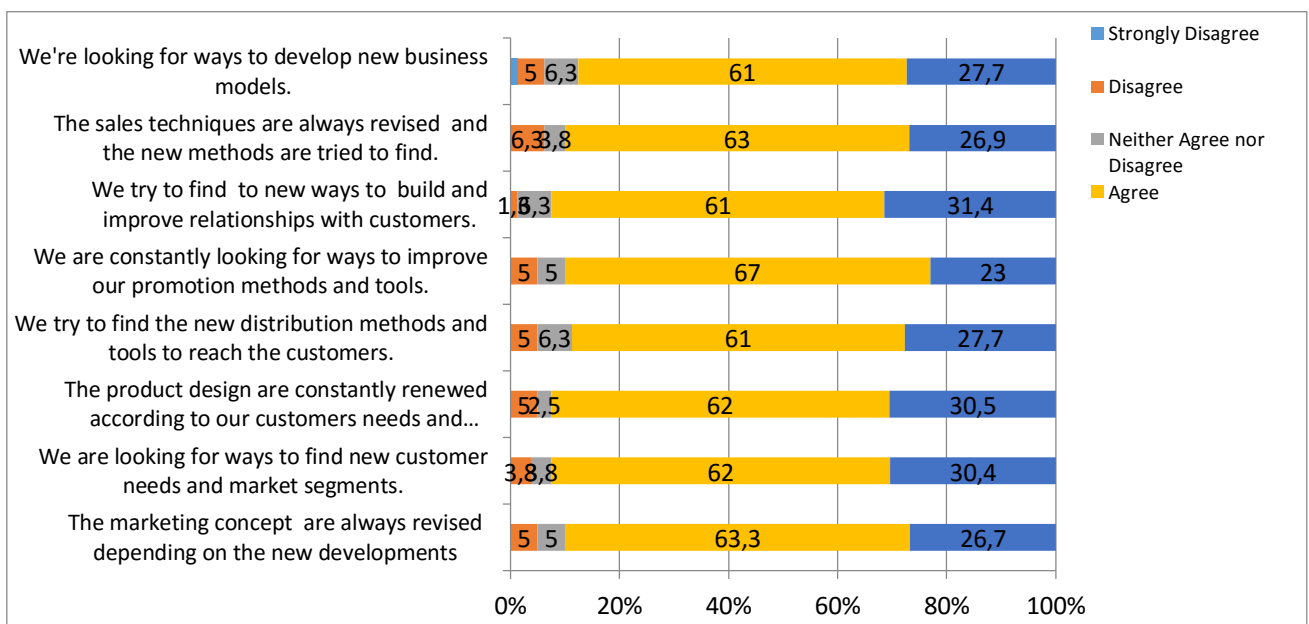**Figure 1.** Large Sized Enterprises innovative marketing aspects

Figure 2. SMEs innovative marketing aspects

627

Table 5 *Regression Analyses (Dependent Variable: IM)*

Independent Var.	β	B (Std)	t	R	F
IC	,232	,253	4,614***	,461	138,168
OI	,525	,483	8,788***		

***:p<0,01; **p<0,05; *: p<0,10

Table 6*: Correlation Matrix*

	IM	IC	OI
IM	1	,576***	,652***
IC	,576***	1	,669***
OI	,652***	,669***	1

IM: Innovative Marketing, IC: Innovation Culture, OI: Organizational Innovation
***Correlation is significant at the 0,01 level

4.4. Analyses

We made correlation analyze with research variables. Correlation matrix in table 1 reports the means, standard deviations, and bivariate Pearson correlations of the constructs. We found positive correlations between IM and IC (r=0.58; p<0, 01), IM and OI (r=0,65, p<0,01). We used regression analyses to test the hypotheses. The analyses showed in Table 1. We tested the effects of IC and OI on IM. Regression model was found significant (F=138,168; p<0,01). These results did support our research hypotheses.

5. CONCLUSION

The study aims to research the relationships between innovation culture and innovative marketing has positive correlation coefficients. The findings emphasize the importance of innovation culture on innovative marketing. The findings indicated that organizational innovation has a positive effect on innovative marketing.

LITERATURE

1. Damanpour, F. (1991). Organizational Innovation: A Meta-Analysis Of Effects Of Determinants and Moderators. *Academy of Management Journal*, *34*(3), 555–590. http://doi.org/10.2307/256406
2. Drexler, E. (2009). Asia and the elements of innovation — Metamodern. Retrieved March 23, 2016, from http://metamodern.com/2009/08/06/asia-and-the-elements-of-innovation/
3. Dosi, G. (1988). Sources, procedures, and microeconomic effects of innovation. *Journal of economic literature*, 1120-1171.
4. Ferneley, E., & Bell, F. (2005). Tinker, Tailor: Information Systems and Strategic Development in Knowledge Based SMEs. *ECIS 2005 Proceedings*, 83.
5. Gehlen, A. (1980), Man in the age of technology, Columbia University Press, New York.
6. Gilmore, A., Carson, D. and Grant, K. (2001), 'SME marketing in practice', Marketing Intelligence & Planning, Vol.19, No.1, pp.6-11.
7. Higgins, J. M., & McAllaster, C. (2002). Want Innovation? Then Use Cultural Artifacts that Support It. *Organizational Dynamics*, *31*(1), 74–84. http://doi.org/10.1016/S0090-2616(02)00073-6
8. Jassawalla, A. R., & Sashittal, H. C. (2002). Cultures That Support Product-Innovation Processes. *The Academy of Management Executive (1993-2005)*, *16*(3), 42–54.
9. O'Dwyer, M., Gilmore, A., & Carson, D. (2009). Innovative marketing in SMEs. *European Journal of Marketing*, *43*(1/2), 46–61. http://doi.org/http://dx.doi.org/10.1108/03090560910923238

10. OECD. (2005). Oslo Manual. 3rd Edition

11. Örücü, E., Kiliç, R., & Savaş, A. (2011). KOBİ'lerde inovasyon stratejileri ve inovasyon yapmayı etkileyen faktörler: bir uygulama. *Doğuş Üniversitesi Dergisi, 12*(1), 58-73

12. Özen, Ü., & Bingöl, M. (2007). İŞLETMELERDE BİLİŞİM TEKNOLOJİLERİ VE YENİLİKÇİLİK: ERZURUM, ERZİNCAN VE BAYBURT'TAKİ KOBİ'LERDE BİR ARAŞTIRMA. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *10*(2).

13. Simpson, P. M., Siguaw, J. A., & Enz, C. A. (2006). Innovation orientation outcomes: The good and the bad. *Journal of Business Research*, *59*(10–11), 1133–1141. http://doi.org/10.1016/j.jbusres.2006.08.001

14. Teece, D. J. (1988). *Interorganizational requirements of the innovation process*. Produced and distributed by Center for Research in Management, University of California, Berkeley Business School.

15. Torlak, Ö. ve Uçkun, N.(2005) Eskişehir'deki KOBİ'lerin Pazarlama ve Finansman Sorunları, Anadolu Üniversitesi Sosyal Bilimler Dergisi, 5(1), 199-215.

