Faculty of Economics-Skopje
Ss. Cyril and Methodius University in Skopje

ECONOMIC AND BUSINESS TRENDS SHAPING THE FUTURE

International Scientific Conference, Skopje,

11-12 November 2021, online

2nd international scientific conference
Economic and Business Trends Shaping the Future

November 11 – 12, 2021

Online Conference Proceedings

Edited by:

Mijalche Santa, PhD

Published by

Faculty of Economics-Skopje, Ss. Cyril and Methodius University

Bul. Goce Delcev 9V, 1000 Skopje, Republic of North Macedonia

www.eccf.ukim.edu.mk

Edition: 2nd

Publication type: e-book

Available at: https://repository.ukim.mk/handle/20.500.12188/9545

Published: Skopje, December, 2021

ISSN: 2671-3705

SCIENTIFIC COMMITTEE (alphabetical order)

- Agnieszka Piekutowska, Faculty of Economics and Finance, University of Bialystok, Poland.
- Agnieszka Alińska, SGH Warsaw School of Economics, Poland
- Anita Ciunova-Shuleska, Faculty of Economics – Skopje, Ss Cyril and Methodius University, North Macedonia
- Anna Lasakova, Faculty of Management, Comenius University in Bratislava, Slovakia
- Atanasko Atanasovski, Faculty of Economics – Skopje, Ss Cyril and Methodius University, North Macedonia
- Aykut Hamit Turan, Sakarya University, Turkey
- Bobi Ivanov, College of Communication and Information, University of Kentucky, USA
- Boban Melovic, Faculty of Economics, University of Montenegro, Montenegro
- Branislav Boricic, Faculty of Economics, University of Belgrade, Serbia.
- Dragan Gligoric, Faculty of Economics, University of Banjaluka, Bosna and Herzegovina
- Fatmir Memaj, Faculty of Economy, University of Tirana, Albania
- Francisco Simões, Iscte – University Institute of Lisbon, Portugal
- Goce Andrevski, Queen's University, Canada
- Goce Petreski, Macedonian Academy of Sciences and Arts and Faculty of Economics – Skopje, Ss Cyril and Methodius University, North Macedonia
- Goran Petrevski, Faculty of Economics – Skopje, Ss Cyril and Methodius University, North Macedonia
- Guillermo Duran, University of Buenos Aires, Argentina
- Igor Ivanovski, Faculty of Economics – Skopje, Ss Cyril and Methodius University, North Macedonia
- Josef Windsperger, Faculty of Business, Economics and Statistics University of Vienna, Austria
- Katerina Toshevska-Trpcevska, Faculty of Economics – Skopje, Ss Cyril and Methodius University, North Macedonia
- Kimberly A. Parker, School of Journalism and Media, University of Kentucky, USA
- Lidija Pulevska Ivanovska, Faculty of Economics – Skopje, Ss Cyril and Methodius University, North Macedonia
- Ljupcho Eftimov, Faculty of Economics – Skopje, Ss Cyril and Methodius University, North Macedonia
- Marija Grishin, University College Dublin, Dublin, Ireland
- Marko Djogo, Faculty of Economics, University of East Sarajevo, Republic of Srpska, Bosnia and Herzegovina
- Matej Cerne, Ph.D., School of Economics and Business (SEB LU), University of Ljubljana, Slovenia
- Metka Tekavčič, School of Economics and Business, University of Ljubljana, Slovenia
- Mihai Mutascu, ESCE International Business School Paris, France
- Miroslav N. Jovanovic, University of Geneva, Switzerland
- Momchil Antov, Dimitar A. Tsenov, Academy of Economics, Svishtov, Bulgaria.
- Natalia Ribberink, Hamburg University of Applied Sciences, Faculty of Business & Social Sciences, Germany

- Neven Šerić, Faculty of Economics, University of Split, Croatia
- Nikola Milović, Faculty of Economics, University of Montenegro, Montenegro
- Nina Begicevic Redzep, Faculty of Organization and Informatics, University of Zagreb, Croatia
- Petar Veselinović, Ekonomski fakultet, Univerziteta u Kragujevcu, Serbia
- Predrag Bjelic, Faculty of Economics, University of Belgrade, Serbia.
- Predrag Trpeski, Faculty of Economics – Skopje, Ss Cyril and Methodius University, North Macedonia
- Sanda Renko, Faculty of Economics and Business, University of Zagreb, Croatia.
- Sasho Arsov, Faculty of Economics – Skopje, Ss Cyril and Methodius University, North Macedonia
- Simon Best, Middlesex University Business School, U.K.
- Stanko Stanic, Faculty of Economics, University of Banja Luka, Bosnia and Herzegovina
- Tadija Đukić, Faculty of Economics, University of Nis, Serbia
- Taki Fiti, Faculty of Economics – Skopje, Ss Cyril and Methodius University and Macedonian Academy of Sciences and Arts, North Macedonia
- Vincent Charles, School of Management, University of Bradford, U.K.
- Vladimir Filipovski, Faculty of Economics – Skopje, Ss Cyril and Methodius University, North Macedonia
- Zorica Bozinovska-Lazarevska, Faculty of Economics – Skopje, Ss Cyril and Methodius University, North Macedonia

ORGANIZING COMMITTEE

- Mijalche Santa, PhD
- Nikolina Palamidovska-Sterjadovska, PhD
- Nikola Levkov, PhD
- Suzana Makreshanska, PhD
- Marija Trpkova-Nestorovska, PhD
- Daniela Mamucevska, PhD
- Elena Markevska Disoska, PhD
- Biljana Tashevska, PhD
- Atanasko Atanasovski, PhD
- Marina Trpeska, PhD
- Marijana Cvetanovska, PhD

TABLE OF CONTENTS

ORGANIZATIONAL CHANGE AND EMPLOYEE STRESS: EMPIRICAL ANALYSIS OF EMPLOYEES IN THE REPUBLIC OF NORTH MACEDONIA

Andrijana Ristovska
National Bank of the Republic of North Macedonia
andrijanaristovska07@yahoo.com

Ljupco Eftimov
Faculty of Economics – Skopje, Ss Cyril and Methodius University
eftimov@eccf.ukim.edu.mk

ABSTRACT
This paper addresses the issue of the importance and necessity of introducing constant organizational changes and their impact on employee stress as one of the primary pull factors of the employee turnover intention. In this regard, human resource managers in organizations are becoming increasingly aware that hiring and retaining talents are the most important determinants of success in the complex global world and that they must work more intensively on modernizing the process of change management to help employees, not only for acceptance, but also for their involvement in the change implementation process.
The number of respondents from the processed data so far is 439 employees (differing according to their demographic characteristics).
The purpose of this paper is to determine whether there is a statistically significant difference between the four different types of organizational change according to the Cummings and Worley (2014) organizational change classification (Human process changes; Techno-structural changes; Human resource management changes and Strategic changes), regarding their impact on the employee emotional state, as well as which type of organizational change has the most significant impact on employee stress in the Republic of North Macedonia.
The survey findings contributed to the conclusion that Macedonian employees in terms of their feelings of fear, anxiety, nervousness, etc., equally perceive the impact of the different types of organizational change. More specifically, there are no statistically significant differences between the impacts of the different types of organizational change over the stress they face because of these changes.

Key words: *organizational change; human process changes; techno-structural changes; human resource management changes; strategic changes; stress; employee' turnover intention.*

JEL Classification: *C83, C88, J63, O33, I31*

http://hdl.handle.net/20.500.12188/15856
http://doi.org/10.47063/EBTSF.2021.0001

1. INTRODUCTION

Throughout its existence, man is constantly learning new mechanisms of adaptation or counteraction to unwanted changes, which affect him and his growth by drawing positive outcomes from the decisions made, both in private and professional life. Changes in professional life have a strong impact on private life, and vice versa, in a continuous paradigm that strives to achieve an acceptable balance.

Change is an integral and inevitable part of organizations as well, because their sustainability and development is strongly influenced by the process of change and transformation (Rothwell et.al; 2016; p.4). The degree of acceptance of the organizational change or the development of greater or lesser resistance, which is manifested in the employee behavior, also depends on the manner of implementation of the organizational change.

Successful implementation of organizational change is possible. The changes do not only refer to a new location, new processes, new structures, level of performance, but in essence, they represent a simultaneous raising of the organization's ability to deal with and respond to emerging needs, opportunities and impacts. In organizational systems people are making strong efforts in the processes of change and they are becoming more and more attached to it. They are having more confidence in their own contributions and a higher level of readiness to deal with future changes, by continuously building experience in these processes. Organizational change occurs when the process of transition from the current status quo to another desired future state begins. This process is actually based on planning and implementing change, in a way that will achieve the lowest level of employee resistance, as well as the lowest organizational costs, but at the same time realizing the maximum level of change implementation effectiveness. Change and its impact is one of the most widely discussed issues in the field of contemporary management. In today's business environment, organizations must constantly make changes in order to remain competitive in the global market (Sikdar; Payyazhi; 2014).

Regardless of its type, change needs to be properly managed and implemented as it has a strong impact on improving the level of costs, quality, decision-making process and the entire management process in general (Van Hoek et al.; 2010). According to Christiansen and Claus (2015), it creates a domino effect in all other aspects of the organization and their overall improvement. On the other hand, improper change management creates negative effects, which often lead to the loss of significant resources, both in terms of time and finances, as well as people and their effort and energy. Hence, it not only leads to unsuccessful implementation of change, but also restores the organization to its previous state, from which it will be very difficult to recover again (Simoes; Esposito; 2014).

The most critical reason why efforts to bring about organizational change fail is the employee resistance. Change is often experienced with fear which makes it difficult to implement it, as organizations find it very difficult to obtain the necessary support and commitment from employees. In this regard, the ability to effectively manage change is a much-needed skill that managers need to possess, because organizations need people who will have a strong and significant positive contribution to change efforts. Employee resistance often occurs as a result of fear of losing their job or their status in the organization, and this happens precisely because of the lack of understanding of the purpose and need for change, which is actually a result of lack of the ability to effectively manage change, or it happens simply because people have different views and perspectives on change than those of management. For these reasons, it is already common that people oppose change, while the organizations lack real people who will move the organization from the current to the new state. Instead, organizations are flooded with employees

who do not take serious enough effort and responsibility because they feel too dependent. However, the high level of awareness and ability to look through the prism of other employees, their involvement in the process of planning change and continuous knowledge sharing and utilization, increases the likelihood and possibility of successful implementation of organizational change.

The global team of change fanatics and advocates of Prosci, Inc., define change management as "the application of a structured process and set of tools for leading the people side of change to achieve a desired outcome". Effective change management means starting the process at the initial stage of change planning and accurately defining and determining the desired and required result. Cummings and Worley (2014), in their book "Organizational Development and Change", identify four key types of organizational change, or as they call it, interventions:

1. Human process changes
2. Techno-structural changes
3. Human resource management changes
4. Strategic changes

A number of studies have been conducted showing the effect of organizational change on employee stress and the mediating role of stress, which as a consequence of organizational changes, can lead to encouraging the employee turnover intention (Enshassi et al.; 2015; Strutton, Tran; 2014; Thunman; 2015). Stress is a very critical factor that has lasting effect on employee intention to leave (Nguyen et al.; 2012). This intention is amplified if the organization is going through a process of change (Smollan; 2015). Ghosh et al. (2013). Tjemkes and Furrer (2010) accepted stress as a mediator in case of interventions related to human processes. It is stress that ultimately forces employees to leave rather the human process change in itself (Krell; 2012). Different researchers have identified the role of stress in the form of mediation consequent of different type of organizational changes (Slåtten et al.; 2011; Riot, de la Burgade; 2012). Enshassi et al. (2015) and Hede (2010) in their research identified the role of stress in techno structural interventions being brought in the organization. Stress kills the creativity of the organization and if not handled properly can force employees to quit (Vithessonthi, Thoumrungroje; 2011). Wong et al. (2015); Li and Zhou (2013) and Johannsdottir et al. (2015) validated stress in mediating role in cases of human resource interventions. They were of the view that change in human resources and its policies send employees on back foot and reinforces employee's turnover intention. If changes are made to strategies employee face stress that ultimately leads to turnover intentions (Farler, Broady; 2012; Tuzun, Kalemci; 2012; Yuan et al.; 2014).

The **subject** of this paper covers extensive theoretical knowledge of the organizational change concept, its necessity in contemporary organizations and the need for its proper management, but also practical knowledge in terms of the impact of different types of organizational change on employee stress in the organization, as a factor that is seriously influenced by any emerging condition.

The **purpose** of this paper is to determine whether there is a statistically significant difference between the four different types of organizational change according to the Cummings and Worley (2014) organizational change classification (Human process changes; Techno-structural changes; Human resource management changes and Strategic changes), regarding their impact on the employee emotional state, as well as which type of organizational change has the most significant impact on employee stress in the Republic of North Macedonia. Employee stress is an extremely important issue for which organizations, and especially their human resource management, need to make serious efforts to reduce it and manage it properly. Otherwise, it can lead to serious

consequences, such as encouraging the employee intention to leave the workplace, ie, dysfunctional fluctuation (Raza et.al.; 2017; p.4).

2. THEORY REVIEW

In the literature, changes are often identified with the term "interventions". The very term "intervention" refers to a system consisting of a series of planned actions or events, designed to facilitate the process of increasing the organizational effectiveness. Interventions are intentional attempts to direct an organization to a different and more effective situation that tend to disrupt its status quo.

Organizational development includes three important criteria as fundamentals that define the effective organizational intervention: (1) the extent to which it is harmonized with the organizational needs; (2) the extent to which it is based on causal knowledge of the expected outcomes; and (3) the extent to which it delegates responsibility for managing change to organizational members. The success of organizational intervention strongly depends on the readiness of the organization for the planned change. The indicators of change readiness include sensitivity to the pressures of change, dissatisfaction with the status quo, the availability of resources to support change, and investing significant time in managing change. Once these conditions are in place, interventions can be designed to address the organizational issues identified in the diagnostic process. When preparedness for change is relatively low, interventions need to be focused precisely on increasing it (Cummings; Worley; 2009; p.3).

The change effects are great and numerous. One of the most significant effects is increased stress on individuals, employees, and their families. By increasing the level of change, people struggle to maintain their own level of emotionality and cognition. Feelings of stress as a result of the change, if strongly expressed, can lead to serious deviant behaviors, such as increased use of alcohol, drugs, violence at work, domestic violence, suicide, but also create a number of health disorders, such as heart disease, chronic disease and many other extremes (Magyar; 2003). Stress can also provoke anger in the workplace, increased interest in developing work-life balance programs, and even encouraging people to seek innovative solutions and ways of working that will distance them from others (Rothwell et al. al .; 2016; p.6).

The introduction of change processes and their implementation in organizations creates a sense of anxiety, uncertainty, fear and stress (Ronnenberg et al.; 2011). Therefore, the responsibility for managing and monitoring the employees during this process belongs to the so-called "change agents", and these are actually people, inside or outside the organization, who are able to help the organization in the process of transformation and to achieve greater effectiveness and development. Their role is to facilitate the implementation of change. Most often, as the most common initiators of change, but also due to the fact that they have the necessary authority to influence the attitudes of their employees, managers act as change agents. Thus, management must be persistent, realistic, to set clear goals and have strong attitudes, to possess the ability to achieve the set goals and a high level of empathy, as well as a strong sense of understanding others, in order to properly explain its employees the need for change. If employees do not understand the change process and the necessity for its implementation, that will definitely increase their level of stress (Abrell-Vogel; Rowold; 2014). If this state is not further properly taken into account, regarding the use of appropriate steps and programs for stress management, as well as improving the way employees are guided through this process, the end effect may be leaving the organization. This will not only affects the process of change, but also would have a negative impact on organizational performance (Rusly et al.; 2012). Therefore, in the overall process of organizational

development, the role of human resource management is critical. According to Cummings and Worley (2014) "the function of human resource management is to provide change management skills through traditional training programs, rather than through the work based learning process, which proves to be an extremely effective way of organizing development". Hence, human resource management must work more intensively on modernizing the process of change management and continuous implementation of strategies to help employees, not only for acceptance, but also for their involvement in the creative and practical process of implementing organizational changes.

Stress is one of the most critical factors that has a lasting effect on employee turnover intention. This intention gains more strength if the organization goes through a process of change (Smollan; 2015).

Human process changes, or interventions, help employees understand the communication protocols that take place in each organization (Bull; Brown; 2012). Employees are more prone to conflict if appropriate mechanisms for interaction at the individual level are not identified (Perrott; 2011). If the employees in an organization are not able to communicate properly on an individual level, the likelihood of conflict is higher, and therefore, changes related to the processes of human resources are necessary (Szabla et al. 2014; Worch et al.2012). It often happens that employees do not understand the reasons for implementing this type of change. This creates stress and encourages their turnover intention (Tsai, Tien; 2011; Carlström; 2012). Therefore, it is of particular importance to provide, not only adequate communication, but also a detailed and objective justification and clarification of the reasons for the introduction of change processes.

The organizational structure plays a very important role in the functioning of the organization. Due to the different types of organizational structure, organizations often need to change it. If they feel that it is necessary to improve and change the existing organizational structure, and that their structure does not meet the set goals and requirements, they must go through the process of *techno-structural interventions*, ie, changes (Rahman, Nas; 2013). However, the process of introducing techno-structural changes is by no means a simple process (Davenport et al.; 2004). One of the main effects of these changes is the redistribution of resources and authority (Wang; 2014; Chen et.al.; 2014). This type of change can often create a sense of loss of power or resources for certain groups of employees and as a result, they will resist these interventions (Dysvik, Kuvaas; 2010). Techno-structural changes are also a source of change in the level of involvement of employees in the organization (Stensaker et al.; 2014). Nyström et.al. (2013) identify the importance of techno-structural changes and their impact on the level of employee empowerment. Employees feel overwhelmed if they are not capable, or are not able to understand all the details related to the change process. As a result, employees try to remove all doubts and ambiguities by justifying the need for change, or by leaving the organization (Aladwan et al.; 2014).

Through their own professional experience in the workplace, employees adapt to established human resource policies in the organization (Li, Zhou; 2013). Therefore, whenever certain policy-related changes are planned, employees have a different perception from the one that is essential and realistic, and as a result, they experience a sense of unnecessary stress (Enshassi et al.; 2015). If employees believe that *human resources management changes* will have a negative impact on them, this perception will continue throughout the overall process of change (Björklund; 2010).

Finally, strategy is defined as the foundation, the pillar of an organization. From all aspects in each organization, it is the strategies that are most strongly established and embedded in the perception

and acceptance of employees (Tuzun, Kalemci; 2012), because they define and determine the way of their work. Thus, *strategic changes* create transformational changes that affect the overall operation of organizations (Bhatnagar et al.; 2010). Employees who are part of an organization that introduces continuous change should be able to handle continuous pressure. Organizations that are focused on a strategy of continuous improvement, must focus on building the ability and capacity of employees to deal with the stress that comes as a result of these processes. Otherwise, unsuccessful management of this process encourages employees to consider leaving the organization (Nguyenetal; 2012a).

3. METHODOLOGY

The following methods were used in order to achieve the objectives of this paper: descriptive method, historical method, methods of analysis and synthesis, comparative method, quantitative and statistical method and methods of induction and deduction. A **survey questionnaire was used as a instrument for data collection**, which was conducted in the period **November-December 2020**. The **target group** of respondents included in the survey were **employees** from different sectors (public sector, private sector, non-profit organization) in the Republic of North Macedonia, namely, a random sample of **500 respondents** with different demographic characteristics, of which **282 respondents completely answered the survey questionnaire**. The questions in the survey questionnaire, which in addition to the scope of questions to determine demographic characteristics (gender, age, education, type of education, type of studies, sector, type of contract, length of service, previous work experience, turnover reasons, etc.), also contain questions to determine the condition of employees in relation to their attitudes and opinions based on questions about their job satisfaction, the impact of organizational change on their stress, as well as questions to determine their turnover intention. This survey questionnaire is, in fact, an adapted combination of three published international questionnaires, namely the PIAAC (Program for the International Assessment of Adult Competencies), the Employee Resistance Assessment Questionnaire (Oreg; 2003) and the Turnover Intention Assessment Questionnaire (Van Dam; 2008). For the purposes of this paper, **this questionnaire will help in determining the impact of different types of organizational change, the so-called interventions in the organization, as part of organizational development, as follows: human process changes; techno-structural changes; human resource management changes and strategic changes on employee stress**. The questionnaire was conducted through the electronic service for collection and analysis of research data "**Kwik Surveys**", as well as sent electronically (via e-mail and social networks) to the respondents.

The subject of this paper covers extensive theoretical knowledge of the organizational change concept, its necessity in contemporary organizations and the need for its proper management, but also practical knowledge in terms of the impact of different types of organizational change on employee stress in the organization, as a factor that is seriously influenced by any emerging condition.

The purpose of this paper is to determine whether there is a statistically significant difference between the four different types of organizational change according to the Cummings and Worley (2014) organizational change classification (Human process changes; Techno-structural changes; Human resource management changes and Strategic changes), regarding their impact on the employee emotional state, as well as which type of organizational change has the most significant impact on employee stress in the Republic of North Macedonia.

The following hypotheses are proposed in order to investigate the set subject and problem in this paper:
Hypothesis 1: By comparing the mean values, there are statistically significant differences between the impacts of human process changes and techno-structural changes on stress.
Hypothesis 2: By comparing the mean values, there are statistically significant differences between the impacts of human process changes and human resource management changes on stress.
Hypothesis 3: By comparing the mean values, there are statistically significant differences between the impacts of human process changes and strategic changes on stress.
Regarding the **methodological approach used**, the hypotheses are tested using a **statistical Z-test**. In this paper, the **Z-test is used to determine whether there is a significant difference between the impact of human process changes on stress and the impact of other types of organizational change on stress**. The higher the value of Z, the greater the difference between the mean values of the two samples. If the testing confirms statistically significant differences, then the research hypotheses can be accepted and further statistical testing will be performed in order to reveal the type of organizational change that has the greatest impact on stress. If testing confirms that there are no statistically significant differences between the impacts of human process changes and the other types of organizational change on stress, it can be concluded that the mean values of all organizational changes are the same.
Namely, when the test statistic is greater than the corresponding critical value, for a given level of significance α, ie, when the p-value is less than α (p <α), we can say that there are statistically significant differences between the data. In that case, the null hypothesis is rejected. Typically, the significance level $\alpha = 0.05$ is used as the standard for such tests.
The statistical analysis of the research results and the graphical presentation of the results are presented in MS Excel.

4. RESEARCH FINDINGS

The findings of the employees' demographic characteristics (gender, age, educational structure, sector and length of service), as well as the analysis of the impact of different types of organizational change on employee stress are presented below. The latter are ranked on a Likert scale of 1 - 10, according to the degree of their impact.
Distribution of respondents according to their demographic characteristics results in the following findings:
Gender: Domination of female respondents (66%), compared to male respondents (34%);
Age: 38% are at the age of 26-35, followed by 24% respondents at the age of 36-45, 24% from 46-55 years, 9% from 18-25 years and 6% over 55 years.
Education level: 59% of the respondents are with higher education, 25% have master's degree, 12% have completed secondary education and only 4% have doctorate degree.
Sector: 56% of the respondents are employed in the public sector, 40% are employed in the private sector, while 4% in a non-profit organization.
Length of service: 38% are engaged for more than 10 years, 25% for 1-3 years, 14% for less than 1 year, 13% for 4-6 years and 10% for 7-10 years.
Numerous studies have shown that demographic characteristics affect respondents' perceptions about the introduction of organizational change, as well as the degree of impact of those changes

on their feeling of stress. In order to meet its purpose, this paper's main focus is to analyze the impact of the organizational change on employee stress, as well as whether there is a statistically significant difference between the four types of organizational change and to determine the type of change that has the most significant impact on stress of the employees in the Republic of North Macedonia.

The hypotheses and the conducted **Z tests** are presented below (Figure 1-3):

Ho hypothesis: By comparing the mean values, there are not statistically significant differences between the impacts of human process changes and techno-structural changes on stress.

H_1 hypothesis: By comparing the mean values, there are statistically significant differences between the impacts of human process changes and techno-structural changes on stress.

Figure 1: Z-test result

	Variable 1	*Variable 2*
Mean	5.34	4.85
Stdev	15.02	16.92
Observations	439	439
Z Stat	0.41	
p value	0.69	
Z Critical	1.96	

Source: Illustration by the author

First, when applying the Z-test, the obtained p value (0.69) is compared with the value of α (0.05). **In this case, 0.69> 0.05, whereby the null hypothesis is accepted**. The same conclusion is confirmed by comparing the realized value of the Z test with the critical value. **In this case, the realized value of 0.41 is less than the critical value of 1.96, which means that the research hypothesis (H_1) is rejected.**

Ho hypothesis: By comparing the mean values, there are not statistically significant differences between the impacts of human process changes and human resrouce management changes on stress.

H_1 hypothesis: By comparing the mean values, there are statistically significant differences between the impacts of human process changes and human resrouce management changes on stress.

Figure 2: Z-test result

	Variable 1	*Variable 3*
Mean	5.34	4.77
Stdev	15.02	14.01
Observations	439	439
Z Stat	0.52	
p value	0.60	
Z Critical	1.96	

Source: Illustration by the author

Based on the result of the conducted Z test, in this case the second research hypothesis (H1) is rejected, ie **the null hypothesis is accepted**, because the **p-value = 0.60**, and it i**s greater than the value of α (0.05)**, while the realized value of the Z test is 0.52, which is less than the critical value of 1.96.

Ho hypothesis: By comparing the mean values, there are not statistically significant differences between the impacts of human process changes and strategic changes on stress.
H_1 hypothesis: By comparing the mean values, there are statistically significant differences between the impacts of human process changes and strategic changes on stress.

Figure 3: Z-test result

	Variable 1	*Variable 4*
Mean	5.34	5.07
Stdev	15.02	13.3
Observations	439	439
Z Stat	0.25	
p value	0.80	
Z Critical	1.96	

Source: Illustration by the author

Regarding the testing of the third research hypothesis, the Z test also finds that **there are no statistically significant differences** between the impacts of human process changes and strategic changes on stress, as in this case p>α (0.80>0.05). Therefore, **the third research hypothesis is rejected**.
Based on the conducted testing, **none of the three research (alternative) hypotheses is accepted** and it is concluded that **the impact of all types of organizational change on stress is equal**, ie, no impact of a certain type of change deviates significantly from the impact of any other type.

5. DISCUSSION AND CONCLUSION

The purpose of this paper is to determine whether there is a statistically significant difference between the four different types of organizational change according to the Cummings and Worley (2014) organizational change classification (Human process changes; Techno-structural changes; Human resource management changes and Strategic changes), regarding their impact on the employee emotional state, as well as which type of organizational change has the most significant impact on employee stress in the Republic of North Macedonia.
This paper identifies four types of organizational change using the theoretical assumptions of Cummings and Worley (2014), Rothwell et.al. (2016), Oreg (2003), and Raza (2017), as well as numerous theories and contemporary research on organizational development and organizational change. Each type of organizational change covers a number of interventions that correspond to the appropriate type, which the respondents ranked on a Likert scale of 1-10 according to the degree of their impact on the employee feeling of stress. These changes, or, the so-called interventions are: human process changes, techno-structural changes, human resource management changes and strategic changes.
Through the use of practical examples from around the world and extensive theory in the field of organizational change, as well as human resource management, it has been established that if

employees fail to understand the change process and are left unattended during the change process, it would result in employees feeling stressed (Abrell-Vogel and Rowold 2014) which if not properly taken into account, it may ultimately result in employees leaving the organization. Employees who are part of an organization that introduces continuous change should be able to cope with continuous pressure. Organizations that are focused on continuous improvement, must focus on strenghtening the employee ability and capacity to deal with stress that comes as a result of these processes. Otherwise, failing to manage this process encourages employees to consider leaving the organization.

Using the Z-test to determine the existence of statistically significant differences between the impacts of different groups of changes on employee stress in the Republic of North Macedonia, it was found that at the level of the overall sample, no impact of a particular group of changes deviates significantly from the impact of any other group of changes. In this regard therefore, it can be concluded from this point that ***none of the three hypotheses is accepted*** and that ***the impact of all changes on stress is equal***.

Attempts by organizations to introduce changes in human resource policy increase the feeling of stress among employees. This is due to the fact that human resource policies are the basis on which employees communicate with organizations. Issues related to the promotion, development and training of employees depend on the human resource policies of the organizations. Consequently, when management decides to make a change in these policies, employee stress increases as a result of their fear that the change may adversely affect their status, power, function, etc. Hence, in order to reduce employee stress level, change agents and management must ensure that change will not adversely affect employees.

Human process changes (change in communication, functioning, group norms and rules) also increase the level of employee stress. Therefore, it is necessary for the organizations to make sure that the employees are informed in time about the intention and the plan for change, as well as to be involved in its creation and implementation, which would increase their motivation for acceptance, but also their trust. Techno-structural interventions also create fear and suspicion among employees. Hierarchy plays a very important and influential role in the way employees work. According to Worch et. al. (2012), the involvement of employees in techno-structural changes reduces their feeling of stress and consequently reduces the risk of eventual stimulation of their turnover intention. Finally, strategic changes also affect stress. Strategies are created and implemented at the top management level, but they have a strong impact on both group and individual level.

Hence, human resource management in organizations should manage change from all aspects and to be involved in managing all types of organizational change. Regardless of the type of organizational change, employees respond equally and develop similar manifestations of stress that can be critical to their health and abstinence, or, ultimately lead to turnover. In order for the organization not to face the consequences of turnover, the preventive role consists in preparing for organizational change through strategies and tactics that will correspond to the type of organizational change.

These findings can be used in local and international context. In macedonian context, this research can help organizations in implementing change effectively, developing change interventions and understanding their connection with employee stress. Change agents can make use of it to develop change interventions and deal with the employee stress because of those change interventions.

REFERENCES

Abrell-Vogel, C., & Rowold, J. (2014). Leaders' commitment to change and their effectiveness in change – a multilevel investigation. *Journal of Organizational Change Management, 27(6)*, pp. 900–921. doi:10.1108 /JOCM-07-2012-0111.

Aladwan, K., Bhanugopan, R., & Fish, A. (2014). Human resource management practices among frontline employees in the Jordanian organizations: navigating through the crossroads of change and challenge. *International Journal of Commerce and Management, 24(1),* pp. 6–24. doi:10.1108/IJCoMA-09-2011-0027.

Bhatnagar, J., Budhwar, P., Srivastava, P., & Saini, D. S. (2010). Organizational change and development in India: a case of strategic organizational change and transformation. *Journal of Organizational Change Management,* 23(5), pp. 485–499. doi:10.1108/09534811011071243.

Björklund, M. (2010). Linking strategic logistics change to labor rights. Social Responsibility Journal, 6(4), 580–592. doi:10.1108/17471111011083455.

Bull, M., & Brown, T. (2012). Change communication: the impact on satisfaction with alternative workplace strategies. *Facilities, 30(3/4),* pp. 135–151. doi:10.1108/02632771211202842.

Perrott, B. E. (2011). Strategic issue management as change catalyst. *Strategy & Leadership, 39(5),* pp. 20–29. doi:10.1108/10878571111161499.

Carlström, E. D. (2012). Strategies for change: adaptation to new accounting conditions. Journal of Accounting and Organizational Change, 8(1), 41–61. doi:10.1108/18325911211205739.

Chen, Y., Friedman, R., & Simons, T. (2014). The gendered trickle-down effect: how mid-level managers' satisfaction with senior managers' supervision affects line employee's turnover intentions. *Career Development International, 19(7),* pp. 836–856. doi:10.1108/CDI-02-2014-0031.

Christiansen, J. K., & Claus, J. V. (2015). Drivers of change in product development rules: how generations of rules change back and forth. *European Journal of Innovation Management, 18(2)*, pp. 218–237. doi:10.1108/EJIM-08-2013-0086.

Cummings, T., & Worley, C. (2014). Organization development and change. Cengage learning.

Cummings, T., & Worley, C. (2009). Organization development and change. 2009, 2005 South-Western, a part of Cengage Learning, p.2.

Davenport, T. H., Harris, J. G., & Cantrell, S. (2004). Enterprise systems and ongoing process change. *Business Process Management Journal, 10(1)*, pp. 16–26. doi:10.1108/14637150410518301.

Dysvik, A., & Kuvaas, B. (2010). Exploring the relative and combined influence of mastery-approach goals and work intrinsic motivation on employee turnover intention. *Personnel Review, 39(5)*, pp. 622–638. doi:10.1108/00483481011064172.

Enshassi, A., El-Rayyes, Y., & Alkilani, S. (2015). Job stress, job burnout and safety performance in the Palestinian construction industry. *Journal of Financial Management of Property and Construction, 20 (2)*, pp. 170–187. doi:10.1108/JFMPC-01-2015-0004.

Farler, L., & Broady, P. J. (2012). Workplace stress in libraries: a case study. ASLIB Proceedings, 64(3), 225–240. doi:10.1108/00012531211244509.

Ghosh, P., Satyawadi, R., Joshi, J. P., & Shadman, M. (2013). Who stays with you? Factors predicting employees' intention to stay. International Journal of Organizational Analysis, 21(3), 288–312. doi:10.1108/IJOA-Sep-2011-0511.

Hede, A. (2010). The dynamics of mindfulness in managing emotions and stress. Journal of Management Development, 29(1), 94–110. doi:10.1108/02621711011009090.
Johannsdottir, L., Olafsson, S., & Davidsdottir, B. (2015). Leadership role and employee acceptance of change: implementing environmental sustainability strategies within Nordic insurance companies. Journal of Organizational Change Management, 28(1), 72–96. doi:10.1108/JOCM-12-2013-0238.
Krell, E. (2012). Change within (managing change within the human resources function). Human Resource Management International Digest, 20 (1). doi:10.1108/hrmid.2012.04420aaa.013.
Li, X., & Zhou, E. (2013). Influence of customer verbal aggression on employee turnover intention. Management Decision, 51(4), pp. 890–912. doi:10.1108/00251741311326635.
Magyar, S.V; 2003."Preventing Workplace Violence." *Occupational Health and Safety 72(6)*, p. 64.
Nguyen, L. D., Boehmer, T., & Mujtaba, B. G. (2012). Leadership and stress orientations of Germans: an examination based on gender, age, and government work experience. *Public Organization Review, 12(4)*, pp. 401–420.
Nyström, M. E., Höög, E., Garvare, R., Weinehall, L., & Ivarsson, A. (2013). Change and learning strategies in large scale change programs: describing the variation of strategies used in a health promotion program. *Journal of Organizational Change Management, 26(6)*, pp. 1020–1044. doi:10.1108/JOCM-08-2012-0132.
Oreg, S., (2003). Resistance to Change: Developing an Individual Differences Measure. *Journal of Applied Psychology 2003 Vol. 88 (4)*, pp. 680–693.
Rahman, W., & Nas, Z. (2013). Employee development and turnover intention: theory validation. *European Journal of Training and. Development, 37(6)*, pp. 564–579.
Raza, M.,A.; Khan, M.,M.; Mujtaba, B., G.; (2017). The Impact of Organizational Change on Employee Turnover Intention: Does Stress Play a Mediating Role?. Springer Science+Business Media New York.
Riot, E., & de la Burgade, E. (2012). Stamping La poste: an illustration of the influence of societal effects on strategic change. Journal of Strategy and Management, 5(2), 175–210. doi:10.1108/17554251211222893.
Ronnenberg, S., Graham, M. and Mahmoodi, F. (2011), The important role of change management in environmental management system implementation, *International Journal of Operations & Production Management, Vol. 31(6)*, pp. 631-647.
https://doi.org/10.1108/01443571111131971.
Rothwell, W.; Stavros; J.,M.; Sullivan, R., L.; (2016). Practicing Organization Development: Leading Transformation and Change, Edition: Fourth, Chapter: Chapter 1: Organization Development, Transformation and Change, Publisher: John Wiley and Sons. doi: 10.1002/9781119176626.ch1.
Rusly, F. H., Corner, J. L., & Sun, P. (2012). Positioning change readiness in knowledge management research. *Journal of Knowledge Management, 16(2),* pp. 329–355. doi:10.1108/13673271211218906.
Sikdar, A.; Payyazhi, J.; (2014). A process model of managing organizational change during business process redesign. *Business Process Management Journal*, *20 (6)*, pp. 971–998. doi:10.1108/BPMJ-02-20130020.
Simoes, P. M. M., & Esposito, M. (2014). Improving change management: how communication nature influences resistance to change. *Journal of Management Development, 33(4),* pp. 324–341. doi:10.1108 /JMD-05-2012-0058.