16. Utterback, J. M., & Abernathy, W. J. (1975). A dynamic model of process and product innovation. *Omega*, *3*(6), 639–656. http://doi.org/10.1016/0305-0483(75)90068-7

THE ROLE OF INNOVATIVE SMES TO THE GROWTH OF REGIONAL ECONOMY: THE CASE OF CZECH REPUBLIC

Richard Gardiner
University of Pardubice, Studentska 95, Pardubice 53210, Czech Republic
richardgardiner18@yahoo.com

Petr Hajek
University of Pardubice, Studentska 95, Pardubice 53210, Czech Republic
petr.hajek@upce.cz

ABSTRACT
Globally, we cannot deny the fact that SMEs form part of the fabric of the economic growth. This presupposes that they serve as a pivot for economic development as they unfold the contributions such promoting economic growth, creating innovation as well as enhancing prosperity. This paper examines the relationship between the small and medium-sized enterprises (SMEs) and economic growth of Czech regions. The paper is based on primary research data collected within the Community Innovation Survey in Czech Republic. This survey provides a unique source of data on various aspects of innovation development in SMEs, such as their objectives, cooperation, funding, etc. We show that the share of innovative SMEs has a strong positive impact on the economic accounts of NUTS 4 regions. We also show that this effect has origins in the structure of intellectual capital (both human and structural) of SMEs. We use the data from the Community Innovation Survey to develop the proxy variables of the components of regional SMEs' intellectual capital. We use structural equation models to demonstrate the statistical significancy of these effects and various direct and indirect effects of the share of innovative SMEs on the indicators of regional economic performance. The results show that new-to-firm innovative SMEs are critical for regional economies based on innovation adoption strategy. Human and structural capital represent important prerequisites for this strategy. This has important policy implications, supporting the role of regional embededness to sustain the role of SMEs. This can also provide some generalizations on the contribution of SMEs for national economies.
Keywords: small and medium-sized enterprises, innovation, regional economic growth

1 INTRODUCTION

Generally, the role of Small and Medium Sizes Enterprises (SMEs) to the regional economy growth has been a thorny issue as a section of developing and transitional economies have different perception about their role towards the economic development. Apparently, SMEs are believed to be crucial for economic development (Wennekers and Thurik, 1999). Yet they have not much asserted the instrumental role (especially human capital development, innovation, and economics growth) played by SMEs. The advanced economies, on the other hand, regard SMEs as a backbone of the economics of high income countries. This assertion was supported by report from Organization of Economic Co-operation and Development (OECD) indicated that more than 95% of private institutions are SMEs in on the globe. At the same time it employs 60% of the labour force in the private sector as well as enhancing regional development and creating of social cohesion.

Consequently, existing literature review portrayed that SMEs promotes economic growth through myriad of ways that extend beyond mere creation of jobs. Its early contribution includes the creation of value chain, ensuring linkages with large firms, promoting economic dynamics via entrepreneurship, and ensuring financial market development. SMEs also promote social stability and assists other industries. According to Dalberg (2011), new SMEs enter the market

every year and statically, represent 5% to 20% of the existing enterprises. They inject into the economic system some level of innovation, dynamism and comparably much of this experienced is from smaller firms rather than from large ones. Hence, they can be major sources of business ideas.

Our study was conducted in Czech regions, where the share of SMEs in the total number of enterprises is 99.86%, the share of total employees in the business sector is 59.43%. This shows that SMEs make tremendous contribution to Czech economy (Belas et al., 2015). Undoubtedly, SMEs sector is one of the pivots for increasing competition, productivity and, thus, promoting the growth of income and per capita GDP. This development encouraged structural transformation of the economy because healthy SMEs are linked up with innovation as well as technological advancement. In effect, such undertaking enhances regional and local development, reduces inequalities, in as much as there is rise in income of a wider segment of given population. In a similar way, SMEs induce greater demand for good governance.

The above mentioned facts raise the need for national and regional support of SMEs' innovativeness. The innovative activity of SMEs depends on two important determinants, namely internal sources related to R&D and external support. Regional level is particularly important because it provides stimulating milieu, supporting inter-firm communication, socio-cultural structures and institutional environment (Asheim and Isaksen, 2002). SMEs are territorially embedded in regional innovation systems, leading to collective learning and continuous innovation. Regional knowledge base is thus becoming increasingly important determinant of SMEs' innovativeness (Sternberg and Arndt, 2001; Lasch et al., 2013; Stuetzer et al., 2014). Regional knowledge base affects both SMEs' capacity to create and absorb new knowledge and their ability to exchange knowledge. These effects are rooted in regional human and structural capital (Nitkiewitz et al. 2014).

Regional human capital comprises the know-how characterizing the different actors operating within a region (Demartini and Del Baldo, 2015). It can be developed through formal training and education (Dakhli and de Clercq, 2004). According Belas et al. (2015), SMEs in Czech Republic are burdened with a decrease in domestic demand due to new technology has changed the trend of market demand. SMEs need to re-develop human capital and at same time should be more innovative in their activities to keep up with current demand. Regional structural capital provides SMEs with technological infrastructures, including information and communication technology (ICT), regional knowledge repositories such as universities and research centers and innovation infrastructure and support (Demartini and Del Baldo, 2015).

Most related studies to date have tended to focus of the determinants of SMEs' innovative activity. However, far too little attention has been paid to the role of innovative SMEs in regional setting, including its effect on regional economic growth. Hence this paper investigates: (1) the effect of innovative SMEs on regional economic growth, (2) the effect of current state of regional human and structural capital on the innovativeness of SMEs, and (3) the impact of these towards the growth of regional economy. Thus, we explore how intellectual capital can be transformed into innovation activity of SMEs and thus promote regional economic growth.

The remainder of this paper is structured as follows. Section 2 briefly reviews the determinants of SMEs' innovation activity. Section 3 introduces data selected for the analysis and the research methodology based on structural equation models. In section 4, we present the results of the empirical experiments and section 5 concludes the paper.

2 DETERMINANTS OF SMEs INNOVATION PERFORMANCE

Innovation is one of the topmost factors through which SMEs promote economic growth and it is perceived as driving force bringing up the rear business success. According to Radas et al. (2015) innovations are more vital to SMEs than for larger firms. Since almost all large firms

are innovative due to substantial internal R&D capabilities, the factors that determine innovativeness of SMEs have attracted particular attention in recent literature.

The commonly reported determinant includes the size of the firm. Comparably, larger firms have easier access to resources needed for investment and adopt new technologies. Larger firms have also the sources to both acquisition and generation of innovations. For this reason they benefit from the economy of scale. Besides, they are capable of attracting the best human capital and use its knowledge to innovate their activities.

Secondly, the number of firm's skilled labour is also another determinant. A firm with ability to use new technology or cope with operation of complex technology saves the firm from incurring additional cost in training labour and save time, respectively. Also, SMEs which have well educated and technically qualified employees will definitely be fast in adapting to market innovations. Regional human capital plays a crucial role in providing skilled labour to SMEs. In addition, the perceived resource deficiency in knowledge-based resources constitutes a major perceptual barrier to SMEs' internationalization (Xie and Suh, 2014).

Moreover, the firm's ability to access information can serve as a determining factor. Firms which have the ability to access current or up-to-date information always stand the chance of adjusting and sustaining in the market because the can adopt strategies meeting these economic changes. This implies the utilization of information about consumer behavior/taste or preference, price fluctuations', emergence of new technology and material, financing market opportunities, government regulations on trade as well as taxes are very important to the firms as they could innovate the strategies and activities to meet any changes of this information. In addition, a firm's ICT infrastructure improves the access to knowledge (Hajek et al., 2014). For instance, firms use ICT to substitute their traditional means of communication, control business documents, and carry on their business activities together with business transactions. ICT create innovation by first stepping up of spreading information through closer links between firms and clients. Similarly, ICT increases the efficiency of communication. Again, regional infrastructure as an important component of regional structural capital plays a critical role in this context.

Another important determinant is the SMEs' assess to finance (Prokop and Stejskal, 2015). Apparently, SMEs have internal financial sources. Yet flexible and easy access to external financial sources provides an alternative opportunity to innovate their activities. As a result, SMEs can purchase or perk up the existing or new machinery and equipment as well as capital goods to innovate their business activities. Apparently, the combination of internal R&D expenditure combined with regional (national) financial support represents the most effective mechanism promoting SMEs' innovation performance.