Slåtten, T., Svensson, G., & Sværi, S. (2011). Service quality and turnover intentions as perceived by employees: antecedents and consequences. Personnel Review, 40(2), 205–221. doi:10.1108/00483481111106084.
Smollan, R. K. (2015). Causes of stress before, during and after organizational change: a qualitative study. *Journal of Organizational Change Management, 28(2),* pp. 301–314. doi:10.1108/JOCM-03-2014-0055.
Stensaker, B., Frølich, N., Huisman, J., Waagene, E., Scordato, L., & Bótas, P. P. (2014). Factors affecting strategic change in higher education. *Journal of Strategy and Management, 7(2)*, pp. 193–207. doi:10.1108 /JSMA-12-2012-0066.
Strutton, D., & Tran, G. A. (2014). How to convert bad stress into good. Management Research Review, 37(12), 1093–1109. doi:10.1108/MRR-06-2013-0139.
Szabla, D.B., Stefanchin, J.E., Warner, L.S. (2014). Connecting Organizational Change Content with Change Strategy: Has Theory Become Practice? In Research in *Organizational Change and Development*, *Vol. 22,* pp. 99–140).
Emerald Group Publishing Limited. Retrieved from http://www.emeraldinsight. com/doi/full/10.1108/S0897-301620140000022004.
Thunman, E. (2015). Managing stress: a matter of proactivity or trust? A thematic study of female- and maledominate Swedish work settings. Qualitative Research in Organizations and Management: An International Journal, 10(2), 134–152. doi:10.1108/QROM-11-2013-1184.
Tjemkes, B., & Furrer, O. (2010). The antecedents of response strategies in strategic alliances. Management Decision, 48(7), 1103–1133. doi:10.1108/00251741011068806.
Tsai, C., & Tien, C. (2011). Does organizational strategic fit in supply chain relations affect the propensity for strategic change?: evidence from Taiwanese investments in China. *Chinese Management Studies, 5(2),* pp. 164–180.
doi:10.1108/17506141111142807.
Tuzun, I. K., & Kalemci, R. A. (2012). Organizational and supervisory support in relation to employee turnover intentions. *Journal of Managerial Psychology, 27(5),* pp. 518–534. doi:10.1108 /02683941211235418.
Van Hoek, R., Mark, J., Janet, G., & Andy, B. (2010). Changing chains: three case studies of the change management needed to reconfigure European supply chains. *The International Journal of Logistics Management, 21(2)*, pp. 230–250.
doi:10.1108/09574091011071933.
Vithessonthi, C., & Thoumrungroje, A. (2011). Strategic change and firm performance: the moderating effect of organisational learning. Journal of Asia Business Studies, 5(2), 194–210. doi:10.1108/15587891111152348.
Wang, E. S.-T. (2014). The effects of relationship bonds on emotional exhaustion and turnover intentions in frontline employees. *Journal of Services Marketing, 28(4),* pp. 319–330. doi:10.1108/JSM-11-2012-0217.
Wong, Y.,Wong, Y.-W., &Wong, C. (2015). An integrative model of turnover intention: antecedents and their effects on employee performance in Chinese joint ventures. Journal of Chinese Human Resources Management, 6(1), 71–90. doi:10.1108/JCHRM-06-2014-0015.
Worch, H., Kabinga, M., Eberhard, A., & Truffer, B. (2012). Strategic renewal and the change of capabilities in utility firms. *European Business Review, 24(5),* pp. 444–464. doi:10.1108/09555341211254526.

Yuan, L., Yu, Y., Li, J., & Ning, L. (2014). Occupational commitment, industrial relations and turnover intention: empirical evidence from China. Chinese Management Studies, 8(1), 66–84. doi:10.1108/CMS- 08-2011-0065.

THE PRACTICE AND DRIVERS OF CSR DISCLOSURE AMONG THE BLUE-CHIP COMPANIES IN NORTH MACEDONIA

Todor Tocev
Faculty of Economics-Skopje, Ss Cyril and Methodius University
todor.tocev@eccf.ukim.edu.mk

Ivan Dionisijev
Faculty of Economics-Skopje, Ss Cyril and Methodius University
ivan.d@eccf.ukim.edu.mk

Zoran Minovski
Faculty of Economics-Skopje, Ss Cyril and Methodius University
zoran.minovski@eccf.ukim.edu.mk

ABSTRACT
Non-financial reporting is becoming an increasingly common topic of discussion and is a matter of time before it is regularly implemented around the world. Stakeholders want to see how companies contribute to the common good and what social activities they undertake, so although in the Macedonian practice Corporate Social Responsibility (CSR) disclosure is not mandatory, there is a growing intention to publicly disclose information about social activities. CSR is extremely important for businesses and other stakeholders, and it requires businesses to develop a corporate strategy that balances environmental, social, and ethical concerns. Through this type of activities, companies manage to increase their influence in society, to leave a good impression but also to contribute to the improvement of society and place of living, which is a win-win situation for everyone.
The paper aims to examine the level of CSR reporting in domestic practice, through research conducted on the blue-chip companies listed on the Macedonian Stock Exchange. We analyzed the financial and annual reports and official websites of the joint stock companies that were part of the MBI10 index in the period from 2016 to 2020. First, a theoretical review of the CSR is presented, followed by a literature review on the CSR's indicators and the state of the CSR in the Macedonian practice. Our findings from the conducted content analysis and linear regression show that larger and more profitable companies show a greater propensity for social responsibility and display more information about their undertaken social related activities.

Keywords: *CSR, non-financial disclosure, North Macedonia*

JEL Classification: *M14, M40*

http://hdl.handle.net/20.500.12188/15915
http://doi.org/10.47063/EBTSF.2021.0002

THE ROLE OF CAP RISK MANAGEMENT IN INCOME STABILISATION: EMPIRICAL EVIDENCE OF IST IN SLOVAKIA

Andrea Boháčiková
Lecturer at Faculty of Economics and Management, Department of Finance – Nitra, Slovakia
andrea.bohacikova@uniag.sk

Tatiana Bencová
Lecturer at Faculty of Economics and Management, Department of Finance – Nitra, Slovakia
tatiana.bencova@uniag.sk

ABSTRACT

In the European Commission (EC) proposals for the Common Agricultural Policy (CAP) post-2020 is emphasized the aim to better support the resilience of agricultural systems in the European Union (EU). This resilience is based on the concern that the agricultural sector should be supported in responding to current and future economic, societal, and environmental challenges and risks. Managing risk in farming includes number of activities and strong effort of farms and policy makers. One part of risk management refers to income stabilisation, aimed at decreasing the unstable financial situation and high level of income volatility in European agriculture. In the EU, every year at least 20% of farmers experience an income loss of more than 30% compared with their average income in the three previous years. The public instruments to mitigate the income risk of farmers included under the Pillar II (insurance premiums, mutual funds, and the Income stabilisation tool) have been implemented only by very low number of EU countries. In the paper, we analyze the ability to decrease the instability of Slovak farmers with the use of Income stabilisation tool of CAP. The Income stabilisation tool (IST) can be used to indemnify the farmers, who experienced a "severe drop" in income, reflecting the income loss of more than 20% or 30% compared to the 3-years average annual income, or the 5-years average annual income, excluding highest and lowest entry (Olympic average). The IST has not been used in the Slovakia, or any other European country operationally so far.

Keywords: *Income stabilisation tool, Agriculture, Risk management, CAP,*

JEL classification: *Q10, Q13, Q14*

1. INTRODUCTION

Farmers´ income is a key element in EU agricultural policy, aiming at ensuring the welfare for the agricultural producers and the help for farmers facing the risks inherent to their business (Tangermann, 2011). An objective of EU Common Agricultural Policy (Article 39 of the Treaty on the Functioning of the European Union, TFEU), is to increase agricultural productivity, 'thus to ensure a fair standard of living for the agricultural community, in particular by increasing the individual earnings of persons engaged in agriculture' (EC, 2017). Income from farming refers to the sum of revenues the farmer receives from the market, including any form of public support, deducting input costs (EC, 2013). The uncertainties related to farm business (such as extreme weather conditions or market changes) have led, after various policy reforms, to CAP direct payments, supporting farmer income with 72% of the current EU farm budget (DG Agri, 2018). The other way of supporting farmers and ensure their

http://hdl.handle.net/20.500.12188/15916
http://doi.org/10.47063/EBTSF.2021.0003

income stability is the use of risk management measures from the Pillar II, especially Income stabilisation tool.

The Income stabilisation tool, defined in the Article 39, Regulation (EU) n°1305/2013 is a risk management tool for compensating farmers for severe income drop. A severe income drop is defined as a decrease of more than 30% of the average annual income of the individual farmer in the preceding three-years period, or five-years period excluding the highest and lowest entry (Olympic average). Independent of the source of this income reduction, farmers should receive compensation payments for less than 70% of the income loss in the year the producer becomes eligible to receive this assistance (EC, 2013; El Benni *et al.*, 2016). Basically, the Income stabilisation tool is a mutual fund that compensates farmers for income losses not production losses. The principal should be that the participating farmers contribute to the mutual fund to establish a financial reserve. Furthermore, the fund obtains the financial support from EU budget. The reserve is used to compensate farmers, who suffer in the next period for income losses, independent of the cause (EU Reg. 8314/2017). The contribution and regulation of IST fund is in competition of individual national agricultural policies. Since January 1st 2018 the IST mechanism has been amended with the Agricultural Omnibus Regulation of European Commission. The threshold rate has been lowered to more than 20% of average annual income, instead of 30%. The sector-specific IST, targeting the independent farm sectors, has been added to the toolkit and the calculation of the annual loss of income of the farmer (both general and sector-specific ISTs) based on indexes has been allowed (Meuwissen, 2018; Cordier, 2020). The compensation rate stayed at maximum 70% of loss. The adjustments have been suggested after unsuccessful implementation of IST in three member states, which had planned to use the tool operationally: Spain, Hungary and Italy. In Italy, there has been problem to monitor the historical income of individual farmers, and the negative attitude to the high level of the threshold rate (Santermo, 2018). In Spain, also the practical measurement of income caused difficulties, as well as the application of IST concerned to specialized dairy producers. In Hungary a great focus has been paid to implement IST, but the lack of guidelines, experience and knowledge caused that it has not been developed so far (Cordier, 2020; Chartier, 2017).

There are also other obstacles and arising questions connected to the implementation of tool. The main criticism states that the risk management tools of EU are more suggestions, rather than effective programs (Vera, 2017; Cordier, 2014). The guideline is hardly insufficient, there is no experience in European or other countries outside with the implementation to national policies, there does not exist public platform to share experiences which could potentially build common benchmarks, and the willingness of farmers to cooperate is often very low. The lack of knowledge about the positive effect of risk management in agriculture leads to disinterest to use the tools and participate. There is a lack of leadership in the farmers' unions, and usually ineffective co-operation between the Ministry of Agriculture and the farmers' unions (Meuwissen *et al.*, 2018). The other problem is the monitoring of historical incomes, as well as the appropriate choice of income variable. There raises also the potential double compensation problem, if farmers use two instruments at once (e.g. insurance premium and IST). Potential threat is the ability of farmers to adjust accounting records in order to obtain IST premium.

Despite of the obstacles in implementation, the scientific research has proved many potential positive effects of the income stabilisation of European farmers. The ex-ante research on the IST focusses on actuarial evaluations of a potential income compensation, governmental costs, impacts on optimal farm programs, and identification of potential beneficiary groups of farms (Mary *et al.*, 2013). In the ex-ante analysis of IST, two basic approaches are employed. The first are the farm level optimization models, which are used to investigate, how the IST affects a specific farm, and how the farmers react to the financial compensation (Turvey, 2012; Mary *et al.*, 2013; Liesivaara *et al.*, 2012). These analyses emphasize the farm-level decision making,

but are focused on a limited amount of farms. The second are the simulation models, using the bookkeeping data across a large set of farms in years, to investigate income risk of farms and potential indemnification within the IST (Kimura and Anton, 2011; Pigeon *et al.*, 2012). Zgajnar (2017) added the third approach, the regression-based econometric models of data series (Pigeon *et al.*, 2014; El Benni *et al.*, 2016). The main objective of the paper is to evaluate the income instability of Slovak farms in the years 2012 – 2017, and the calculate the potential indemnification for Slovak farmers with the use of the Income stabilization tool of CAP. The paper is the further extension of the study Boháčiková *et al.* (2020).

2. DATA AND METHODS

The data used for the analysis consist of the financial statements of individual farms in Slovakia, operating in the period 2009-2017. All information is obtained from the Ministry of Agriculture and Rural Development of Slovak Republic. The final data set is created after outlier removal and consists of 653 farms. Farms are examined according to their legal form and production orientation. The legal forms cooperatives and business companies (Limited liability company and Join-stock company) are taken into account. According to the production orientation, the farms are divided into crop and animal farms. The classification criterion for production orientation is exceeding 50% share of sales from crop production or animal production to the total sales of own products and services. The structure of data is presented in Table 1.

Table 1. Structure of data

	Category	Absolute value	% share
Legal form	Cooperative	336	51%
	Business company (Ltd. JSC)	317	49%
Production orientation	Crop farm	278	43%
	Animal farm	375	57%
Size of land	LPIS more than 500 ha	121	18.5%
	LPIS (500-1000)	168	25.7%
	LPIS more than 1000 ha	364	55.8%
Sum		**653**	

(Source: own processing, LPIS – land parcel identification system)

In order to access the income situation of the farmers, it is necessary to select the appropriate income variable. The European Commission defines the income as the sum of all revenues the farmer receives, including any form of public support, deducting input costs. However, there are several income variables than might be used in the analysis of potential implementation of IST, such as net farm income (El Benni *et al.*, 2016), profit margin (Liesivaara *et al.*, 2012), net value added (Pigeon *et al.*, 2012) and others. In the paper we use the Gross farm income as the income variable to identify the farms that could have received the potential indemnification from CAP, if the Income stabilisation tool had been implemented in Slovakia. Gross farm income refers to the sum of sales from products and services (total output), including sales from crop production, sales from animal production and sales from agroturism, plus the subsidies of non-investment character, deducting the input costs. The input costs are recorded in the account consumption of material, energy and other non-storable supplies and include the costs of fuels, electricity, seeds and seedlings, fertilizers and pesticides, crop protection products, purchased feeds for animals, and total intermediate consumption. The other costs such as wages, rent and interest paid are not taken into account.

3. RESULTS AND DISCUSSION

In order to access the income instability of Slovak farms, and their potential financial compensation of loss, we focused on the income variable – gross farm income (GFI). Firstly, it is necessary to calculate the reference income, as the 3-year average of annual income, and subsequently to quantify the difference between the reference GFI and actual one, in the relevant year (2012-2017). If the difference (loss) exceeded 20%, the farmer could have been indemnified to the maximal level of 70% compensation of the loss in the certain year. The threshold rate 20% can be applied for Income stabilization tool since the Agricultural Omnibus from the January 1st 2018, when the amendment of the Regulation (EU) n°1305/201, Article 36 – 39 has been stated. The initial requirement for income loss was lowered from 30%. In the paper, we take into account both scenarios, and identify farms with more than 20% loss or 30% loss. As the reference GFI is recalculated for each individual period, it is possible that the number of identified farms would differ, if the farmers were indemnified in the previous year. In each year, the percentage share of instable farms and the amount of potential indemnification are analyzed. The results are presented in Table 2.

Table 2. The farms eligible for the IST compensation

Years	**Number of farms with income loss exceeding**		**Share of farms with income loss exceeding**		**Median**	**Max**	**Min**	**The indemnification in thous. EUR**	
	20% (count)	30% (count)	20%	30%	(€)	(€)	(€)	20% threshold (€)	30% threshold (€)
2012	144	95	22.1%	14.5%	135 933	962 830	10630	26 195 964	19 653 040
2013	112	59	17.2%	9.0%	137 740	736 526	13765	20 881 238	12 971 121
2014	170	100	26.0%	15.3%	157 385	1576237	10538	37 442 077	27 806 668
2015	93	50	14.2%	7.7%	151 210	1730 838	4087	19 232 809	12 960 661
2016	100	52	15.3%	8.0%	157 582	1578 112	6047	23 181 934	17 721 007
2017	72	49	11.0%	7.5%	152 337	707 448	5859	14 018 409	11 069 947

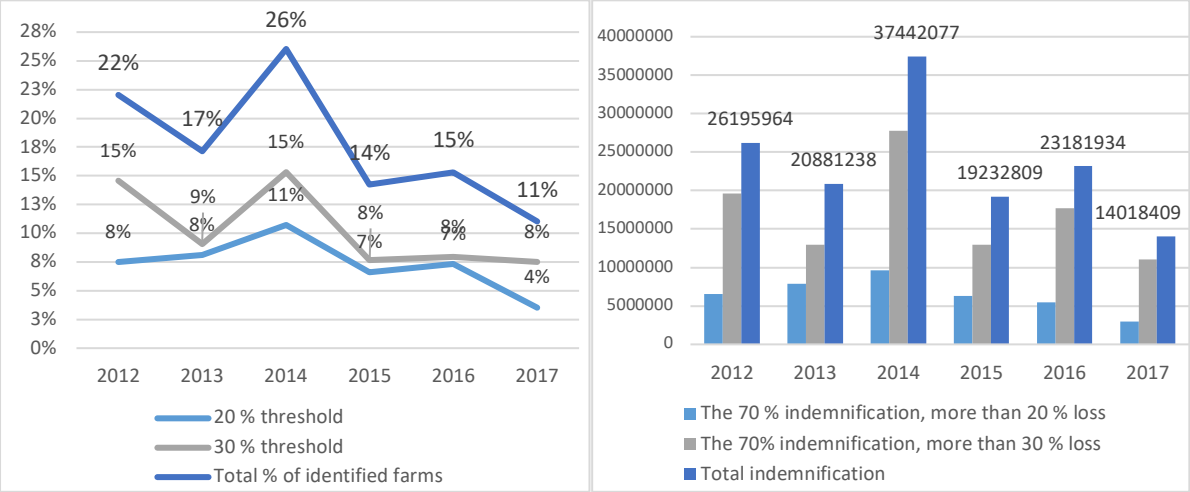
(Source: own processing, adjusted from Boháčiková et al. (2020)

It is not possible to take into account the costs of establishing the Income stabilisation tool fund, as well as the initial contribution of participating farmers. The European Commission allows the Member States to create the own rules in the implementation of the risk management tools to the national policies. In Slovak Republic, the IST has not been implemented so far, therefore the further data and information about the realization of tool in practice are missing. The Income stabilisation tool belongs to the 2014-2020 Common Agricultural Policy and can be applicable since 2014. In the paper, we analyse the longer period, to be able to compare the results and examine the development.

In the year 2012, 22.2% of farmers reached the level of more than 20% loss in comparison to the 3-years average annual income, and could have been indemnified with 26.2 mill. EUR in the case of 70% loss coverage. The number of farms exceeding the 20% loss level has the declining character during the following years, except for the 2014, when the highest number of farms (170) was identified. The financial compensation from the IST in that year would have reached around 37.5 mill. EUR. The lowest number of farms (11%), as well as lowest level of indemnification required (11 mill. EUR) was found in 2017. The change of threshold from 30% to 20% seems to be step forward in risk management, given the potential ability to support

more farmers in loss coverage. In the years 2015 and 2016 the changed threshold rate caused almost doubled number of identified farmers.

Figure 1. The farms reaching the loss level for IST indemnification



(Source: own processing, adjusted from Boháčiková et al. (2020), value of indemnification expressed in EUR)

Table 3. Differences in legal form and production orientation

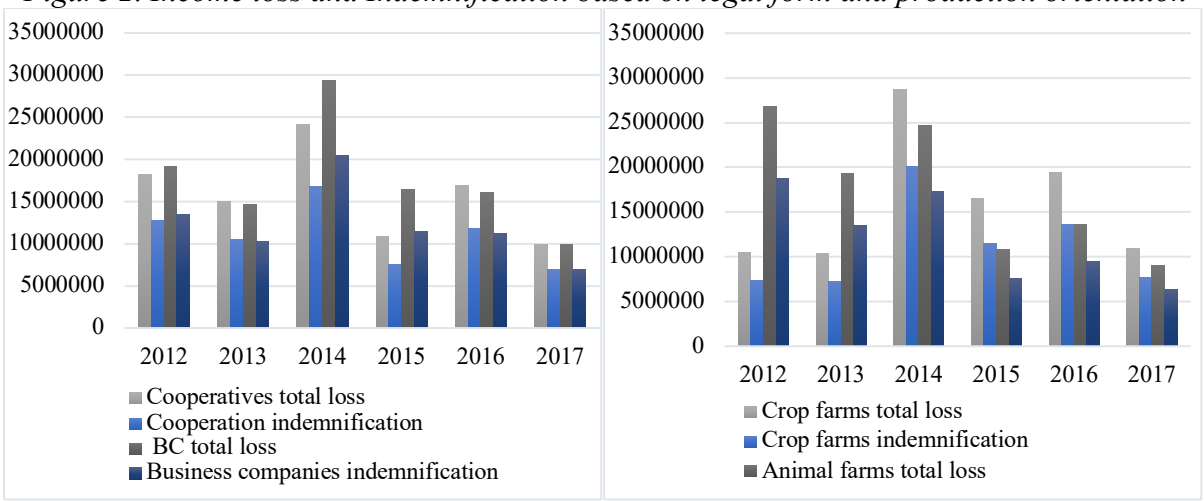
	All farms	**Cooperatives**				**Business companies**			
Year	Count	Count	Share	Total loss	Potential indemnification (€)	Count	Share	Total loss	Potential indemnification (€)
2012	144	66	46%	18243791	12770653	78	54%	19179015	13425311
2013	112	53	47%	15086101	10560271	59	53%	14744238	10320967
2014	170	74	44%	24127706	16889394	96	56%	29360976	20552683
2015	93	40	43%	10972063	7680444	53	57%	16503379	11552365
2016	100	52	52%	16970986	11879690	48	48%	16146062	11302244
2017	72	35	49%	10003287	7002301	37	51%	10023012	7016108
		Crop farms				**Animal farms**			
		Count	Share	Total loss	Potential indemnification (€)	Count	Share	Total loss	Potential indemnification (€)
2012	144	44	31%	10571683	7400178	100	69%	26851123	18795786
2013	112	35	31%	10467477	7327234	77	69%	19362862	13554004
2014	170	82	48%	28748753	20124127	88	52%	24739929	17317950
2015	93	51	55%	16550314	11585220	42	45%	10925127	7647589
2016	100	57	57%	19491070	13643749	43	43%	13625978	9538185
2017	72	35	49%	11002097	7701468	37	51%	9024202	6316941

(Source: own processing)

For the deeper analysis, the farms are divided according to their legal form and production orientation. The table 3 presents the count, % share of farms experiencing an income loss exceeding 20%, the total loss, and the value of indemnification in the case of 70% coverage. There is not significant difference in the number of farms with more than 20% loss of average annual income according to the production orientation. Almost half of the farms are cooperatives and the other one, business companies. Also the level of total loss does not show the comparable differences. It seems, that the character of legal form does not play the role in income situation, as it used to be in Slovakia in previous years.

The comparison of farms, having more than 20% income loss over the years, and thus the opportunity to gain the financial contribution from IST, according to the production orientation shows, that in 2012 and 2013 almost 70% of identified farms were the animal farms. During those years the crop agriculture was more profitable and stable, than the animal farmers. The indemnification required to cover the 70% of loss would have been around 7.5 mill EUR for crop farms, and almost 18.9 mill EUR for animal farms in 2012. In 2013 the percentage share of crop and animal producers remains the same, however the total loss and the compensation differs. Since 2014, after the new CAP programming period, the significant differences between groups have been smoothened. Approximately, half of the identified farms are the crop producers and the second half the animal. It is remarkable, that regardless the number of farms suffering the loss exceeding 20% (if the majority is crop or animal) the crop farmers experienced higher total loss, and thus would have need higher indemnification in each year since 2014 till 2017.

Figure 2. Income loss and Indemnification based on legal form and production orientation



(Source: own processing, value of indemnification expressed in EUR)

The Figure 2. shows the differences in production orientation and legal form of farms experiencing more than 20% income loss over the period 2012-2017. The lines indicate the % share of farmers eligible for compensation, and the bars indicate the total loss and the required financial contribution from the Income stabilisation tool fund, if it was implemented in Slovak agriculture. In the year 2017, only 72 farms would have obtained the loss coverage in the total amount of 14 mill. EUR, which is the most positive result from all the selected years. The total loss reached the lowest value, in both crop and animal producers.

4. CONCLUSION

The Income stabilisation tool belongs to one the risk management tools of Common Agricultural Policy, introduced in 2014-2020, aimed at compensating farmers for the negative effects of price volatility and income drops. The tool can be implemented by any EU-Member State to provide up to 70% compensation of more than 20% income loss compared to the 3-years average annual income, or 5-years Olympic average. The paper focused on the identification of instable farms in Slovak agriculture, experiencing more than 20% or more than 30% loss (previous threshold) during the period 2012-2017. The farms are analysed separately based on the production orientation and legal forms. Both characteristics show only small differences on the in the percentage of eligible farms for compensation. In the paper, we calculated the total loss and the total required indemnification (70% coverage of loss), if the tool had been implemented in Slovakia. The reference income variable, the *Gross farm income*, has been selected as the most suitable from the point of available data, and EU definition of income from farming.

The CAP allows the Member states to define the own rules for the constitution and management of the IST fund, particularly for the granting of compensation payments to farmers. The countries should firstly prepare administration and monitoring of farms, methodology for arrangement of funds, penalties in case of negligence on the part of the farmer and other steps, that might be costly. None of the EU countries has been using the tools to mitigate the income agricultural risk for now. Even though the millions of EUR could have been refunded to farmers to improve their welfare. The main reason of the unsuccess of the IST are many obstacles and uncertainties in implementation. The guideline is very vague and insufficient, the income definition and income variable choice is confusing, there is an inconsistent accounting system in EU countries, and problem with appropriate monitoring of individual farms. One of the conditions is the creation of IST fun with the active participation and initial contribution of farmers, that may be considered with unwillingness. Moreover, the budgetary needs of the IST can be very volatile and quite demanding. If the scheme is implemented in all Member States, the maximum budget needs for one year are estimated at 22 billion EUR (EC, 2017). To be able to encourage the risk management in Slovak agriculture, it is important to pay attention to the education of farms in this field, dissemination of knowledge about abilities for risk mitigation, support of risk management tools from the government, as well as the focus of scientific research on the potential effects on agriculture business.

Acknowledgement

This paper is supported by the project VEGA 1/0735/21 *Role, financial needs and risks of small farms in Slovakia.*

REFERENCES

Agri, D. G. (2017), "Modernising and simplifying the CAP, Background Document Economic challenges facing EU agriculture", pp. 3-36, Brussel, European Comission, available at: https://ec.europa.eu/info/sites/default/files/food-farming-fisheries/key_policies/documents/env_background_final_en.pdf (accessed 19 May 2021).

Chartier, O., Cronin, E., Jongeneel, M., van Asseldonk, M., Bergevoet, R., Cordier, J., Gielen-Meuwissen M. and Bocci, M. (2017), "Study on Risk Management in EU Agriculture", DG AGRI, Brussels, European Commission, available at: https://op.europa.eu/en/publication-detail/-/publication/5a935010-af78-11e8-99ee-01aa75ed71a1 (accessed 19 May 2021).

Boháčiková, A., Bencová, T., Kapustová, Z. and Strápeková, Z. (2020), "The Potential Indemnification of Slovak Farmers with the Income Stabilisation Tool", *Visegrad Journal on*

Bioeconomy and Sustainable Development, Vol. 9 No 2, pp. 78-81, doi: 10.2478/vjbsd-2020-0016.
Cordier, J. (2014), "Comparative analysis of risk management tools supported by the 2014 Farm Bill and the CAP 2014-2020", *IP/B/AGRI/IC/2014-044*, Strassburg, Parlement Européen.
Cordier, J. and Santeramo, F. (2020), "Mutual funds and the Income Stabilisation Tool in the EU: Retrospect and Prospects", *EuroChoices*, Vol. 19 No. 1, pp. 53-58.
El Benni, N., Finger, R. and Meuwissen, M. P. (2016), "Potential effects of the income stabilisation tool (IST) in Swiss agriculture", *European Review of Agricultural Economics*, Vol. 43 No. 3, pp. 475-502.
European Commission. (2013), "Regulation (EU) No 1305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the EAFRD and repealing EC No 1698/2005", OJ L (Official Journal European Union L 347/487), 347, pp. 487-548.
European Commission. (2017), "Summary of main changes introduced to the four basic regulations of the CAP through the Omnibus regulation", available at : https://ec.europa.eu/agriculture/capoverview/summary-changes-omnibus_en.pdf (accessed 19 september 2020).
Kimura, S. and Anton, J. (2011), "Farm income Stabilization and Risk Management: Some Lessons from Agristability Program in Canada", paper presented at the International Congress of the European Association of Agricultural Economists, 30 August-2 September, Zurich, Switzerland.
Liesivaara, P., Myyra, S., and Jaakkola, A. (2012), "Feasibility of the income stabilisation tool in Finland", working paper [no. 706-2016-48385], 123rd Seminar, Dublin, Ireland, February 23rd-24th.
Mary, S., Santini, F. and Boulanger, P. (2013), "An Ex-Ante Assessment of CAP Income Stabilisation Payments using a Farm Household Model", paper presented at the 87th Annual Conference of the Agricultural Economics Society, 8-10 April 2013, University of Warwick, United Kingdom.
Meuwissen, M. P., Assefa T. T. and Van Asseldonk, M. A. (2013), "Supporting insurance in European agriculture: Experience of mutuals in the Netherlands", *EuroChoices*, Vol. 12 No. 3, pp. 10-16.
Meuwissen, M. P., Van Asseldonk, M. A. and Huirne, R. B. (2008), *Income stabilisation in European agriculture: design and economic impact of risk management tools*, Wageningen Academic Publishers.
Meuwissen, M.P.M., Mey, Y.d. and Van Asseldonk, M. (2018), "Prospects for agricultural insurance in Europe" *Agricultural Finance Review*, Vol. 78 No. 2, pp. 174-182.
Pigeon, M., de Frahan, B. H. and Denuit, M. (2014), "Evaluation of the EU proposed farm income stabilisation tool by skew normal linear mixed models", *European Actuarial Journal*, Vol. 4 No. 2, pp. 383-409.
European Commission. (2013), "Regulation (EU) No 1305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005", Brussels.
Santeramo, F.G. (2018), "Imperfect information and participation in insurance markets: evidence from Italy", *Agricultural Finance Review*, Vol. 78 No. 2, pp. 193-194.
Tangermann, S. (2011), "Risk management in agriculture and the future of the EU's Common Agricultural Policy", *ICTSD Programme on Agricultural Trade and Sustainable Development,* Issue Paper 34, Geneva.
Turvey, C.G. (2012), "Whole Farm Income Insurance", *The Journal of Risk and Insurance*, Vol. 79 No. 2, pp. 515-540

Vera, A. C. and Colmenero, A. G. (2017), "Evaluation of risk management tools for stabilising farm income under CAP 2014-2020", *Economía agraria y recursos naturales*, Vol. 17 No. 1, pp. 3-23.

THE IMPACT OF REMITTANCES ON ECONOMIC GROWTH IN WESTERN BALKANS – A PANEL APPROACH

Predrag Trpeski
Faculty of Economics-Skopje, Ss Cyril and Methodius University
Predrag.Trpeski@eccf.ukim.edu.mk

Borce Trenovski
Faculty of Economics-Skopje, Ss Cyril and Methodius University
Borce.Trenovski@eccf.ukim.edu.mk

Gunter Merdzan
Faculty of Economics-Skopje, Ss Cyril and Methodius University
gjunter.merdzan@eccf.ukim.edu.mk

Kristijan Kozeski
Faculty of Economics-Skopje, Ss Cyril and Methodius University
kozeski@eccf.ukim.edu.mk

ABSTRACT
The migration is one of the constitutive features of Western Balkans' historical specificity, which significantly changed Balkan societies in the last two centuries. One crucial effect of intensive emigration is high remittances. Cross-country analyses and evidence from household surveys suggest that migration and remittances reduce poverty in the origin communities. In addition, remittances lead to increased investment in education, health, and small businesses. The diaspora can be a source of capital, investment, knowledge, and technology transfer. The inflow of remittances can contribute to the economic development of the remittance-receiving country, provided that the country can use these funds to finance investments that will enable it to produce export or investment goods to replace imports. This paper examines the impact of remittances on economic growth in the Western Balkans (North Macedonia, Serbia, Albania, Kosovo, Montenegro, and Bosnia and Herzegovina) last two decades. The relationship between economic growth, remittances, final household consumption, domestic investments, and trade is examined through a panel approach. The paper uses annual data obtained from the World Bank World Development Indicators. The results of the empirical analysis help determine the relationship between remittances and economic growth and provide a solid base for policymakers to direct remittances into productive investments. The general conclusion for the region is the need to implement policies that will strengthen the financial system to enable a more significant positive impact of remittances from migrants on economic growth.

Keywords: *Remittances, Economic Growth, Western Balkans*

JEL classification: *F22, F24, O47*

1. INTRODUCTION

Immigration stimulates the economic growth of the recipient country in two ways. First, it expands the workforce and encourages more startup businesses. Second, it increases economic efficiency by supplying low- and high-skilled labor markets with more labor. Highly skilled migrants also assist in transferring advanced technology that reflects reduced production costs,

http://hdl.handle.net/20.500.12188/15917
http://doi.org/10.47063/EBTSF.2021.0004

reduces trade-related costs, and increases economic growth (Abdelbagi, 2016). However, the Western Balkans are suffering from substantial outgoing migration due to many problems faced and still being faced by the citizens in this region, such as political instability, unemployment, and poverty. As a result, many migrants from this region are causing a loss of human capital on the continent.

The Western Balkans region is aging rapidly, and its declining population is projected to continue. This trend is due to low fertility rates along with external migration. The regional fertility rate dropped from 3,9 to 1,6 children per woman in the period 1965-2015. Immigration is projected to reduce the region's population, though not as much as in the past. Bosnia and Herzegovina, which has the highest average age among the six countries, is expected to increase its average age from 41,5 in 2015 to 53,9 in 2065 – the second highest age in the world. In the absence of political or behavioral responses or changes in labor productivity, the simulations show that aging in the region will reduce labor force participation and average annual per capita income growth by 0,4 percentage points over the next 50 years. In 2010, more than 20 % of the population born in North Macedonia lived abroad. In Bosnia and Herzegovina, and Albania, this figure was closer to 40 %. Massive external migration in the region has resulted in remittances of an average of 10 % of GDP in the affected economies (World Bank Group, 2017).

On the other hand, emigrants from the Western Balkans contribute to the development of their countries through many channels. For example, remittance inflows from migrants generate income multipliers for receiving households, which become critical resources for local development. Remittances from these migrants also create more funding for other sectors, such as investment, trade, and human development. Cross-country data show a statistically significant negative correlation between labor force participation and remittances, although the link is not particularly strong. The correlation is stronger when we limit the sample to middle-income countries and even more so when taking only the Western Balkans. Remittances from abroad can affect the readiness for work and the readiness to take certain types of jobs, which leads to higher unemployment and possibly long periods of unemployment. Nevertheless, there is generally a positive relationship between remittances and unemployment in the Western Balkans (World Bank Group, 2017).

Remittances as part of GDP in the Western Balkans averaged about 9 % in 2014, with the highest levels in Kosovo and Bosnia and Herzegovina. Remittances reach 20-25 % of households in Kosovo and are estimated to account for more than 15 % of GDP. As part of household income, remittances vary by country, with Kosovo having the highest level, followed by Albania. While these flows can increase income, support small business development, and alleviate poverty, their regular arrival can undermine the incentive to work. Remittances from abroad, together with the already large public transfers to households and individuals from the Western Balkans, increase non-labor incomes and reservation wages (World Bank Group, 2017).