The SMEs' openness to foreign trade is another factor which contributes to innovation activity. The SMEs which are open to foreign trade are capable developing innovation as they are exposed to state-of-the-art knowledeg and technology (Filalotchev et al., 2009). A study conducted by Benacek et al. (2000) for Central and Eastern Europe countries indicated that there emerge technology spillover from foreign direct investment in manufacturing sectors of the Czech Republic, Hungary, Slovakia and Polland. Overall, the manufacturing sector in the Czech Republic had the strongest ability to gain knowledge from the spillovers.

The determinants of SMEs' innovation activity with respect to regional dimension in the Czech Republic can be traced from the study conducted by Prokop and Stejskal (2015). They outlined the importance of public R&D expenditure as an indicator of regional innovation capital.

Following the arguments mentioned above, we hypothesize that:

H1: When combined with private R&D expenditure, regional human capital (HC) and structural capital (SC) promote the innovativeness of SMEs.

Most Czech regions profit from knowledge acquisition, rather than developing more radical innovations. Moreover, Czech regions were categorized as moderate innovators in regional innovation scoreboard (Hollanders et al., 2009; Hajek et al., 2014). We therefore hypothesize that:

H2: For the economic growth of Czech regions, new-to-firm innovations are more important than new-to-market innovations.

3 DATA AND METHODS

To examine the role of innovative SMEs in the economic growth of Czech regions, we collected data from both the Community Innovation Survey (CIS) and the regional database of the Czech statistical office (CSO). The CIS 2010 was based on a harmonized questionnaire of EU Member States and it was carried out in the Czech Republic for the period 2008-2010 by combining sample (stratified random sampling) and exhaustive surveys taking into account the regional dimension of NUTS 4 (77 regions). In total, data on 4,447 SMEs were obtained with the reported response rate greater than 60 %. The CIS is regarded as a comprehensive and reliable source of innovation statistics in the EU.

The innovation activity of the SMEs in the region was estimated by calculating the share of SMEs that introduced a new product or process to the firm/market. New-to-firm innovations are less radical and rely on knowledge acquisition as they are already available from the competitors in the market. In our sample, 28.4 % of SMEs were innovative, introducing new-to-market innovation in 52.9 % and new-to-firm innovation in 79.0 % (note that many SMEs introduced both new-to-market and new-to-firm innovation in the monitored period). To transform the data into regional dimension, we calculated average values for the SMEs located in the region.

R&D expenditures are considered the most important determinant of innovation activity in the related literature. To measure this determinant, we used the regional average of total expenditures for all types of innovation activity, including in-house and external R&D, the acquisition of equipment and the acquisition of existing knowledge from other enterprises and organizations.

SMEs are important actors in regional innovation systems. Although SMEs mostly apply and exploit knowledge generated within the regional innovation system, SMEs are strongly connected to other actors via knowledge transfer component (Hajek et al., 2014). These actors, such as universities and other research organizations, generate and diffuse knowledge. To measure these determinants of SMEs' innovation activity, the concept of regional intellectual capital was utilized, consisting of two interconnected components – human and structural capital. Relying on previous literature on measuring regional intellectual capital, we used the proxies of the two components that were found significant in prior studies. To assess the level of regional human capital, we adopted the measure of educational attainment. To distinguish between general, academic and scientific knowledge and skills, we used the shares of population with bachelor, master and doctoral degree. On average, the shares were 1.8 % for bachelor, 8.6 % for master, and 0.4 % for doctoral degree. Note, however, that significant differences existed between the regions. For example, Prague achieved the values more than twice the average ones.

To evaluate regional structural capital, we focused on the following components: (1) innovation capital (measured by regional government and university R&D expenditures and by the share of employees working in science and R&D), (2) process capital (measured by the share of households with internet access and the share of population participating in the last parliament elections), and (3) market capital (measured by GDP per capita in PPS with EU28=100). Similar as the proxy variables for human capital, the structural capital indicators were strongly

correlated. To obtain unbiased results in regression models, we therefore first performed a confirmatory factor analysis with maximum likelihood estimates. The average weights (AW) for human and structural capital are presented in Table 1. Cronbach's alpha showed > .60, indicating the internal consistency of the models.

Table 1: Results of confirmatory factor analysis

Indicator of HC	Weight	Indicator of SC	Weight
bachelor degree	0.956	regional government and university R&D expenditures	0.909
master degree	0.993	employees working in science and R&D	0.914
doctoral degree	0.956	households with internet access	0.767
		population participating in the last parliament elections	0.731
		GDP per capita in PPS	0.915

To evaluate regional economic growth, we used two common economic measures of innovative activity, employment and sales' growth. Again, to obtain these indicators for NUTS 4 regions, we calculated average values for the SMEs located in the region (20.2 % sales growth on average, 10.8 % employment growth on average between years 2008-2010). As a result, we had a sample of 77 regions with corresponding input-output data.

To study the effects of innovative SMEs on regional economic growth, we constructed several structural equation models. In these models, innovative SMEs represent a mediator variable, causally located between the input variables (R&D expenditure, regional human and structural capital) and output (growth of employment and sales). In other words, we tested both the direct and indirect (via innovative SMEs) effect of the input variables on regional economic growth. The direct and indirect effects were then estimated from the following equations:

$$M = i_M + a_j \times X + e_M, \tag{1}$$
$$Y_k = i_Y + c'_j \times X + b_j \times M + e_Y, \tag{2}$$

where c'_j estimates the direct effect of the input variables on regional economic growth, and $a_j \times b_j$ estimates the indirect effect via innovative SMEs. The total effect c_j can be then calculated as follows:

$$c_j = c'_j + a_j \times b_j. \tag{3}$$

In the models, the causal effect bewteen regional human (and structural) capital and innovative SMEs is moderated through private expenditure on R&D, representing a moderator W_1. Then, the effect of X_j on Y_k may be expressed as follows (Hayes, 2013):

$$Y_k = i + (c_1 + c_2 \times W_m) \times X_j + c_3 W_m + e_Y, \tag{4}$$

where $(c_1 + c_2 \times W_m)$ represents the conditional effect of X_j on Y_k.

4 RESULTS
In Fig. 1 to Fig. 4, we examined both the mediation role of innovative SMEs and the moderation role of private R&D expenditures on regional economic growth (growth of employment and sales). In these models, regional HC and SC influence the economic growth both directly (this is without the mediation role of innovative SMEs) and indirectly (we hypothesize that HC and SC promote the innovativeness of SMEs and thus support regional economic growth). We also

expect that exploiting regional HC and SC can be effectively transformed into innovation only when combined with private R&D expenditures.
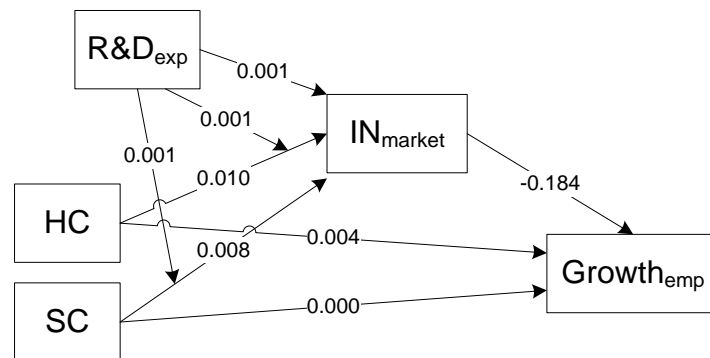

Figure 1: The mediating effect of new-to-market innovative SMEs on employment growth
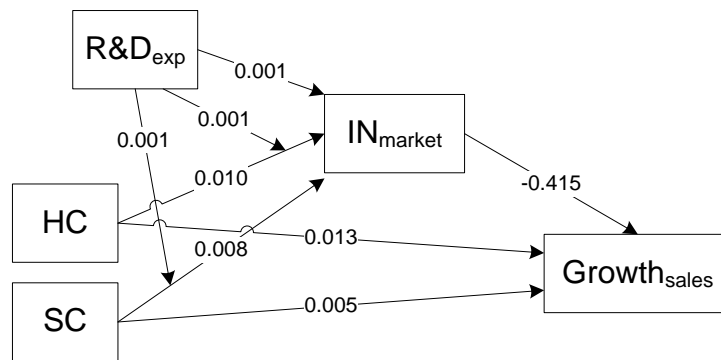

Figure 2: The mediating effect of new-to-market innovative SMEs on sales' growth

Fig. 1 and Fig. 2 show results for more radical new-to-market innovative SMEs (innovation leaders), whereas Fig. 3 and Fig. 4 represent structural models for new-to-firm SMEs (innovation followers).