Remittances, massive social security systems, and high wages in the public sector in the Western Balkans create discouraging factors for work. High non-labor income can create a perverse increase in activity by increasing the reservation wages, unemployment rates, and duration of unemployment. Higher wages and job security in the public sector may have increased reservation wages and created incentives to take private-sector jobs.

According to the latest Migration and Development Briefing (World Bank), in 2020, the officially recorded remittances flows to low- and middle-income countries reached $ 540 billion, just 1,6 % below the total remittance of $ 548 billion in 2019. Despite Covid-19, remittance flows remained resilient in 2020, recording a smaller decline than previously projected. The decline in registered remittance flows in 2020 was smaller than during the global financial crisis in 2009 (4,8 %). Also, the decline was far smaller than the decline in foreign

direct investment (FDI) to low- and middle-income countries, which, without flows to China, fell by more than 30 % in 2020. As a result, remittance flows to low- and middle-income countries exceeded the amount of FDI ($ 259 billion) and foreign development assistance ($ 179 billion) in 2020. The main drivers of the stable remittance flow included fiscal stimulus resulting in better-than-expected economic conditions in the host countries, the shift in cash flows in digital and from informal to formal channels, and cyclical movements in oil and exchange rates. As a result, it is estimated that the actual size of remittances, which includes formal and informal flows, is more extensive than officially reported data, although the extent of Covid-19's impact on informal flows remains unclear.

Therefore, this study aims to examine the impact of remittances on economic growth in the Western Balkans in the period 1996-2020. The rest of the paper is organized as follows: Part 2 reviews the literature, part 3 explains the data, and the empirical model and econometric technique are presented, part 4 is results and discussion, and the last part is intended for the conclusion. It is important to note that this paper examines only the direct effects of remittances on economic growth and does not aim to explore their indirect effects.

2. LITERATURE REVIEW

There are empirical studies that explain the impact of remittances on economic growth based on various theories and models. According to Jushi, et al., (2021), there are three main theories regarding the impact of remittances on development. The first theory has an optimistic view of the impact of remittances on economic growth. The second theory has a pessimistic view. The third theory emphasizes that remittances do not have a strictly positive or negative impact on economic growth, but this relationship is complex. Given the empirical literature and based on different theories, we believe that remittances are essential factors that positively impact economic growth, but it still depends on their use in specific countries and regions. We are testing this impact in the case of the Western Balkan countries.

Also, according to Rao & Hassan, (2011), some papers examine the direct and others indirect short-term and long-term impacts of remittances on economic growth. Our paper examines the direct effects of remittances on economic growth. However, this is very different from examining the indirect macroeconomic effects of remittances, when, for example, the impact of remittances on economic growth through its volatility is explored (World Bank, 2006), by accelerating the development of the financial sector (Toxopeus & Lensink, 2008), or through the real exchange rate (Rajan & Subramanian, 2005). In addition, remittances can indirectly affect economic growth through education, human capital, domestic investment rate, and other important determinants of output growth.

Emigrant remittances are an essential source of funding for many developing countries. Chami, et al., (2005), Rao & Hassan, (2011), and Barajas, et al., (2009), discuss the importance of remittances as a source of funding for developing countries. According to these authors, large inflows of remittances, as mentioned above, can potentially be expected to have significant effects on the growth rate of production capacity in recipient economies. Although a significant portion of the inflows is due to altruistic reasons for supporting the standard of living of family members, some are also motivated by monetary benefits and incentives offered by recipient countries. For example, non-resident deposits attract higher interest rates and are exempt from income tax in India and Pakistan (Rao & Hassan, 2011).

Remittances also have effects on growth and well-being. However, there is little agreement and scant information in the literature on the impact of international migration and remittances. Adams & Page, (2005), analyze a new data set on international migration, remittances, inequality, and poverty from 71 developing countries. Studies involving a larger sample of countries as Spatafora, (2005), have found evidence that remittances can help improve a

country's development prospects, maintain macroeconomic stability, mitigate the impact of adverse shocks, and reduce poverty. According to the same study for many developing countries, remittances are a huge source of foreign exchange and have proven to be much more stable and less cyclical than other such sources.

As stated above, in addition to previous studies attempting to identify specific channels through which remittance inflows may affect growth, such as the effects of Dutch Disease (Nikas & King, 2005), some studies discuss the direct effects of remittances on growth through regression of the growth rate on remittances and a set of control variables. Chami, et al., (2005), contrary to the general assumption in the literature and policymakers that remittances from immigrants play the same role in economic development as foreign direct investment and other capital flows; develop a remittance model based on the family economy, which implies that remittances are not profit-oriented but are compensatory transfers and should have a negative correlation with GDP growth. They test this model on new remittance panel data and find a robust negative correlation between remittances and GDP growth. Paper suggests that remittances may not be intended to serve as a source of capital for economic development.

Faini, (2007), also uses the distance from major migrant destination countries as a cross-regression remittance tool, using a sample of 68 countries with average data from 1980 to 2004. The innovation in this study is that the author does not include the investment rate in the set of control variables, based on the fact that remittance flows could partially drive investments. In contrast to the previous study, the estimated total remittance ratio relative to GDP in Faini's regression through the ordinary least squares method was positive and significant. However, when the regression was assessed with instrumental variables, the remittance rate coefficient lost its statistical significance, although it remained positive.

Based on the above, remittances in the country of origin are the essence of the debate on migration and development in countries with many emigrants. However, the binary relationship between productive remittance investments (in agriculture, industrial development, education, health) and non-productive investments (housing, conspicuous consumption) is unclear and depends on the value courts on the nature of development. Moreover, the automation of remittances, distributed across hundreds of thousands of recipients, each makes its own decisions, disabling strategic planning for investing remittances in development priorities at the national level (Nikas & King, 2005). So it can be concluded that how remittances will affect economic growth and development in a given economy largely depends on complementary infrastructure, services, favorable physical conditions (especially for agriculture), and a stable political and financial environment.

3. DATA AND METHODOLOGY

This chapter explains the data and presents the empirical model and econometric technique for examining the effects of remittances on economic growth. Date are taken for the six countries of the Western Balkans (North Macedonia, Serbia, Albania, Kosovo, Montenegro, and Bosnia and Herzegovina) for the period 1996-2020. They were collected from the World Bank World Development Indicators database. In order to make this analysis, the panel regression model is used in this paper. We use GDP per capita as a dependent variable, and remittances, final consumption, domestic investment, and trade are used for independent variables. Data on variables in their original form are shown in current USD, except the trade, % of GDP (Table 1). For analysis, all variables are transformed into logarithms. Due to the lack of data for all countries for the entire time series, we work with unbalanced panel data and have 111 observations. The primary purpose of this study is to examine the direct effects of remittances on economic growth.

Table 1: Description of the variables

Variable	Explanation	Source
GDP per capita (current US$)	GDP per capita is gross domestic product divided by midyear population. Data are in current U.S. dollars.	World Development Indicators, World Bank
Personal remittances, received (current US$)	Personal remittances comprise personal transfers in cash or in-kind made or received by resident households to or from nonresident households and compensation of employees. Data are the sum of two items defined in the sixth edition of the IMF's Balance of Payments Manual: personal transfers and compensation of employees. Data are in current U.S. dollars.	World Development Indicators, World Bank
Final consumption expenditure (current US$)	Final consumption expenditure is the sum of household final consumption expenditure (private consumption) and general government final consumption expenditure (general government consumption). Data are in current U.S. dollars.	World Development Indicators, World Bank
Gross fixed capital formation (current US$)	Gross fixed capital formation includes: • land improvements (fences, ditches, drains, and so on); • plant, machinery, and equipment purchases; and • the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. According to the 1993 SNA, net acquisitions of valuables are also considered capital formation. Data are in current U.S. dollars.	World Development Indicators, World Bank
Trade (% of GDP)	Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.	World Development Indicators, World Bank

(Source: World Development Indicators Database, World Bank)

Econometrically, the general model we use for estimation when using panel data can be described as (Brooks, 2014):

$$\gamma_{it} = \alpha + \beta x_{it} + u_{it} \quad (1)$$

where γ_{it} is a dependent variable, α is the intercept term, β is a $k \times 1$ vector of the parameters of the explanatory variables to be estimated and x_{it} is a $1 \times k$ vector of observations of the explanatory variables, $t = 1, \dots, T; i = 1, \dots, N$.

The simplest way to analyze panel data is by estimating pooled regression, which involves estimating one equation for all data so that the γ database is arranged in a single column containing all observations for cross members and time series. Similarly, all observations of each explanatory variable are arranged in single columns in the matrix x. In that case, this equation is estimated in the usual way using the ordinary least squares (MLS) method. Although this is a straightforward way to proceed and requires the estimation of as few parameters as possible, the procedure has some severe limitations. Most importantly, data aggregation in this way implicitly assumes that the mean values of the variables and the relationships between them are constant over time and across all cross-sections in the sample (Brooks, 2014).

To solve this problem, we choose between two-panel evaluation approaches: fixed-effects and random-effects models. The simplest types of fixed-effect models allow the intercept in the regression model to differ between the cross-members, but not overtime, while all estimated slope coefficients are fixed both cross-sectionally and temporally.
The fixed effects model can be estimated using the following equation (Brooks, 2014):

$$\gamma_{it} = \alpha + \beta x_{it} + \mu_{it} + v_{it} \quad (2)$$

Where the error member u_{it}, decomposes into an individual specific effect, μ_i, and the "remainder disturbance", v_{it}, which varies with time and terms (including everything that remains unexplained for γ_{it}. We can count on μ_i as covering all variables which affect γ_{it} cross over, but do not differ over time.
An alternative to the fixed-effects model described above is the random-effects model. As with the fixed-effects model, the random-effects approach proposes different intercept coefficients for each member. However, these intercept coefficients are constant over time, assuming that the relationships between the explanatory and explained variables are the same cross-sectionally and temporally.
However, the difference is that according to the random-effects model, it is assumed that the intercepts for each cross-member derive from a common a common intercept α (which is the same for all cross-members over time), plus a random variable ϵ_i, which varies through the cross-members but is constant over time. ϵ_i measures the random deviation of the intercept of each member of the common intercept coefficient α. We can write the panel model with random-effects as follows:

$$\gamma_{it} = \alpha + \beta x_{it} + \omega_{it}, \qquad \omega_{it} = \epsilon_i + v_{it} \quad (3)$$

where x_{it} is still a $1 \times k$ vector of explanatory variables, but unlike fixed-effects, there are no dummy variables here to capture the heterogeneity (variation) in the cross-sectional dimension. Instead, it happens through members ϵ_i. It should be noted that this framework assumes that the new error cross member ϵ_i has zero mean, is independent of the individual error member v_{it}, has a constant variance σ_ϵ^2, and is independent of the explanatory variables x_{it}.
The random-effects model is often more appropriate than the fixed-effects model when the subjects in the sample can be considered randomly selected from the population. However, the fixed-effects model is more plausible when the subjects in the sample effectively make up the entire population (for example, when the sample covers all developed countries, emerging markets or developing countries according to their official classification by particular institution).
Also, because there are fewer parameters to be estimated with the random-effects model (no dummy variables) and therefore, degrees of freedom are preserved, the random effects model should produce a more efficient estimate than the fixed-effects model (Brooks, 2014).
However, the random-effects model has a significant drawback because it is only valid when the composite error member ω_{it} is not associated with all explanatory variables. This assumption is stricter than the corresponding one in the case of the fixed-effects model because, with random-effects we require both ϵ_i and v_{it} to be independent of x_{it}. This can also be understood as considering whether any omitted variable is not related to the explanatory variables included. Thus, the random-effects model can be used; otherwise, the fixed effect model is preferred. Finally, we perform the Hausman test to see which model in our analysis are recommended and display the results.

4. RESULTS AND DISCUSSION

This section presents the results related to the impact of remittances on economic growth in the case of Western Balkans that are the subject of analysis in this research for 1996-2020. First, before presenting the results of the conducted empirical analysis, it is considered necessary to examine the integrative characteristics of the panel data, which implies the determination of the stationarity or non-stationarity of the variables. For this purpose, the LLC (Levin, Lin and Chu) is used in this paper. Based on the results obtained from the conducted LLC test, it can be concluded that all of the variables are stationary at the level of 1 % significance level.

Table 2: Results for the integrative characteristics of the variables used in the model

Variable	Statistics (LLC-test)	p-value of the statistics (LLC-test)
$\ln GDP_{p.c.}$	-4,57811	0,0000
$\ln Remittances_{received}$	-3,13067	0,0009
$\ln Consumption_{final}$	-3,47775	0,0003
lnGFCF	-4,67719	0,0000
lnTrade	-2,36849	0,0089

(Source: Authors' calculations.)

Then, we evaluate the fixed effects model to see what information the "likelihood ratio" gives us from the "Redundant Fixed Effects Tests". The results of this test indicate that in this model it is permissible to impose fixed or random effects on the cross-members and not on the period. So, it is advisable to work with a model with fixed or random effects, rather than a pooled regression where all data is considered belongs to one entity without paying attention to the different characteristics between entities/cross-member entities. Next, we perform the Hausman test to decide which technique should be used in our model. The p-value of the Chi-square statistic is 0,0000, i.e., it has a lower value of 0,05, which means that we can reject the null hypothesis and find that, in our case, the fixed effects model is recommended.

The next step is to estimate the model, i.e. to determine the coefficients of the independent variables by imposing fixed effects on the cross-members in the model, and the following equation estimates it:

$$\begin{aligned} lnGDP_{p.c._{1996-2020}} &= \alpha + \beta_1 \ln Remittances_{received_{1996-2020}} \\ &+ \beta_2 lnConsumption_{final_{1996-2020}} + \beta_3 lnGFCG_{1996-2020} \\ &+ \beta_4 lnTrade_{1996-2020} + \mu + v_{1996-2020} \end{aligned} \quad (4)$$

Table 3. Results for the estimated coefficients based on the model with fixed effects

Explanatory variables	Coefficient	t-statistics	p-value
$\ln Remittances_{received}$	-0,057830**	-2,553414	0,0122
$\ln Consumption_{final}$	1,006936***	37,80333	0,0000
lnGFCF	0,075374**	2,605607	0,0106
lnTrade	0,201603***	4,760340	0,0000
a	-16,13444***	-67,80757	0,0000
R^2	0,995176		
F-statistics	2315,133		
p-value (F-stat)	0,000000		

(Notes: ***, **, and * denote significance at the 1 %, 5 % and 10 % levels, respectively. Source: Authors' calculations.)

The estimate results indicate an appropriate level of fit of the model, i.e., the coefficient of determination R^2 takes a value of 99,52 %, which indicates that the variations in the model are explained by the variables included in the model. Furthermore, the p-value of the F statistics of the evaluated model is 0%, i.e., it is lower than 5% which means that the hypothesis that the explanatory variables together have a significant influence on the movement of the dependent variable can be accepted. Furthermore, the application of the Jarque-Bera test in the model also confirms the assumption of a normal distribution of the residuals. In our model, the p-value of the test statistics is 25,81 %, i.e., it has a higher value of 5%; in that case, we cannot reject the null hypothesis that residuals follow a normal distribution. Therefore, according to the results obtained from the conducted diagnostic tests, it can be concluded that the model is well adapted, and the obtained results from the coefficients are objective and reflect the real relationship between the analyzed variables.

As expected, the results reveal that economic growth depends on final household consumption, domestic investment, and trade in the Western Balkans. All have a positive and significant impact on the economic growth of the Western Balkan countries. On the other hand, remittances have a significant but small negative impact on the economic growth in the same countries. As noted above, the Western Balkan countries suffer from vast migrants causing losses in human capital stocks. For example, educated and trained workers prefer to provide their skills abroad to receive a high salary, rather than what they would receive if they had worked in their country (Ziesemer, 2012). Based on this, it can be concluded that emigration negatively affects economic growth due to a lack of skilled and trained labor. However, these migrants can contribute positively to economic growth in certain countries or groups of countries through their remittances to countries of origin. Migrants' remittances help receive families and cover their living needs, such as food and clothing, so they tend to invest the rest in their children's health care and education. This will improve the way of life of remittance recipients and help build up human capital stocks in these countries by increasing the number of educated and healthier workers (Abdelbagi, 2016).

According to Amuedo-Dorantes, (2014), there are two main areas of concern at the macro level that find widespread empirical support in the literature: discouraging people from entering the workforce and the impact of remittances on domestic product prices and the exchange rate. The first category of problems refers to the potential reduction of labor supply, the development of conspicuous consumption patterns, and the inability to develop a culture of saving that can enable future investment and growth. However, despite declining labor supply after remittances, evidence of declining economic growth is rarer, and analyzes usually do not consider the long-term remittance flows in human capital, as mentioned earlier. Another impact of remittances at the macro level is their effect on the exchange rate by increasing the prices of domestically produced goods. Recalling the effects of Dutch Disease models or resource booms, some researchers argue that remittances can increase consumption of non-traded goods and prices of domestic products, reduce exports and undermine the country's competitiveness in world markets. There is evidence that these effects are most common in smaller economies, while they are more difficult to find in larger economies.

This is confirmed by The World Bank Group's analysis, (2017), that remittances, massive social protection systems, and high wage premiums in the public sector in the Western Balkans create discouraging factors for work. In addition, high non-labor income can create a perverse increase in inactivity by increasing the reservation wages, unemployment rates, and the public sector may have increased reservation wages and created disincentives to take up private-sector jobs.

CONCLUSION

This study examines the direct impacts of remittances, final household consumption, domestic investment, and trade on economic growth in Western Balkans from 1996 to 2020. The study uses annual data obtained from the World Bank World Development Indicators database. The data are processed using panel technique, i.e., model with fixed-effects. Empirical results show that final consumption of households, domestic investment, and trade have a significant and positive impact on economic growth, while remittances have a significant but negative impact on economic growth in the Western Balkans in the analyzed period.

The negative relationship can be explained by two main areas of remittance impact on economic growth: the incentives created by remittance recipients to join the workforce and the impact on the exchange rate by increasing domestic product prices. As a result, production reduces exports and undermines the country's competitiveness in world markets. These effects are more common in smaller open economies such as the Western Balkans.

Remittances as part of household income vary by country, but while these flows may increase income, support small business development, and alleviate poverty, their regular arrival may undermine the incentive to work. Remittances, together with the already large public transfers to households and individuals from the Western Balkans, increase non-labor incomes and reservation wages.

Given the enormous potential benefits of remittances at the macro level, such as the contribution of remittances to the country's economic stability and creditworthiness, much more can be gained for economic growth and development through more effective management of this process. Therefore, this study is helpful for the academic and business community and policymakers that will help these countries limit emigration to retain qualified and trained staff in the Western Balkans. Furthermore, to introduce policies that develop the financial system, the positive effects can overcome the negative effects of remittances and positively impact economic growth.

REFERENCES

Abdelbagi, E., 2016. Migration, Remittances, Trade Opennes and Economic Growth in Africa: GMM Technique. *Journal of Global Economics,* 4(2).

Adams, R. H. & Page, J., 2005. Do International Migration and Remittances Reduce Poverty in Developing Countries?. *World Development,* 33(10), pp. 1645-1669.

Amuedo-Dorantes, C., 2014. The Good and the Bad in Remittance Flows. *IZA World of Labor,* Issue 97.

Barajas, A. и др., 2009. Do Workers' Remittances Promote Economic Growth?. Bo: *IMF Working Paper.* н.м.:н.а., p. 22.

Brooks, C., 2014. *Introductory Econometrics for Finance.* Cambridge: Cambridge University Press.

Chami, R., Fullenkamp, C. & Janjah, S., 2005. Are Immigrant Remittance Flows a Source of Capital for Development. *IMF Staff Papers,* 52(1), pp. 55-81.

Faini, R., 2007. Migration and Remittances: Impact on the Countries of Origin. *Revue d'Économie du Développement,* 15(2-3), pp. 153-182.

Jushi, E., Hysa, E., Cela, A. & Panait, M. V. M., 2021. Financing Growth through Remittances and Foreign Direct Investment: Evidences from Balkan Countries. *Journal of Risk and Financial Management,* 14(3), p. 117.

Nikas, C. & King, R., 2005. Economic Growth through Remittances: Lessons from the Greek Experience of the 1960s Applicable to the Albanian Case. *Journal of Southern Europe and the Balkans,* 7(2).

Rajan, R. G. & Subramanian, A., 2005. What Undermines Aid's Impact on Growth?. Bo: *IMF Working Papers.* н.м.:International Monetary Fund.
Rao, B. B. & Hassan, G. M., 2011. A Panel Data Analysis of the Growth Effects of Remittances. *Economic Modelling,* 28(1-2), pp. 701-709.
Spatafora, N., 2005. Two Current Issues Facing Developing Countries. Bo: *World Economic Outlook.* Washington, DC.: International Monetary Fund.
Toxopeus, H. & Lensink, R., 2008. Remittances and Financial Inclusion in Development. Bo: T. Addison & G. Mavrotas, yp. *Development Finance in the Global Economy. Studies in Development Economics and Policy.* London: Palgrave Macmillan.
World Bank Group, 2017. *The Western Balkans: Revving Up the Engines of Growth and Prosperity,* Washington, DC: World Bank.
World Bank, 2006. *The Development Impact od Workers' Remittances in Latin America, Vol. 2: Detailed Findings,* Washington: World Bank.
Ziesemer, T. H. W., 2012. Worker Remittances, Migration, Accumulation and Growth in Poor Developing Countries: Survey and Analysis of Direct and Indirect Effects. *Economic Modelling,* 29(2), pp. 103-118.

SHADOW ECONOMY AND CORRUPTION IN THE BALKANS – IS THERE A CONNECTION AND WHAT SHOULD BE DONE[1]

Radostina Ivcheva
Faculty of Economics and Business Administration at Sofia University "St. Kliment Ohridski"
radi_ivcheva@abv.bg

ABSTRACT
Economies in the Balkans are lagging behind more advanced countries in Europe in their economic development. In some sense that could be a result of the high share of the shadow economy in those countries. Research points out several causes of shadow activities such as low tax morale, high levels of unemployment, weak business environment and very high poverty levels, lack of trust in the state and the public institutions, high perceptions of corruption and also the high taxation levels. This issue affects directly the economy as well as indirectly the whole society. This paper aims to find a positive link between the volumes of the shadow economy and corruption in eight Balkan economies: Slovenia, Croatia, Bosnia and Herzegovina, Serbia, Montenegro, Kosovo and North Macedonia and Bulgaria.

Keywords*: shadow economy, corruption, socio economic issues*

JEL classification: *D73, E26, O17*

1. INTRODUCTION

Shadow economy shrunk across much of Europe since the global financial crisis, but still remains a significant share of GDP, especially in the Balkans. Shadow economy is on average, around 15–20 percent of GDP in advanced economies and around 30-35 percent of GDP in emerging economies (Medina and Schneider 2018).

There is no single definition of shadow economy. One of the main authors in this field Friedrich Schneider explains this phenomenon as "all market-based legal production of goods and services that are deliberately concealed from public authorities for the following: to avoid paying income, value-added, or other taxes; to avoid paying social security contributions; to avoid having to meet certain legal labor market standards such as minimum wages; to avoid complying with certain administrative procedures". This is the definition which is recognized id this paper as well.

On the other hand corruption is a complex phenomenon, which roots lie in bureaucratic and political institutions, and its effect on development varies with country conditions. Corruption has a disproportionate impact on the poor and most vulnerable, increasing costs and reducing access to services, including health, education and justice.

The main hypothesis of this paper is that there is a positive relation between corruption and the size of shadow economy in the Balkans. This can have a strong impact not only on the economic development on the countries in the region but on their future in the European Union as well.

2. EXPLAINING THE MAIN CONCEPTS

[1] *This research paper is financed by the "Scientific Research" Fund under project № 80-10-192/06.04.2021.*

http://hdl.handle.net/20.500.12188/15918
http://doi.org/10.47063/EBTSF.2021.0005

There are many theories about the existence, causes and effects of the shadow economy. The classical/Marxian approach argues that in the center of the informal economy is the "surplus" labor force which is a product the process by which the capitalist economy secures its resources minus the people who traditionally survived on those resources. On the other hand according to the dualistic/modernization theory, shadow economy consists of marginal activities – distinct from and not related to the formal sector – that provide income for the poor and a safety net in times of crisis. In the neoliberal/legalist theory, the informal sector is comprised of micro – entrepreneurs who choose to operate informally in order to avoid the costs, time and effort of formal registration. Significant element of this theory is the delay of growth due to lower level of productivity, limited investments, inadequate and inefficient tax system, low level of implementation of technological progress and complications in macroeconomic policy (Koufopoulou et al. 2019). However Loayza and Rigolini (2006) and Medina et al. (2017) came to the conclusion that in some cases the shadow economy can serve as a source of employment and income in the absence of opportunities in the formal sector, or as a safety net during cyclical downturns. In other words in some cases the shadow economy can contribute to overall growth (Schneider 2004).

Although shadow economy can act as a source of supplemental income, its existence creates inefficiencies in the broader economy. The costs associated with shadow economy include distortions in the labor market, forgone revenue due to underreporting of wages and output, suboptimal provision of public goods, and lower provision of and access to financing. Limited scale of production also tends to impede firms' productivity and innovation (Kelmanson et all. 2019).

Shadow economy decreases tax revenue, with consequences on government's ability to provide public services and hence increasing the nation's debt. Shadow economy includes economic activities and respective incomes that are not under the government regulation and taxation. Feige and Cebula (2012) come to the conclusion that noncompliance shifts real resources from honest taxpayers to dishonest evaders and tax liabilities from present to future generations. In this sense, there is a shift from legal and regulated economy to the shadow economy.

Martha Chen (2007) identified the existence of three approaches in the relation between official and shadow economies: dualism, structuralism and legalism. Dualism establishes that shadow economy has few connections to official economy and operates separately. Its hypothesis sustain that regulation had segmented the market, as a derivation from the rigidities of official economy. These few connections happen since both economies share some common factors, like unemployment, corruption level or monetary mass, allowing the transference of resources between these economies.

On the other hand, structuralism assumes that official and shadow economies are intrinsically connected. This means that some agents from the official economy encourage relations with shadow economy in order to decrease input costs. Agents meet their interests and consequently the shadow economy is used to expand the official economy. Legalism establishes a relation between the shadow economy and the regulatory environment of the official economy, outside the scope of the agents' actions. There is a collusion of interests between economic agents and government in the regulated official economy.

Schneider et al. (2008) presented another perspective. They suggest that to understand the consequences of shadow economy we should focus on the nature of the relation with formal economy. For these authors, what is important is to know whether, in the relations between both economies, substitute effects such the passage of productive activities overcome complementary ones, like economic growth. When both economies complement instead of competing each other, the shadow economy stimulates the growth of official economy. The authors justified this claim

with the value added in the shadow economy, which is subsequently transferred to the official economy. However, if the competition between both economies prevails, unfair competition affects negatively the allocation of resources. So their research has shown us, that there are positive and negative impacts of shadow economy in official economy.

Underground economic activity is, by definition, not directly observable or reported. However, it may be assumed that shadow activities depend positively on the opportunity costs of remaining formal and negatively on the probability of detection and potential fines. The literature suggests some potentially observable causes of the underground economy. Changes in certain tax rates are thought to be one cause because they alter people's incentives to evade paying taxes. Changes in people's opportunities to evade taxes is another cause. Such changes may be reflected in changes in the sectors where people are employed (e.g. the growth of sectors where evasion is easier) the type of employment (e.g. shifts from paid to self-employment) or market structures (e.g. the supplanting of small shops by large stores) (Almenar et all. 2019). Changes may also occur in people's attitudes towards the morality of cheating on their taxes. Frey and Weck-Hanneman (1984) argued that the causal variables in MIMIC models are in fact determinants of hidden economic output and that it is reasonable to interpret their combined effect as a measure of the underground economy.

There is considerable theoretical and empirical agreement on the factors that determine the relative size of the underground economy. These factors include the tax burden, regulations, enforcement, labor force characteristics etc. Growth in the underground economy may also reflect citizens' dissatisfaction with public services received in exchange for taxes and hence with tax rates (Hill, 2002). Evasion of tax payments, in turn, lessens the government's ability to finance public goods and services. There are also various possible indirect indicators of changes in the level of underground activity. Some studies have focused on monetary factors such as changes in cash holdings that can be linked statistically to changes in tax rates as indicators of changes in the underground economy.

Given that there are significant costs associated with shadow economies, policy makers seek to understand the drivers and possible solutions. Identifying the causes and reducing the size of the shadow economy entails several challenges. For instance, tax morale, enforcement, rates, and compliance all interact with each other, as well as the provision of public services and government effectiveness. Finally, once drivers are identified, policies must be calibrated so that economic activity is formalized without stifling entrepreneurship or cutting off incentives to work (Schneider 2013).

Theoretically, corruption and the shadow economy can either be complements or substitutes (Dreher and Schneider 2006). Choi and Thum (2005) present a model where the option of entrepreneurs to go underground constrains a corrupt official's ability to ask for bribes. Dreher et al. (2008) extend the model to the explicit specification of institutional quality. The model shows that corruption and the shadow economy are substitutes in the sense that the existence of the shadow economy reduces the propensity of officials to demand non declared payments.

To the contrary Johnson et al. (1997) establish a model corruption and the shadow economy as complements. In their full-employment model, labor can either be employed in the official sector or in the underground economy. Consequently, an increase in the shadow economy always decreases the size of the official market. In their model, corruption increases the shadow economy, as corruption can be viewed as one particular form of taxation and regulation. According to Hibbs and Piculescu (2005), corrupt bureaucrats can overlook unofficial production in exchange for a bribe, so that corruption increases the size of the underground sector.

Similar studies related to Balkan countries are limited in number. Hysa (2011), in her study on the Balkans for the period 2002–2010, argues that the negative relation between corruption and human development is strong in Serbia, Montenegro, Albania, and Former Yugoslav Republic of Macedonia, weak in Croatia, and insignificant in the case of Bosnia and Herzegovina.

3. DATA, METHODOLOGY AND FINDINGS

This paper examines the relation between the size of the shadow economy in eight Balkans countries: Slovenia, Croatia, Bosnia and Herzegovina, Serbia, Montenegro, Kosovo and North Macedonia and Bulgaria, and the estimations of the Corruption Perception index for a period of twenty years between 1995-2015 where we see approximately two full economic cycles. To do that we perform a OLS regression with one dependent variable being the shadow economy and two explanatory variables – corruption and capital per capita.

Data for the shadow economy are taken from an IFM Working paper prepared by Leandro Medina and Friedrich Schneider (2018). The authors estimate the size and development of the shadow economy of 158 countries over the period 1991–2015 using the MIMIC approach.

To estimate corruption, we employ Corruption Perceptions Index. The Corruption Perceptions Index[2] (CPI) is an index published annually by Berlin-based Transparency International since 1995 which ranks countries "by their perceived levels of public sector corruption, as determined by expert assessments and opinion surveys." The CPI generally defines corruption as an "abuse of entrusted power for private gain". Corruption generally comprises illegal activities, which are deliberately hidden and only come to light through scandals, investigations or prosecutions. The sources and surveys which make up the CPI, ask their respondents questions which are based on carefully designed and calibrated questionnaires. The CPI contains informed views of relevant stakeholders, which generally correlate highly with objective indicators, such as citizen experiences with bribery as captured by the Global Corruption Barometer. For a country/territory to be included in the ranking, it must be included in a minimum of three of the CPI's data sources. If a country is not featured in the ranking, then this is solely because of insufficient survey information and not an indication that corruption does not exist in the country.

Figures for the capital per capita are calculated using data about the capital stock for each country taken from "IMF Investment and Capital Stock Dataset, 2017" and data for the population taken form the World Bank dataset.

Theoretically there is not a single understanding about the relation between corruption and the shadow economy. But on the other hand there are reason to believe that the relation might differ among high and low income countries. In high income countries, the official sector provides public goods like the rule of law, enforcement of contracts, and police protection. Usually, only craftsmen or very small firms take the option of going underground. In this case, the shadow economy is only hidden from tax inspectors and other officials. Typically high income countries typically show small levels of corruption. Moreover, in those countries corruption quite often takes place to bribe officials to get big contracts from the public sector (e.g., in the construction sector), which are then handled in the official economy and not in the shadow economy. Hence, corruption in high income countries can be a means of achieving certain benefits which make work in the official economy easier, e.g., winning a contract from a public authority, getting a license (e.g., for operating taxes, providing other services, or getting permission to convert land into "construction ready" land). In

[2] https://www.transparency.org/en/cpi/2020/index/nzl

high income countries people thus bribe in order to be able to engage in more official economic activities (Dreher and Schneider, 2006).
To the contrary in low income countries as those in the Balkans different mechanisms to prevail. Instead of working partly in the official sector and offering additional services underground as in high income countries, enterprises completely engage in underground activity. Examples of enterprises that sometimes operate completely underground are restaurants, bars, or hairdressers. As one reason for this, the public goods provided by the official sector are in many developing countries less efficient as compared to high income countries.
The hypothesis of this paper is that there is a positive relation between corruption and the size of the shadow economy in countries in Balkans. In order to verify the hypothesis we first create a skater plot using data for the size of shadow economy and the Corruption perception index in all examined countries.

Figure 1. Relation between the size of shadow economy and corruption in the Balkans (1995-2015)

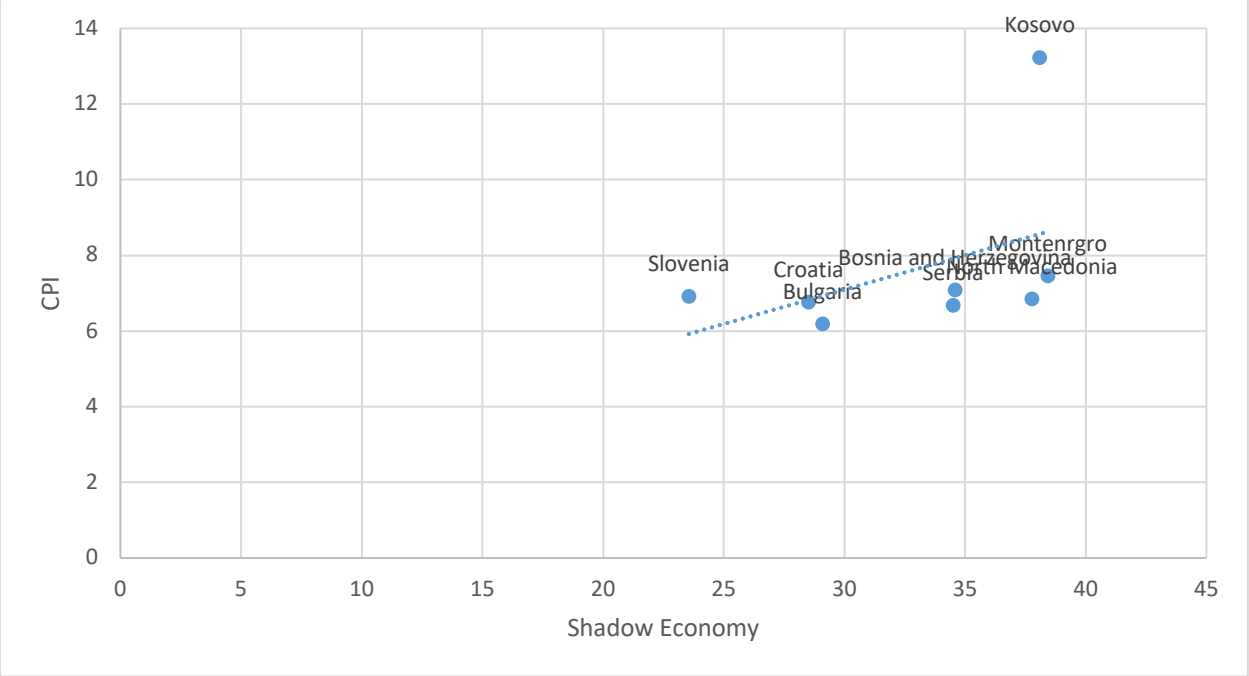


Figure 1 shows a positive relation between the size of shadow economy and corruption for the examined countries in the period. In order to find a stronger prove for the hypothesis the correlation coefficient between the size of the shadow economy and corruption for all countries for the period 1995-2015 is calculated.[3] The calculations show us a correlation of approximately 0.5 which falls into the category for moderate relation. That proves that our hypothesis is right.
To further confirm out findings a multiple OLS regression including one dependent variable and two explanatory variables is performed. Our dependent variable is the size of shadow economy measured as present of GDP for each country. The explanatory variables are corruption and capital per capita in the Balkan countries. All data are averages over the period 1995-2015.