The result of structural model in Fig. 1 explicitly shows that there is no positive effect from new-to-market innovative SMEs (IN_{market}) on employment growth in Czech regions. The indirect effects from human capital (HC) and structural capital (SC) via innovative market SMEs were also not significant for employment growth. Similarly, private research and development (R&D) expenditure, HC and SC did not show any significant effect on new-to-market innovative SMEs.

The structural model in Fig. 2 also showed no significant effect from new-to-market innovative SMEs on sales growth. The other direct effects from indicators HC and SC also showed insignificant effects. In addition, there was no significant effect from R&D expenditure, HC and SC on new-to-market innovative SMEs. Compared with regional employment growth, the effects were stronger but still insignificant.

The effect of new-to-firm innovation SMEs (IN_{firm}) on regional employment growth was strong, whereas the direct effect from regional HC and SC was insignificant (see Fig. 3). However, regional HC and SC and R&D expenditure showed significant positive effect on new-to-firm innovative SMEs. Thus, HC, SC and R&D expenditure had a strong indirect effect on regional employment growth. Even stronger effects were observed for the structural model in Fig. 4. The directions of the effects on sales' growth were the same as for the employment growth.
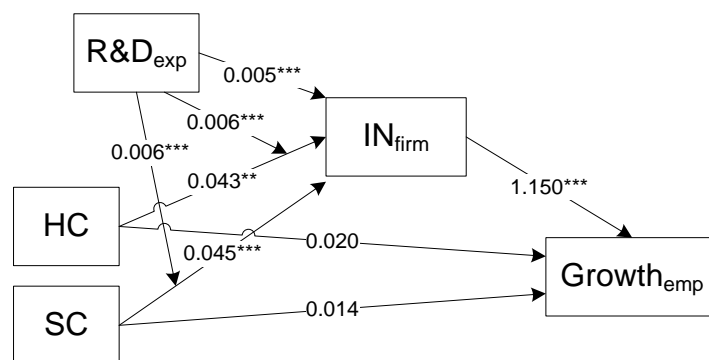
Figure 3: The mediating effect of new-to-firm innovative SMEs on employment growth
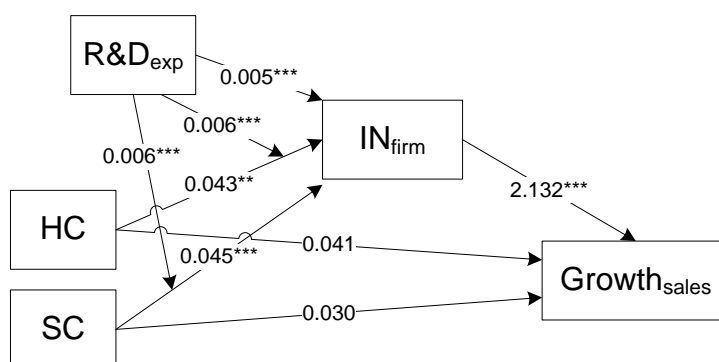

Figure 4: The mediating effect of new-to-firm innovative SMEs on sales' growth

5 CONSLUSION

The present study was designed to determine the effect of innovative SMEs on regional economic growth, and the effect of regional HC and SC on both the innovativeness of SMEs and regional economic growth. In this investigation, the aim was to assess the role of innovative SMEs in the relationship between regional knowledge base and economic growth. Returning to the hypotheses posed at the beginning of this study, it is now possible to state that private R&D expenditure is an important moderator for SMEs in utilizing regional knowledge base, providing empirical support to hypothesis *H1*. Thus, we showed that regional HC and SC promote the innovativeness of SMEs. Moreover, regional support is more effective when combined with private R&D expenditure. This conclusion, however, holds only for new-to-firm innovative SMEs. This finding has important implications for developing regional innovation strategies in moderate innovative regions like Czech regions. Knowledge acquisition strategy is more effective for these regions and should be therefore supported by national and regional governments. This conclusion was further supported by confirming hypothesis *H2*, this is that new-to-firm innovations are more important than new-to-market innovations for the economic growth of Czech regions. One of the more significant findings to emerge from this study is that new-to-market innovative SMEs do not represent a significant driver of regional economy growth in moderate innovative regions. However, more research on this topic needs to be undertaken before the association between regional knowledge base and innovative SMEs is more clearly understood. Future studies on the current topic are therefore recommended. The focus should be placed not only on moderate innovative regions, but also on innovation followers and leaders. Further studies are also recommended, taking onto account additional variables such as foreign direct investment and regional knowledge networks.

LITERATURE:
1. Asheim, B. T., Isaksen, A. (2002). Regional innovation systems: the integration of local 'sticky'and global 'ubiquitous' knowledge. *The Journal of Technology Transfer* 27(1), 77-86.
2. Belas, J., Demjan, V., Habanik, J., Hudaková, M., Sipko, J. (2015). The business environment of small and medium-sized enterprises in selected regions of the Czech Republic and Slovakia. *E+M Ekonomie a Management* 1, 95-110.
3. Benacek, V., Gronicki, M., Holland, D., Sass, M. (2000). The determinants and impact of foreign direct investment in Central and Eastern Europe: A comparison of survey and econometric evidence. *Transnational Corporations, Journal of United Nations* 9(3), 163-212.
4. Dakhli, M., De Clercq, D. (2004). Human capital, social capital, and innovation: a multi-country study. *Entrepreneurship & Regional Development* 16(2), 107-128.
5. Dalberg, H. (2011). *Report on Support to SMEs in Developing Countries Through Financial Intermediaries*. SME Briefing Paper, EIB Draft version, Geneva: European Investment Bank.
6. Demartini, P., Del Baldo, M. (2015). Knowledge and social capital: drivers for sustainable local growth. *Chinese Business Review* 14(2), 106-117.
7. Filatotchev, I., Liu, X., Buck, T., Wright, M. (2009). The export orientation and export performance of high-technology SMEs in emerging markets: The effects of knowledge transfer by returnee entrepreneurs. *Journal of International Business Studies* 40(6), 1005-1021.
8. Hajek, P., Henriques, R., Hajkova, V. (2014). Visualising components of regional innovation systems using self-organizing maps - Evidence from European regions. *Technological Forecasting and Social Change* 84, 197-214.
9. Hajkova, V., Hajek, P. (2014). Efficiency of knowledge bases in urban population and economic growth–Evidence from European cities. *Cities* 40, 11-22.
10. Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. Guilford Press.
11. Hollanders, H., Tarantola, S., Loschky, A. (2009). *Regional Innovation Scoreboard (RIS) 2009*. PRO INNO EURO, INNO METRICS.
12. Lasch, F., Robert, F., Le Roy, F. (2013). Regional determinants of ICT new firm formation. *Small Business Economics* 40(3), 671-686.
13. Nitkiewicz, T., Pachura, P., Reid, N. (2014). An appraisal of regional intellectual capital performance using Data Envelopment Analysis. *Applied Geography* 53, 246-257.
14. Prokop, V., Stejskal, J. (2015). Determinants of machinery firms´ innovation activity-case study from the Czech Republic. In *55th Congress of the European Regional Science Association: World Renaissance: Changing Roles for People and Places*.
15. Radas, S., Anic, I. D., Tafro, A., Wagner, V. (2015). The effects of public support schemes on small and medium enterprises. *Technovation* 38, 15-30.
16. Sternberg, R., Arndt, O. (2001). The firm or the region: what determines the innovation behavior of European firms?. *Economic Geography* 77(4), 364-382.
17. Stuetzer, M., Obschonka, M., Brixy, U., Sternberg, R., Cantner, U. (2014). Regional characteristics, opportunity perception and entrepreneurial activities. *Small Business Economics* 42(2), 221-244.
18. Wennekers, S., Thurik, R. (1999). Linking entrepreneurship and economic growth. *Small Business Economics* 13(1), 27-56.
19. Xie, Y. H., Suh, T. (2014). Perceived resource deficiency and internationalization of small- and medium-sized firms. *Journal of International Entrepreneurship* 12(3), 207-229.