[3] The absolute value of the correlation coefficients is in the range from 0 to 1. If the correlation coefficient is a positive number, the dependence is positive, ascending - the larger values of one variable correspond to larger values of the other variable. If the correlation coefficient is a negative number, the dependence is negative, descending - higher values of one variable correspond to lower values of the other variable.

F-test on the significance of the explanatory variables show that they are good predictors of the degree of shadow economy. This is in line with our hypothesis. Moreover the results for the t-stats and p-values help us to reject the null hypothesis that there is no relation between the variables. Finally we look at the R-squared values. The R-squared value of ~0.821 indicates that our model accounts for about 82.1% of the dependent variable's variance. The regression results are shown in Table 1.

Table 1. Regression results

Table 1					
Regression Statistics					
Multiple R	0,90583296				
R Square	0,820533351				
Adjusted R Square	0,748746692				
Standard Error	2,852293494				
Observations	8				
	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	185,9819992	92,991	11,43016	0,013644555
Residual	5	40,67789088	8,135578		
Total	7	226,6598901			
	Coefficients	*Standard Error*	*t Stat*	*P-value*	
Intercept	26,37556952	5,5768445	4,729479	0,005199	
CPI	0,829559055	0,331774642	2,500369	0,054466	
Capita per capita	-0,274473225	0,068272443	-4,02026	0,010118	

(Source: Author's calculations)

Having in mind that the business environment and reduction of the hidden economy is a critical dimension of the Copenhagen economic criteria[4] for EU membership countries in the Balkans that are in the process of negotiations have to increase their effort to lower the corruption and shadow economy within them. The improvement of the institutional environment, quality of public services and lower tax burden are expected to be more effective than repression measures in the combat against the shadow economy. And as we can see in the last European Commission report "Progress towards Meeting the Economic Criteria for EU Accession"[5] all of the countries in the region have made some progress in that direction but still have some way to go. On the other hand the share of shadow economy in the Balkan countries that are already a member of the European Union has been shrinking in the years after their accession to the single market.

[4] https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/international-economic-relations/enlargement-and-neighbouring-countries/enlargement/economic-accession-criteria_en

[5] https://ec.europa.eu/info/publications/progress-towards-meeting-economic-criteria-eu-accession-eu-commissions-2019-assessments_en

Friedrich Schneider (2017) came out with a different point of view about the fight with shadow economy. He studies the relation of cash and volume of shadow economy in 38 European countries. His results clearly show that the share of cash payments has an influence on the size and development of the shadow economy and is statistically significant, or in other words the more cash, the larger the shadow economy and vice versa. Having that in mind Schneider estimates that reduction in cash or introduction of a cash limit will lead to a reduction in the volume of shadow economy between 2 and 20% (in the case of abolishing cash). But on the other hand he says that there are weak empirical evidence that limitation or abolishment of cash and more comprehensive state control over individuals' financial flows and funds will effectively fight shadow economy.
Instead of abolishing cash all together a paper "Shining Light on the Shadow Economy: Opportunities and Treats" created by Organization for Economic Co-operation and Development (2017) suggests that shadow economy can be reduced by whole of government approaches, also known as joined-up government that are intended to overcome boundary problems between different parts of government to allow citizens easier access to services, avoid duplication and increase efficiency. The report also states that international co-operation is highly important to tackling cross-border shadow economy activity. This includes sharing of information, intelligence and co-operation on live cases. Information sharing is made possible through bilateral treaties, tax information exchange agreements or the Multilateral Convention on Mutual Administrative Assistance in Tax Matters. Another way governments can deal with shadow economy is by reinforcing social norms working through customers and others to help reduce opportunities for noncompliant behavior, in particular by not facilitating shadow economy behavior.

4. CONCLUSION

This paper was started with the hypothesis that corruption and shadow economy in the Balkans have a strong positive relation. That can be harmful to the countries that are in the process of negotiations for becoming members of the European Union and for those that are members already for it can lead to lower international image.
The empirical findings were in line with the expectations so we can say that there is a positive relation between the two variables for the given period. In that sense corruption and shadow economy are problems that the countries in the Balkans have to work on solving. All countries in the region have the resources needed for a developed country and they have high economic margins throughout the years, therefore an improvement of the government performance would be enough to generate a decrease in corruption and speeding up the proses of EU membership.

REFERENCES:

Achim, M.V., Văidean, V.L., Borlea, S.N. and Florescu, D.R. (2021) "The Impact of the Development of Society on Economic and Financial Crime. Case Study for European Union Member States", *Risks*, [online] Vol. 9 No. 5, p.97, available at: http://dx.doi.org/10.3390/risks9050097.
Almenar, V., Sánchez, J.L. and Sapena, J. (2019) "Measuring the shadow economy and its drivers: the case of peripheral EMU countries", *Economic Research-Ekonomska Istraživanja,* Vol. 33 Issue 1, pp. 2904-2918, available at: https://www.tandfonline.com/doi/full/10.1080/1331677X.2019.1706601 (accessed 25 October 2021).
Cebula, R.J. and Feige, E. (2012) "America's unreported economy: measuring the size, growth and determinants of income tax evasion in the U.S*", Crime Law and Social Change*, Vol. 57 No. 3, pp. 265-285.

Chen, M.A. (2007) "Rethinking the Informal Economy: Linkages with the Formal Economy and the Formal Regulatory Environment", working paper [46], United Nations, Department of Economics and Social Affairs.
Choi, J.P. and Thum, M. (2005), "Corruption and the shadow economy", *International Economic Review*, Vol. 46 No. 3, pp. 817-836.
Dreher, A., Kotsogiannis, C. and McCorriston, S. (2009) "How Do Institutions Affect Corruption and the Shadow Economy", Discussion Papers from University of Exeter, Department of Economics, No. 505.
Dreher, A. and Schneider, F. (2009) "Corruption and the shadow economy: an empirical analysis", *Public Choice*, Vol. 144 No. 1, pp. 215-238.
Frey, B.S. and Weck-Hanneman, H. (1984) "The hidden economy as an 'unobserved' variable", *European Economic Review*, Vol. 26, Issue 1-2, pp. 33-53.
Feruni, N., Hysa, E., Panait, M., Rădulescu, I.G. and Brezoi, A. (2017) "The Impact of Corruption, Economic Freedom and Urbanization on Economic Development: Western Balkans versus EU-27", *Sustainability,* Vol. 12, Issue 22, available at: https://www.mdpi.com/2071-1050/12/22/9743/htm (accessed 25 October 2021).
Hibbs Jr., D.A. and Piculescu, V. (2005) "Institutions, corruption and tax evasion in the unofficial economy", Göteborg, Department of Economics.
Hill, R. (2002) "The underground economy in Canada: Boom or bust"*, Canadian Tax Journal*, Vol. 50 No. 5, pp.1641–1654.
Hysa, E. (2009) "Corruption and Human Development Correlation in Western Balkan Countries", *Euro Economica*, Vol. 30 No. 4, pp. 147-157.
Johnson, S., Kaufmann, D. Shleifer, A., Goldman, M. I., and Weitzman, M. L. (1997) "The unofficial economy in transition"*, Brookings Papers on Economic Activity*, Vol. 2, 159–221.
Kadia, A. (2020) "Corruption and Economic Growth in the Balkan Countries", *European Journal of Economics and Business Studies*, European Center for Science Education and Research, Vol. 3 No. 3, pp. 88-97
Kelmanson, B. Kirabaeva, K., Medina, L. Mircheva, B. and Weiss, J. (2019) "Explaining the shadow economy in Europe: size, causes and policy options", Working Paper, IMF, Washington DC, 13 December.
Koufopoulou, P., Williams, C.C., Vozikis, A. and Souliotis, K. (2019) "Shadow Economy: Definitions, terms & theoretical considerations", *Advances in Management and Applied Economics*, Vol. 9, Issue 5, pp. 35-57
Loayza, N.V. and Rigolini, J. (2006) "Informality Trends and Cycles"*,* Policy Research Working Paper No. 4078. World Bank, Washington DC.
Magessi, N.T. and Antunes, L. (2015), "Shadow economy and wealth distribution", *Advances in Artificial Economics*, Vol. 127, pp 169-179.
Medina, L. and Schneider, F. (2018) "Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?", IMF Working Paper, Washington DC, 24 January.
Nikopur, H., Shah Habibullah, M. and Schneider, F. (2009) "The shadow economy Kuznets's curve panel data analysis", MPRA Paper No. 12956, pp.169-179.
Schneider, F. (2017), "Restricting or Abolishing Cash: An Effective Instrument for Fighting the Shadow Economy, Crime and Terrorism?", International Cash Conference 2017 - War on Cash: Is there a Future for Cash? 25 – 27 April 2017, Island of Mainau, Germany.
Organization for Economic Co-operation and Development, (2017), *Shining Light on the Shadow Economy: Opportunities and Treats*, available at: https://www.oecd.org/tax/crime/shining-light-on-the-shadow-economy-opportunities-and-threats.pdf (accessed 25 October 2021).
United Nations Office on Drugs and Crime Vienna, (2013) *Business, Corruption and Crime in The Western Balkans: The impact of bribery and other crime on private enterprise*, available at: https://www.unodc.org/documents/data-and-analysis/statistics/corruption/Western_balkans_business_corruption_web.pdf (accessed 25 October 2021)

THE RELATIONSHIP BETWEEN THE DEVELOPMENT OF THE FINANCIAL SECTOR AND THE ECONOMIC GROWTH IN THE REPUBLIC OF NORTH MACEDONIA

Dashmir Saiti
Faculty of Economics - Skopje, Ss. Cyril and Methodius University
dashmirs@gmail.com

Borce Trenovski
Faculty of Economics - Skopje, Ss. Cyril and Methodius University
borce.trenovski@eccf.ukim.edu.mk

ABSTRACT
According to economic theory, the money supply positively affects economic growth, especially in the short run. Additionally, for small and open economies, the openness of the economy plays a crucial role in economic growth. Therefore, the subject of this paper is the impact of the money supply, measured through the broad money aggregate (M3), and trade openness of the country on the economic growth in North Macedonia. M3 aggregate is taken as an indicator of the financial sector development, whereas on the other hand, the trade-to-GDP ratio is an indicator for the openness of the economy. The research is employing the Vector Autoregression (VAR) model, and quarterly data for the period 1995-2019 are used. As opposed to the economic theory, the results show the absence of a long-run relationship between GDP, broad money, and trade openness in North Macedonia for the observed period. Also, in the short run, M3 and trade openness have a significant positive impact on GDP. Additionally, there is no noticeable time gap in the above relationships. Namely, the impact of broad money and trade openness on GDP in North Macedonia is not much stronger after a significant time lag from the impact in the first year. This put into question the capability of the monetary policy as a tool of the broader macroeconomic policy to shift the aggregate demand curve upwards and boost economic activity.

Keywords: Financial Development, Trade Openness, Economic Growth, VAR

JEL Classification: E51, F1, F43

1. INTRODUCTION

Financial development is a basic determinant of economic growth in a national economy. For small and open economies, a key role for economic growth is the openness of the economy. As a proxy in economic theory for the measure of financial development is the ratio of money supply to gross domestic product, which ratio should have a stable growth of the broad money aggregate and economic growth, also a key issue is managing trade openness, which is ratio of the sum of imports and exports to GDP. Financial development is important for economic growth because it mobilizes savings and helps with capital accumulation, it is a process of strengthening the quantity and quality of financial intermediation services, where in fact, the modern financial environment encompasses a wide range of activities such as trade, risk pooling, hedging, etc. (Haque, 2020).

The relationship between trade liberalization, financial reform and economic growth is well documented in the economic literature, where it is argued that trade policies and financial liberalization reduce inefficiencies in the production process and positively affect economic growth, where this argument is reinforced by the fact that countries with more open trade and financial policies can grow faster than those with limited trade and financial policies (Khan & Qayyum, 2007). This is widely evident from the fact that countries with a high degree of trade

http://hdl.handle.net/20.500.12188/15857
http://doi.org/10.47063/EBTSF.2021.0006

openness and a well-developed financial system have higher GDP growth compared to countries with a low financial sector for development and restrictive trade policies (Murthy, et al., 2014). Opening to trade will affect demand for external finance, and thus financial depth, in the trading countries, when a wealthy country starts trading with a poor one, it will naturally increase production of the financially dependent good, and its financial system will deepen, on the other hand, in the poor country the financially dependent sector will shrink, leading to a deterioration in the size of the country's financial system, as well as its quality (Quy-Toan & Levchenko, 2004).

Many different researches and models in the past period have been observed to find the economic implications of trade openness and its impact on economic growth. In the Republic of North Macedonia, in the past 25 years, there is a continuous trend of increasing the share of trade and money supply as a percentage of GDP. Hence, the subject of this research is the relationship between the broad money aggregate (M3), as a financial indicator, and the trade openness of the nominal gross domestic product in North Macedonia in the period from 1995 to 2019. The assumption is that these two variables have a statistically significant impact on the nominal GDP in Republic of North Macedonia (RNM).

Early contributions used aggregate bank data for a number of developed and developing countries, including the ratio to GDP of monetary variables (M2 or M3) or indicators of financial depth (loans to the private sector), but later studies on the relationship between financial Development and economic growth have also added indicators of stock market size and liquidity, but they are available for fewer countries and for a shorter period of time, and variables such as the ratio of broad money to GDP are taken as a measure of the size of the financial sector (Caporale, et al., 2009). Monetary policy plays a significant role in boosting any country's economic growth, there has been a long debate in the economy about the role of money in the economy, where "Monetarists" believe that monetary policy affects prices but not real GDP, or unemployment, while Keynesians believe that changes in the money supply led to changes in real output and prices (Chaitipa, et al., 2015).

Contemporary research practices in the empirical literature tend to focus on the short and long run dependencies and mutual implications between economic growth and development of the financial sector. However, there is no clear consensus weather long run relationship between these two phenomena exists or not. In this regard, the research employs dynamic time series models, whereby special attention is devoted to the existence of potential long run relationship, since it is of high importance for the overall econometric analysis.

The research paper is structured in three sections. First section reviews the relevant empirical literature of impact of financial development and trade openness on economic activity. The second part analyzes the methodology and data for the endogenous variables of interest, the stability test of the variables, and the Johansen test for cointegration. Finally, the third part summarizes the results and discussion of financial and economic activity through their comparisons of mean values, correlation, causality, variance decomposition, and impulse response in the Republic of North Macedonia.

2. LITERATURE REVIEW

Various studies have explored the relationships and effects of financial development and trade openness and their impact on economic growth in the short and long term. Popov (2017), reviews and evaluates the empirical research on the relationship between financial markets and economic growth, accumulated in the last quarter of the century, where most of the historical evidence suggests that financial development causes economic growth in a positive and monotonous way. According to Rajan & Zingales (2001), they show that the development of the financial sector does not change monotonously over time, in particular, they find that according to most measures, countries were more financially developed in 1913 than in 1980

and emphasize, among other things, that trade openness correlates with the development of the financial market, especially when cross-border capital flows are free.

Empirical analyzes that concluded that financial development has a long-term and positive relationship with economic growth, for instance, Levine (1997), Khan & Qayyum (2007), Shahbaz & Rahman (2012), Ewetan & Okodua, (2013), Tsaurai (2017), Chandrashekar et al., (2018) and Obeid & Awad (2018), on the other hand, the short-term positive impact is confirmed by the research of Caporale et al. (2009) and weak causality by (Murthy, et al., 2014). Broad money supply and economic growth show a significant long-term and positive relationship by Sultana (2018) and short-run causality between money supply (M3) and GDP (Bednarik, 2010; Simionescu, et al., 2018). The findings showed that financial development has a negative effect on growth in long-run, according to Yucel (2009), the presence of structural breaks indicate a stable long-run with the negative link, according to Elijah & Hamza (2019) and, in the case of the short run, broad money supply have negative effects on economic growth (Sultana, 2018). Some studies have also found that there is bidirectional causality between financial development and economic growth (Lewis, 1995; Demetriades & Hussein, 1996; Baliamoune-Lutz, 2013; Murthy, et al., 2014; KAR, et al., 2014; Simionescu, et al., 2017). Trade openness has a positive significant impact on economic growth and the results also show that trade openness is the significant driving force for growth in the long run (Khan & Qayyum, 2007; Yucel, 2009; Shahbaz, 2012; Tsaurai, 2017; Obeid & Awad, 2018; Chandrashekar, et al., 2018; Nwadike, et al., 2020).

Ariç (2014), analyzes the relationship between financial development and economic growth in the European Union using the panel data method, which includes the period between 2004 and 2012. According to the relevant research, the ratio of capitalization, money and quasi-money M2 as (%) of GDP have a positive impact on growth, while domestic credit to the private sector as (%) of GDP has a negative impact on growth.

According to Dingela & Khobai (2017) investigates the dynamic impact of broad money supply (M3) on economic growth (GDP) per capita in South Africa using time-series data from 1980 to 2016, the study used the autoregressive distributed lag (ARDL)-bounds testing approach to cointegration and error correction model to examine the impact of (M3) on GDP per capita. The results show that there is a statistically significant positive relationship between money supply and economic growth in the short and long term.

Yugang (2017) shows that many scholars have researched the importance of money supply in macroeconomics in developed countries, while few studies have explored it in developing countries. Yugang's research refers to the data of the annual series from 2000 to 2016 in China to analyze the relationship between money supply (M2) and macroeconomic variables using the vector auto regression (VAR) model. Among other results is and the following result that an increase in real GDP could result in an increase in the money supply.

In the study by Hussain & Haque (2017) assessed the impact of the relationship between money supply and GDP growth per capita in Bangladesh from 1974 to 2014 using the VECM model. They specified the model with three variables, the percentage of broad money to GDP, real interest rates and the annual GDP growth rate per capita. The results suggest that a stable percentage of broad money is related to the growth rate and on the other hand, money supply has a significant impact on the growth rate of output in the long run. According to the relevant research, it is recommended that the government maintain consistency and follow the "the Taylor rule" to allow the money supply to grow at a steady rate in line with economic growth.