BUSINESS NEGOTIATION AS A CRUCIAL COMPONENT OF SALES

Davor Perkov
University Libertas, Zagreb, Croatia
dperkov@libertas.hr

Dinko Primorac
University North, Koprivnica, Croatia
primoracdinko@gmail.com

Goran Kozina
University North, Koprivnica, Croatia
goran.kozina@unin.hr

ABSTRACT

Negotiation is something that cannot be learned just like that. Negotiation is a controlled communication process that resolves the conflict of interest of two or more reasonable negotiating parties (when each party can block the achievement of the objective of the other side). Business negotiation should be mastered. The key is to know how much to offer in which moment and know where and how to draw the line of what we're prepared to accept. The main hypothesis is that many companies today leave negotiation function outside of standardization in the business processes. Negotiation theory in some segments differs from the negotiation in sales. The purpose of the paper was to point out the specific potentials, problems, dynamics and importance of negotiation as a crucial component of sales. It will be clarified what are the contents of negotiating function, how it affects development and how best to acquire negotiating skills in the sales process. The aim was to draw attention to dimensions that preparation process has when leading the course of negotiations to accomplish desired sales goals. Primary research has been conducted at the end of the year 2015. The sample of fifty (N=50) respondents from different Croatian companies took part in an online survey. The findings indicated that Croatian employees are not prepared quite adequately for the process of negotiation and that they are not improving their negotiation skills.
Keywords: business negotiation, sales process.

1. INTRODUCTION

The choice of this topic was prompted because of its importance and representation in many literatures, as well as on the Internet. Breadth of the topic and its development is intriguing and may be discussed from many different perspectives. Negotiation is a controlled communication process that resolves the conflict of interest of two or more reasonable negotiating parties (when each party can block the achievement of the objective of the other side). If one side cannot block the achievement of the objectives of the other side, then it is not a negotiation. Negotiation is a special form of social interaction, a form of coexistence in diversity.

Negotiation can even be fun if there is knowledge about what is to be done, but it could be a real hassle if in most cases the negotiations end up as "short-sleeved". So again, proceeding in negotiating hike armed with arguments, data, and even the wiles and at all costs trying to drive the result of negotiations solely to ones' will, the path is leading in the wrong direction. Negotiations can be considered successful only when both parties are satisfied with the outcome of the negotiation. Otherwise, before even the winning foam of champagne settles, the grand success can backfire right in ones' head. Therefore, it should be clever to prepare a strategy in which there are clearly separated targets to be achieved and the details that can be "sacrificed" in favor of the opposite side in accordance with the principle of "always ready to accept a

compromise." The goal of this paper was to present how CRM and loyalty programmes can influence the business result and competitiveness of two Croatian retailers. The main hypothesis was that many companies today leave negotiation function outside of standardization in the business processes. The purpose of the paper was to point out the specific potentials, problems, dynamics and importance of negotiation as an art of selling. The aim was to draw attention to dimensions that preparation process has when leading the course of negotiations to accomplish desired sales goals.

This paper was structured in five major chapters. The first chapter briefly introduces the topic of research, main hypothesis as well as purpose and aim and presents the paper structure. The second chapter elaborates the literature review of the term and relevant business negotiation concepts and is broken into two subheadings. The third chapter analyses best negotiation skills, strategies and practices in sale. Depending on type of the negotiator and other factors, the negotiation strategy is created. The fourth chapter describes the research approach and design, sample and methods to test the hypothesis. The fifth chapter presents the research findings. The sixth chapter summarizes key points of the paper.

2. LITERATURE REVIEW

Negotiation is the principal way that people redefine an old relationship that is not working to their satisfaction or establish a new relationship where none existed before. Because negotiation is such a common problem-solving process, it is in everyone's interest to become familiar with negotiating dynamics and skills. Reduced to its essence, negotiation is a form of interpersonal communication. Together with *listening skills*, *positive attitude* and *self-confidence,* according to our survey (see part 5-Findings!) *communication abilities* are the most important prerequisites for successful negotiations. Communication is a two – way street that requires everyone involved to exchange messages. The goal is to make the own position or proposal understood by the other party, and this relies on communication ability.

Negotiation is a discussion between two or more participants who are trying to find a solution to their problem.[1] Michael and Sandra Rouse (2005;p.191) define negotiation as a social process of interaction and communication between people with a purpose of achieving permanent agreement based on some common interests and all of that to achieve default goals and avoid conflicts. Although there are single negotiations between individuals or organizations, this definition highlights that negotiation is a process, a continuous assemblage of negotiations that take place during a certain time period. Also, this definition highlights that agreement between two sides has to be permanent and based on common interests.

2.1. Term and types of business negotiation

In business, negotiation occurs between managers and staff, employers and employees, professionals and clients, within and between organizations and between agencies and the public. Negotiation is a problem-solving process in which two or more people voluntarily discuss their differences and attempt to reach a joint decision on their common concerns. This process includes constant interaction and dialogue between the parties so they can find the solution that is the best for both of them. This interaction stop to be negotiation when one party is physically, psychologically or politically incapable to say "no" (Gosselin, 2007). According to Cohen (2002;p.3), negotiation is a process in which two or more parties work together to come to the mutually acceptable solution of one or more questions. It can relate to trade transaction, contracts or bargain of any kind.

According to Čulo and Skenderović (2012), negotiation is a dialogue between two or more people or parties, intended to reach an understanding, resolve point of difference, or gain

---

[1]http://www.beyondintractability.org/essay/negotiation (access: Sep 8th 2015)

advantage in outcome of a dialogue, to produce an agreement upon courses of action, to bargain for individual or collective advantage and to craft outcomes to satisfy various interests of two parties involved in negotiation process. Negotiation is a process where each party involved in negotiation tries to gain an advantage for themselves by the end of the process. Therefore, negotiation is intended to aim at compromise.

Negotiations have particular importance in business. Some people say that "the business life is a permanent negotiation with other people who are defending their own interests". In business environment, negotiation is usually connected with 2 areas: first one is commercial one, actually buying and selling and the other one are mutual relationships in an organization. Also, there are many other areas where it is useful to own negotiation skills: negotiation related to time, conditions and way of delivery, break length and time for the employees, schedule for meetings, etc. (Baines, 1994). Negotiations can be divided in different types, depending on goals, time, mutual relationships of included parties and potential conflict. Based on result, negotiations can be divided on integrative and distributive, whilst Michael and Sandra Rouse (2005) add another type of negotiation, destructive ones (Figure 1).

	COMPANY *A* WINS	COMPANY A LOSES
COMPANY *B* WINS	Integrative „win-win"	Distributive „win-lose"
COMPANY *B* LOSES	Distributive „lose-win"	Destructive „lose-lose"

Figure 1. Negotiations based on result

Integrative negotiations finish when both parties get what they want. During distributive negotiations both parties seek to win no matter the win for other party and usually the win of first party is the loss for another one. Only distributive negotiation focuses on interests of both parties, and it should be applied if the ability of negotiations is intended to be used as a source of competitive advantage. In fact, other ways of negotiation don't depart from such a broad front of objectives, or the funds, and they are therefore called strategies of reduced negotiation (Tudor, 1992).

Destructive negotiations are processes in which both parties seek to win even though there is a possibility to lose (even though they already won formally). Sometimes individuals or organizations want to hurt another party so they can prove their opinion and so they can win at any cost. However, at the end of that process, they tend to become losers.

2.2. Preparations and sales negotiation outcomes

According to Lišanin (2004), first and very important phase of each sales negotiation process are the *preparation and planning*. Usually, it is attributed to 70 to 90% success in the negotiations to this stage. The main task of this phase is to identify and study the available sources of information, and based on them, examine and identify needs, wishes and opportunities important to other negotiation party. At this stage, it should be taken into account

not only the organizational needs but also individual characteristics and needs of those who will participate in the sales negotiations. It should not be forgotten that both sides enter into negotiations as a persons and an individuals with their own needs. Here lies the abilities to find a *win-win* solution that would maximally satisfy both sides, regardless of entering into negotiations because of the disagreement existence or conflict of interest. The diversity of the real needs and views regarding the priorities of their satisfaction is just what enables the *win-win* outcomes in the most difficult circumstances, unless both sides really try. Before attending the negotiations it should be established what should be disclosed or provided for what we need and expect from the negotiations. In addition to the established base, maximum, minimum and target positions, there must be anticipation for the thing that might be the key or problematic in the way of an agreement.

The second phase of the negotiations is the *negotiating session* itself or meeting in which there are attempts to reach an agreement. At the very beginning it is necessary to do everything possible to reduce tensions and to express the intent for a successful outcome for all parties. Firstly, negotiating sessions are essentially composed by the harmonization and ratification of the agenda and presentation of items that will be discussed. That should create the base for negotiation process, revealing the real needs and starting positions of each party.

The next steps are the concrete *proposals and discussion* about arguments, possible solutions, concessions and items that could be possible to exchange or could be ultimately exchanged. Two parties express their different points of view. Negotiators should always be sure that for the concessions they make, they should always get that (or approximately that) value in return. Otherwise, it may happen that the negotiation outcome is worse than it was before. In the *win-win* approach to negotiations, preparation will include many seemingly minor issues such as: determining the place of negotiations, determining an equal number of team members and care about the environment and schedule of negotiators. Also, sales negotiator must make the basic concepts based on following:[2]

- ✓ Alternative negotiations
- ✓ Minimal limit for accomplishing agreement
- ✓ How flexible will he or she be and which compromises is he or she willing to make?
- ✓ BATNA (*Best Alternative To a Negotiated Agreement*)
- ✓ The lowest/the highest acceptable price
- ✓ ZOPA (*Zone of Possible Agreement*)

All of that should lead to creating a supportive and pleasant environment for everyone involved. *Win-win* is a whole philosophy of human interaction because both sides win. Agreements or solutions are mutually beneficial and satisfying (Cohen, 2002).

From the other hand, a *win - lose* approach usually takes preparation in thinking and arranging various traps, ways of expressing power and many manipulative techniques which will help achieve the pressure and dominance over the other side. Such approach does not contribute to building confidence and nurturing relationships in the long run. If the opposing party still insists on the use of pressure, unverified information and weak arguments, such tactics can be publicly discredited, but it is always necessary to keep personal integrity and providing a new chance to turn the negotiations into a collaborative environment.

Good preparation in advance and a clear understanding of the minimum goals that we want to achieve with negotiations combined with the awareness of the best alternative to the supposed agreement will help not letting possible large pressures in negotiations to end in a way that later regret will follow. Sometimes it's better to get out of the sales negotiations in time, rather than accept extremely unfavorable solutions to us that perhaps are even the long-term binding.

---

[2] http://www.colorado.edu/conflict/peace/example/fish7513.htm (access: Nov 20th 2015)

3. STRATEGIES AND BEST PRACTICES OF NEGOTIATIONS IN SALES

Understanding the other party's interests and tactics is integral to good negotiating. Choosing a strategy that best responds to their interests and tactics will help you achieve the best outcome. Lewicki et al. (2009) suggests that goals have to be the path of the negotiation strategy. Negotiators must foresee which goals they want to achieve in negotiations and they must focus on how to do that. Being able to negotiate well, impacts so many key factors in careers. Negotiation is done for jobs and salaries, for promotions and resources, with clients and in sales. Due to Grant (2014) the best practices of negotiations are:

1. Sharing information

Negotiation is often approached to with guard and not showing all cards. Yet, while some believe this is a smart approach, it has a negative impact on outcomes and inhibits trust. People tend to be matchers and *follow the norm of reciprocity, responding in kind to how we treat them.* If we want to be trusted, we must first offer it. Studies have shown that revealing some information, even when it's unrelated to the negotiation, increases the outcome. There is no need to put all cards on the table at the outset. Simply putting something of one's out there – hobbies, personal concerns, or hopes – can set a positive tone that's conducive to gaining agreement.

2. Ranking in order priorities

Typically when there is negotiation, it is know what the key issues are, and they are sequenced. For example, when trying to close a new client, it might be said that the price is most important, and if no one agrees, there's no use to continue. Grant's research shows that we are able to achieve better outcomes by ranking and leaving all the issues on the table and being transparent about it. In that way both parties can compare their rankings and determine what the full sets of options really are.

3. Go in knowing targets price and walk away terms

Walk away price (or terms) is reservation price. The lowest price that buyer is willing to accept from a seller before they are no longer interested in purchasing. Target price is the goal we are hoping for. Often we go into negotiations with one or the other – or letting the partner start the bidding. This puts entire team at a huge disadvantage. It's critical to do the research ahead of time here. Research is to be based on firm data, as not only will it provide more confidence and power to the team, but it also reduces the chance of throwing something crazy out there. By knowing teams own range, it will help make better decisions in the moment, and be clear about the limits.

4. Make the first offer

This is one piece of advice that clearly defies conventional wisdom. In negotiations, information is often equated with power. It's best to extract as much as possible from the other person before tipping our own hand. Fixed-pie negotiations assume there is a limited amount of benefit to go around. *Take it or leave it* is a fairly uncreative thing to say in a negotiation.[3] People who make first offers get better terms that are closer to their target price. The reason is the psychological principle of anchoring. Whatever the first number is on the table, both parties begin to work around it. It sets the stage. Often we are reluctant to go first because we may be way off, and disengage the other party. Higher prices make the buyer focus on the positives, while lower ones invite focus on the downsides. In other words, we find data that supports this anchor. Consider real estate: a high-priced home makes us look at all the desirable qualities, while a below-market offering brings up a bad location or needed repairs. Ideally the best first offer is one that's just outside the reservation price.

---

[3] http://www.forbes.com/sites/larrymyler/2015/06/01/four-ways-to-win-any-negotiation/ (access: Nov 20th 2015)

5. Don't counter too low

If the first offer cannot be made, then the team needs to protect themselves against the anchoring effect. Caution: most people go too low, too quickly. The counter should be based on the same information the team would have used if they would made the first offer. Re-anchoring is also to be considered. Letting the other person know that their offer is way off, and go back in with a new reset. It also may be helpful to call out what is observed to redirect the conversation.

6. Counter offers make both parties more satisfied

Every buyer wants to feel that they got a good deal; every seller wants to feel as if they drove a hard bargain. Parties are most satisfied on both fronts if there was some back and forth. It is advised that the first offer shouldn't be taken, even if it meets desired needs. By going back and asking for concessions it can be ensured that the best deal is done, and it will increase teams' satisfaction as well. More satisfied partners are more likely to work harder and be more committed to the end result, which is the ideal outcome from the start.

Understanding the other party's interests and tactics is integral to good negotiating. Choosing a strategy that best responds to their interests and tactics will help achieve the best outcome. Strategy is the general plan of achieving goals. When the negotiators state their goals, they move on to the next element of the course: choice and development of the strategy. Some of the different strategies for negotiation include:[4]

- *Problem solving*: both parties committing to examining and discussing issues closely when entering into long-term agreements that warrant careful scrutiny.
- *Contending*: persuading your negotiating party to concede to your outcome if you're bargaining in one-off negotiations or over major 'wins'.
- *Yielding*: conceding a point that is not vital to you but is important to the other party; valuable in ongoing negotiations.
- *Compromising;* both parties forgoing their ideal outcomes, settling for an outcome that is moderately satisfactory to each participant.
- *Inaction:* buying time to think about the proposal, gather more information or decide your next tactics.

Chosen strategy will depend on with who the negotiations are and the type of relationship towards them. For example, what level of cooperation and common interest exists between the two, and how will each party behave during the negotiation? It will also depend on what they are negotiating and the time frame. The ability to defend ones point of view and the ability to convince the opponent in ones' own point are often key elements of success. Leaving aside the emotions and dishonest rhetorical questions, negotiator is always armed with well-built line of argument.[5]

4. RESEARCH METHODOLOGY AND SAMPLE ANALYSIS

This chapter describes the research approach and design, sample of respondents and instruments. The main working hypothesis of this paper was that many companies leave the negotiating function outside of standardization in the business processes. That speaks of the many mistakes companies are confronted with when designing future goals and sales objectives. In this paper the subject of research is negotiating function as one of the key sales capabilities to which special attention, importance and appropriate access must be given. We used secondary and primary data sources. Secondary sources included domestic and foreign scientific and professional literature, as well as relevant online databases. The research of literature was conducted by desk research method. Primary information sources have been

---

[4] https://www.business.qld.gov.au/business/running/managing-business-relationships/negotiating-successfully/negotiating-strategies (access: Nov 20th 2015)

[5] Authors translation from: Nepryahin Nikita (2010). *Ybejday i pobejday. Secreti efektivnoy argymentacii.* Moskva: Alpina Pablisherz. P. 132

obtained through empirical research of sales negotiation processes in different Croatian organizations. Using an online survey, 50 individual respondents were included (Figure 2).

VARIABLE	Structure (%)	VARIABLE	Structure (%)
Age		*Gender*	
20- 30	8	Male	60
31-40	42	Female	40
41 and more	50		
Branch		*Number of employed in an organizations*	
Retail	18	1-50	46
Construction	4	51-100	6
Tourism	4	101 and more	48
Industrial production	6		
Finance	6		
Catering	4		
Local government	6		
Forestry	8		
Undeclared	8		
Other	36		

Figure 2. Sample analysis

In the section "other", two respondents were employed in culture and two in servicing. In the branches of education, transport, science and high education, traffic, precise mechanics and electronics, vehicle servicing, agricultural production, honey production, maintenance of motor vehicles, geodetic services and informatics, bookkeeping and business counseling, there was only one respondent employed. For creating the questionnaire it has been used Google Forms on Google Drive. Respondents could not be younger than 20 years, because it is assumed that negotiation duty can be led by people that are employed and have more experience. Key methods used in the conducted research include logical methods. Particularly the methods of analysis, synthesis, deduction and comparison were applied from this group of methods. Mathematical and statistical methods were also applied in this paper.

5. FINDINGS

This chapter was designed to present the study results and evaluate findings in a way to test the stated hypothesis. Respondents answered 11 questions about personal data, attendance of negotiation education, frequency of coordination with the team before the negotiation process, outcomes of negotiations and finally, about attributes (perks) good negotiator should have. Most of the questions were closed – type. Respondents received the questionnaire in form of Google Forms through e – mail. The results of survey are shown in Figure 3 and Figure 4. The responses indicate that 8% of the respondents often attend seminars, courses or some other types of education to improve negotiation skills. 38% of them attend to these programmes few times a year, while 36% do that only once a year. 18% of respondents are not attending any type of education at all (variable 1). Not attending training and not investing in improving negotiating skills, it can significantly affect the ability of negotiators. There is a possibility that due to financial constraints people are unable to pay a course or a training which requires money. On the other hand, there are many seminars, internet sources and additional literature which are either financially acceptable or completely free. It all depends on the willingness and commitment of the people in the negotiation process and whether they want to expose themselves more in that direction or not. Under variable 2 we can see that 57% participants meet with their team in order to coordinate and harmonize only once or never before the negotiations. 43% of them meet from 2 to 6 times before negotiations. It is evident that they

believe that the preparation, coordination and harmonization with the team prior to the negotiations have a big importance. These results indicate a lack of awareness of employees about the importance of preparation before the sales negotiations. Coordination and harmonization with the team is always a smart move. No matter how many years someone is working together, how long they knew who and how many people are used to the interpersonal relationship between them, it can never be known to whom one will speak at the negotiating table. Information is the most important resource of today's sales and it is always advisable for the team to be engaged in the coordination prior to negotiations in order to better prepare for the negotiation process. Whereas the third variety of *win-win* outcomes is present in more than 76% cases, for the majority of respondents (82%), *win-lose* outcome has up to 50% representation in their sales negotiations (variable 4). It can be concluded that the vast majority of negotiations, for the respondents in the questionnaire, are ending with victory, but also the victory of the other side. It speaks that in most cases compromise is achieved, and that no one's needs, demands or proposals are ignored.

Variable	Structure (%)
1. Number of attended educations in order to improve negotiation skills:	
• Often	8
• Few times in year	38
• Once a year	36
• Not attending at all	18
2. Number of conducted team coordination and advising before the negotiations:	
• Never	18
• Once before negotiations	39
• 2-5 times before negotiations	39
• 6 and more times before negotiations	4
3. *Win-win* negotiation outcomes:	
• 0-25 %	14
• 26-50 %	18
• 51-75 %	30
• 76-100 %	38
4. *Win-lose* outcomes:	
• 0-25 %	50
• 26-50 %	32
• 51-75 %	16
• 76-100 %	2
5. *Lose-lose* outcomes:	
• 0-25 %	74
• 26-50 %	22
• 51-75 %	4
• 76-100 %	0
6. *Lose-win* outcomes:	
• 0-25 %	82
• 26-50 %	14
• 51-75 %	4
• 76-100 %	0

Figure 3: Importance and number of attended education, advising before the negotiations and sales negotiaton outcomes (N=50)

According to the questionnaire of all employees, who are 6 or more times a year attending some of negotiation training, 76% to 100% of negotiations are ending *win-win* outcome. Research has shown that, if there is a know-how, negotiation can have a positive outcome for both sides. Variable number 5 shows that 37 (74%) respondents believe that up to 25% (or less) of their overall sales negotiations ends with a *lose-lose* situation share of respondents by 11 (22%) respondents said that that percentage varies from 26% to 50%. The research indicates that an extremely small number of negotiations ends with a *lose-lose* outcome. It points to the fact that they know what they're doing and know how to reach a compromise and the best solution for both sides. Variable number 6 shows share of respondents by *lose–win* end in negotiations. It is shown that majority of 41 respondents (82%) finished their negotiations with *lose–win* outcome in less of 25% cases. 7 (14%) respondents said that that percentage varies from 26% to 50%. Nobody of the respondents said that 76 or more their negotiations end up in a *lose-lose* neither *lose-win* situations. These results can be equated with the results from the previous paragraph. For 48 (96%) of respondents negotiations rarely end with a lose - win outcome, and for only four of them (4%) the outcomes of lose - win are more often their negotiations.

In the last part of the research, the respondents expressed their opinions on open question: *What qualities (characteristics) make a good negotiator?* Due to total of 177 responses, the most important characteristics are (Figure 4): *listening skills* (19%), *positive attitude* (16%), *self-confidence* (13%) and *communication abilities* (12%).
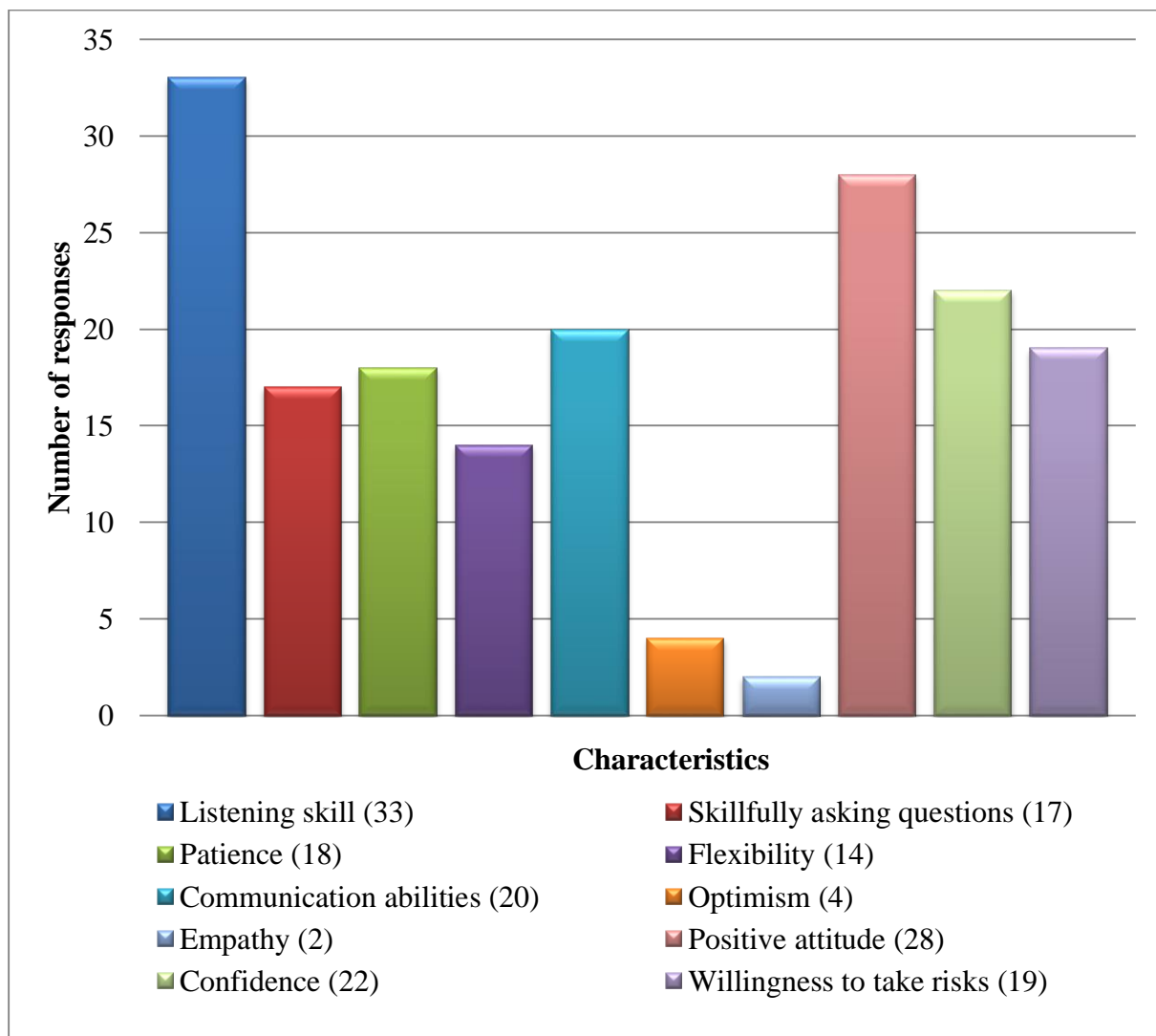

Figure 4. Most important characteristics of a good sales negotiator (N=177)

Willingness to take risks was cited in 11% questionnaires, *patience* in 10%, *skillfully asking questions* in 9% and *flexibility* in 7%. The characteristics that have received the least of the respondents' votes were optimism and *empathy*. The research indicates that today it is very important to listen and not just blindly following thoughts and actions, but also paying attention to the other side. If you listen carefully, a lot can be heard. If a lot is heard, the easier it can be to understand the situation. If the situation is easier to understand, it is easier to come up with a positive outcome.

6. CONCLUSION

Negotiation theory in some segments differs from the negotiation in sales. In this paper negotiation process was shown as a crucial component of sales. The goal was to draw attention to dimensions that preparation process has when leading the course of negotiations to accomplish desired sales goals. The main hypothesis was that many companies today leave negotiation function outside of standardization in the business processes.

From our primary online research conducted in year 2015 among fifty (N=50) domestic sales negotiators, it follows that Croatian employees are not prepared quite adequately for the process of negotiation and that they are not improving their negotiation skills. Majority of negotiations have a *win-win* or *win-lose* outcome and minority of negotiations have a *lose-lose* or a *lose-win* outcome. Due to our research, *listening skills*, *positive attitude*, *self-confidence* and *communication abilities* are the most important characteristics of good sales negotiator.

Considering the limitations which derive from inadequate number of respondents, the results of this research need to be taken with a grain of salt, i.e. they should not serve as the basis for making general conclusions about sales negotiations in Croatian organizations. However, the results are quite indicative and statistically reliable for deeper understanding of the importance of negotiations skill in modern business. In conclusion, this research might deserve an expansion with a larger sample in the future in order to make strong and general statements about these issues in Croatian economy.

LITERATURE:

1. Čulo, K., Skenderović, V. (2012). Communication in the Process of Negotiation. *Informatologija*. Vol. 45, prosinac 2012, No. 4, str. 323–327.
2. Baines, A. (1994). *Negotiate to Win*. Work Study: Volume 43.
3. Cohen, S. (2002). *Negotiating Skills for Managers*. Wisconsin: McGRaw-Hill.
4. Gosselin, T. (2007). *Practical Negotiating: Tools, Tactics and Techniques*. New Jersey: John Wiley & Sons Inc.
5. Grant, A. (2014). *Give and Take: Why Helping Others Drives Our Success*. Penguin.
6. Lewicki, R., Saunders, M. D., Barry B. (2006). Pregovaranje. Zagreb: Mate.
7. Rouse, M. J., Rouse, S. (2005). Poslovne komunikacije. Zagreb: Masmedia.
8. Tomašević Lišanin, M. (2004). *Pregovaranje kao poslovni proces koji dodaje vrijednost. Zbornik Ekonomskog fakulteta u Zagrebu.* Godina 2, broj 1. Str. 152. (access: Nov 15th 2015 from: hrcak.srce.hr/file/41454)
9. Tudor, G. (1992). *Kompletan pregovarač–umijeće poslovnog pregovaranja*. Zagreb: MEP.
10. http://www.beyondintractability.org/essay/negotiation (access: Sep 8th 2015)
11. https://www.business.qld.gov.au/business/running/managing-business-relationships/negotiating-successfully/negotiating-strategies (access: Nov 20th 2015)
12. http://www.colorado.edu/conflict/peace/problem/intpos-p.htm (access: Nov 20th 2015)
13. http://www.forbes.com/sites/larrymyler/2015/06/01/four-ways-to-win-any-negotiation/ (access: Nov 20th 2015)

13ᵗʰ International Scientific Conference on Economic and Social Development