The main purpose of the research of Simionescu et al. (2018) is to evaluate the relation between GDP and the most important monetary variables in two countries: Romania and the Czech Republic over the period of 1995:Q1 – 2015:Q4 and in the empirical part were applied the vector error correction models (VECM). The main findings are the following: in Romania and in the Czech Republic there is a short-run causality from money supply (M3) to GDP and a

long-run relationship between GDP, internal credit, and M3, the rate of M3 was a cause of economic growth in Romania, it was not confirmed for the Czech Republic.

Asteriou & Spanos (2019) examined the relationship between financial development and economic growth on the face of the recent financial crisis, using a panel dataset of 26 European Union countries over the period 1990-2016. The relevant empirical research uses multiplicative dummies to compare two distinct sub-periods before and after the crisis, where the results show that before crisis, financial development promoted economic growth, while after the crisis it hindered economic activity. The study of Ginevičius et al. (2019) examined the relationship between financial and economic development in the countries of the European Union using annual data for the period 1998-2016, the authors did this by reviewing descriptive statistics and also by applying econometric methods. The Granger causality test showed that the authors found: (1) countries with an average GDP per capita indicator showed the highest level of financial development; (2) in Denmark, Portugal and Latvia, unidirectional causality has been discovered, from real GDP to financial development; (3) unidirectional causality running from financial development to real GDP has been found in Austria; (4) two-way causal links between financial and economic development have been identified in Luxembourg, France and the United Kingdom; (5) results from Finland, Germany, the Czech Republic, Slovakia, Croatia and Bulgaria supported the neutrality approach.

The research of Elijah & Hamza (2019) explores the relationship between financial sector development and economic growth in Nigeria, using annual time series data for the period 1981 to 2015. They examine the long-term relationship between financial sector development and economic growth through cointegration with endogenous structural break and VECM modeling. The results show that there is a co-integration between financial development, trade openness and economic growth with structural breaks in 2010 and the model reveal that there is a significant negative relationship between financial development and economic growth during the research period.

The study of Gries & Redlin (2012) was focused on the short-term and long-term dynamics between GDP growth per capita and trade openness to 158 countries in the period 1970-2009, using panel cointegration tests and panel error-correction models (ECM) in combination with GMM estimation. Furthermore, they applied Difference GMM and System GMM estimations. According to their results, long-term coefficients indicate a positive significant causality from openness to growth and vice versa, in contrast, the short-term coefficient shows a negative short-term adjustment, which suggesting that openness can be painful for an economy undergoing short-term adjustments.

Murthy et al. (2014) examined the correlation and direction of causality between the three macroeconomic variables such as trade liberalization, financial development, and economic growth in India using Johansen's co-integration test and the VECM for the direction of long-term causality. This study also found that there is bidirectional causality between financial development and growth, however, causality deriving from growth to finance is stronger than that from finance to growth, and unidirectional causality ranging from financial development and economic growth to open trade. Chandrashekar et al. (2018) examine the relationship between financial development, trade openness, and economic growth in India, using the Phillips-Perron (PP) test, Johansen's co-integration, and Granger causality methodology for the long-run relationship and direction of Causality between variables for the period from 1975-2014. Their findings confirm that there is a long-term link between financial development, trade openness, and growth, and causality results in a mixed direction.

In the case of single-country studies, Obeid & Awad (2018) they explored the effect of trade openness and financial development on economic growth in Jordan based on quarterly data for the period (1992-2015). According to their research, two forms were used for measuring the effect of trade openness on economic growth using the Autoregressive Distributed lag model,

the results showed that there exists a long-term positive effect of trade openness and financial development on economic growth in Jordan and on another side, for the short-term impact, the effect of trade openness and financial development on economic growth was not statistically significant.

Wajda-Lichy et al. (2019) examined the causality between trade openness and financial development in 11 new member states of the European Union using the Granger panel approach. According to their research, the main findings are as follows: (1) the test results of the finance-trade nexus are country-specific; (2) statistically significant causality is found from trade to finance in eight countries (Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovenia); (3) finance is a statistically significant reason for causality to trade in six countries (Croatia, Estonia, Latvia, Lithuania, Poland, and Slovakia), and in four of them (Croatia, Estonia, Latvia, Lithuania), the regression coefficients positive signs, which support the supply-leading.

3. DATA AND METHODOLOGY

The research uses data from the IMF (International Monetary Fund) and WB (World Bank) databases on the nominal GDP of the Republic of North Macedonia, the broad money supply (M3) as a percentage of GDP, and trade openness also as a percentage of GDP, for the period 1995 to 2019. This selection of the variables finds strong support in the classical economic theory based on money neutrality, which assumes that changes in the total money supply affect the nominal variables rather than the real ones (Hussain & Haque, 2017). In addition, the model follows the work of Elijah & Hamza (2019), which investigate the effects of financial sector development on economic growth, whereby financial development is measured by the broad money supply-to-GDP ratio, economic growth is represented by the natural logarithm of the nominal GDP, whereas openness, as control variable, is represented by the ratio of the sum of exports and imports divided by the nominal GDP.

According to the National Bank of the Republic of North Macedonia (2017), broad money M1 is the currency in circulation and demand deposits, broad money M2 includes the monetary aggregate M1 and the short-term deposits and broad money M3 (standardized definition of broad money) includes the monetary aggregate M2 and long-term deposits with maturity from one to two years.

The data for nominal GDP are on a quarterly basis, while for M3 and trade openness on an annual basis, by transforming them on a quarterly basis using Eviews software, using the cubic method. This transformation aims to provide a larger statistical sample, since the real data available on these variables are insufficient for reliable estimation of the developed VAR model. Furthermore, because the variables used are on a quarterly basis and the seasonal influence in their movement is visible, they are further seasonally adjusted through the census method X-12 (additive). Additionally, due to the fact that the original values of the nominal GDP are in absolute amount, its logarithmic transformation has been performed. Possible limitation in this regard is that using interpolated data in the analysis might result in biased estimates, caused by spurious relationships. This limitation should be taken into consideration when interpreting the obtained results, as well as for further research.

Because the analysis is based on time series, in which there is a deterministic trend, the Phillips-Perron unit root test is used to determine their order of integration. The result of this test shows that all variables are non-stationary of the first order, which can be seen from (Table 1), where the p-values of the conducted test are shown.

Table 1: Testing for unit roots

Variable	Included in the test	Phillips-Perron		Order of identification
		level	1st difference	
lgdp_q_sa	Intercept	0.9287	0.0001	I(1)
	Trend and intercept	0.0241	0.0000	
	None	1.0000	0.0000	
broad_m_q_sa	Intercept	0.6003	0.0032	I(1)
	Trend and intercept	0.9582	0.0313	
	None	0.9966	0.0014	
trade_q_sa	Intercept	0.9243	0.0019	I(1)
	Trend and intercept	0.1063	0.0125	
	None	0.9621	0.0003	

(Source: Authors' calculation)

Additionally, with the help of the Johansen (1991) cointegration test, for 3 lag intervals, it was determined that there is no statistically significant long-run relationship between the variables (cointegration) (Table 2). Hence, the most appropriate way to model them would be a VAR model with differentiated series (Yugang, 2017). The VAR model is used when there is no cointegration between variables and is estimated using time series that are transformed into their stationary values (Altaee, et al., 2014).

Table 2: Johansen cointegration test - Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.136728	17.57505	29.79707	0.5975
At most 1	0.039636	3.901665	15.49471	0.9113
At most 2	0.001509	0.140484	3.841466	0.7078
Trace test indicates no cointegration at the 0.05 level				
* Denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

(Source: Authors' calculation)

Regarding the number of lag intervals, since the data are on a quarterly basis, the optimal number would be 4 or 8 lag intervals, which corresponds to a time period of 1 and 2 years of time lags, respectively. If some statistical indicators are taken into account, such as information criteria and indicators for the suitability and reliability of the models, it is determined that the optimal number of lag intervals in the model is 4. Additionally, due to the fact that by differentiating the series one of these 4 lags intervals is lost, in the previously mentioned cointegration test, as well as in the evaluation of the VAR model, 3 time lags are included, i.e. one less than the optimal 4.

The VAR model can be represented by the equations of GDP, M3 as (%) of GDP and trade openness as (%) of GDP. The set of equations for all three endogenous variables represented the VAR model. In mathematical form the equations of autoregressive model are represented for the three endogenous variables, where β_1, β_2 and β_3 are the coefficients of the short-term connection blocks for the three variables consequently for p or 3 time lags and β_0 represents the intercept coefficient and u_n random error.

$$\Delta loggdp\_q\_sa = \beta_{0.1} + \beta_{1.p.1} \sum_{p=1}^{3} \Delta loggdp\_q\_sa_{t-p} + \beta_{2.p.1} \sum_{p=1}^{3} \Delta broad\_m\_q\_sa_{t-p} + \beta_{3.p.1} \sum_{p=1}^{3} \Delta trade\_q\_sa_{t-p} + u_1 \quad (1)$$

$$\Delta broad\_m\_q\_sa = \beta_{0.2} + \beta_{1.p.2} \sum_{p=1}^{3} \Delta loggdp\_q\_sa_{t-p} \ \beta_{2.p.2} \sum_{p=1}^{3} \Delta broad\_m\_q\_sa_{t-p} + \beta_{3.p.2} \sum_{p=1}^{3} \Delta trade\_q\_sa_{t-p} + u_2 \quad (2)$$

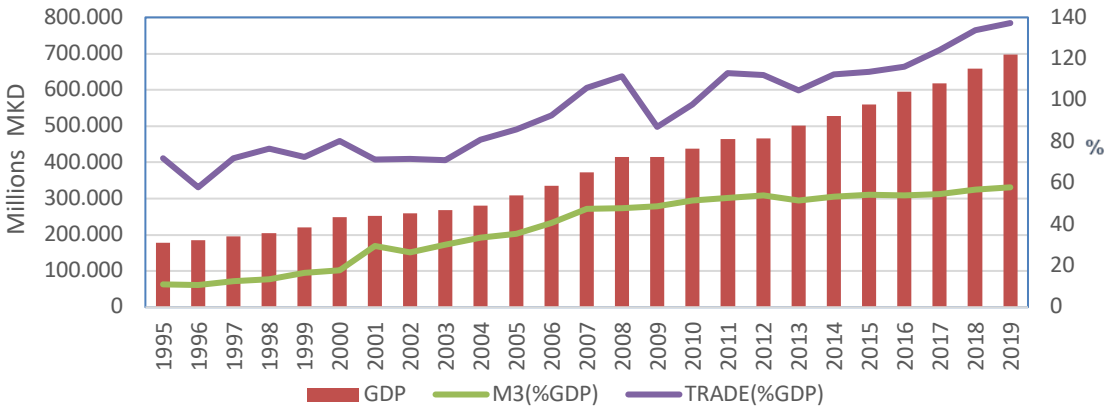
$$\Delta trade\_q\_sa = \beta_{0.3} + \beta_{1.p.3} \sum_{p=1}^{3} \Delta loggdp\_q\_sa_{t-p} + \beta_{2.p.3} \sum_{p=1}^{3} \Delta broad\_m\_q\_sa_{t-p} + \beta_{3.p.3} \sum_{p=1}^{3} \Delta trade\_q\_sa_{t-p} + u_3 \quad (3)$$

The VAR model thus laid is the basis for conducting the Granger (1974) causality test, the impulse response function and the analysis of variance, which would determine the presence and strength of the relationship between the observed variables.

4. RESULTS OF THE ECONOMETRIC ANALYSIS

The broad money (M3) in the Republic of North Macedonia, in the period from 1995 to 2019, records a continuous positive trend, the dynamics of which slightly decreases after 2008. There is also a positive trend in trade openness, with some structural disruptions also observed in the period of the global financial crisis of 2008. The movement of these two variables, as well as the nominal GDP in the Republic of North Macedonia, is shown in (Figure 1) below. It can be seen that the lowest ratio between M3 and GDP was recorded in the first years of transition in 1995 and 1996 with 11%, while the highest ratio is observed in 2019 with 58%. Trade openness, expressed as (%) of GDP, reached its lowest level in 1996, while in 2019 it reached the highest 137% of GDP.

Figure 1: Broad money movement, trade openness and nominal GDP in RNM



(Source: Authors' illustration)

If we look at the average values of trade openness and money supply before and after 2008, the difference is noticeable, i.e., the increase in the post-crisis period. Namely, the share of broad money aggregate (M3) in GDP before and after the global crisis is growing almost twice, from 25% to 49%, while trade openness is growing from 78% to 105%. These are statistically significant differences confirmed by the ANOVA test. Because of its ease of use, closeness, and clear interpretation, researchers will sometimes refer to the comparison of group means on several dependent variables using a series of independent univariate Analysis of Variance (ANOVA) models (Finch, 2016).

The positive relationship between money supply and GDP of which they speak Korauš et al. (2017), i.e., the openness of trade and GDP they are talking about Huchet et al. (2018), is also confirmed in the case of the Republic of North Macedonia, where the correlation coefficients

between these variables are over 0.95. According to Levine (2003) various studies and their mutual comparisons have demonstrated a strong and positive relationship between the functioning of the financial system and long-term economic growth. According to Elijah & Hamza (2019), it is recommended that in order to achieve the desired level of economic growth through financial development we should take into account the structural breaks in the macroeconomic empirical analysis as it helps to avoid false results and financial development should be supported by other proactive measures to complement reforms in the financial sector. Regarding the set VAR model, it is statistically significant and fully meets the assumptions of the classical linear regression model, including the stationarity requirement. The model is well adjusted, with the adjusted coefficient of the determination being 0.17 for the GDP equation, 0.97 for the broad money equation (M3), and 0.98 for the trade openness equation. Additionally, the model has a small prediction error, the Mean Absolute Percentage Error (MAPE) is below 1%, indicating that it is on a solid footing for reliable results. During the analysis of the diagnostics of the residuals, it is noticed that in the three models there is no presence of the first-order autocorrelation with the application of the Breusch-Godfrey Serial Correlation LM Test. In the equation of nominal GDP, the residuals do not have the presence of heteroskedasticity by applying the White Test. The evaluated model has three endogenous variables from which no inverse root is outside the limits of the inverse root circle and the model satisfies the stable state. Based on the estimated model, the Granger causality test shows that broad money aggregate (M3) has a short-term impact on nominal GDP, but not vice versa. There is only a unidirectional statistically significant relationship between trade openness and nominal GDP, i.e., trade openness has a short-term impact on GDP, but not vice versa (Table 3). Following the short-term causality of M3 and trade openness, it is noticed that there is only one short-term relationship, where the M3 has a short-term relationship on trade openness at the level of statistical significance of 0.05, but not vice versa.

Table 3: Granger causality test

	Dependent			
Independent	variables	Δlgdp_q_sa	Δbroad_m_q_sa	Δtrade_q_sa
	Δlgdp_q_sa	/	4.84	2.87
	Δbroad_m_q_sa	7.59*	/	9.33**
	Δtrade_q_sa	7.64*	1.92	/
Note: ***, ** and * denote statistical significance at the level of 1%, 5% and 10% respectively				

(Source: Authors' calculation)

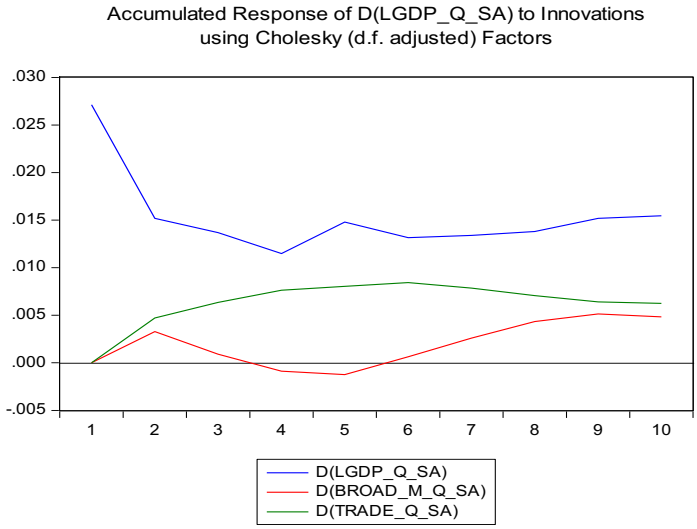
Gries & Redlin (2012) examine the cause-and-effect relationship between trade openness to GDP, whereby the lower-income panel countries show a negative causality, the high-income countries show a positive relationship between growth and trade openness, the desired growth-led openness and openness-led growth hypothesis can only be supported for industrialized countries.

If the variance of the nominal GDP is decomposed as an endogenous variable in the estimated VAR model, it can be seen that broad money (M3), for 10 periods explains about 3% of the variations in nominal GDP, with its impact not increasing throughout the period. On the other hand, trade openness has a consequent impact on GDP, where it has little impact on nominal GDP. During the 10 periods, trade openness explains about 3% of the variations in nominal GDP.

When analyzing the accumulated impulse response of the dependent variable (lgdp_q_sa), (Figure 2), it can be seen that a shock to the broad money supply (M3) will cause positive

effects on GDP starting after the fifth period, with a tendency to increase until the ninth period, followed by stagnation and a tendency for a slight decrease in the impact until the tenth period. On the other hand, a shock to trade openness from the first period will cause a positive slight increase in GDP until the sixth period or up to a year and a half, where subsequently the positive effect decreases to the ninth period and is followed by stagnation of the impact on GDP.

Figure 3: Impulse response to nominal GDP



(Source: Authors' illustration)

From the aspect of the stability of the system, the function of the non-accumulated impulse response shows that the nominal GDP in the Republic of North Macedonia is relatively durable when it comes to shocks to endogenous variables. Namely, after the initial shock that would occur in response to the nominal GDP for a shock of a standard deviation in the other variables is absorbed relatively quickly, after which the system returns to its long-term equilibrium. In other words, the broad money supply and trade openness in the Republic of North Macedonia does not represent a risk factor that could lead to permanent structural shifts in nominal GDP.

5. CONCLUSION AND DISCUSSION

According to the results of the conducted research, it can be concluded that the financial component M3 / GDP has a statistically significant short-term and positive impact on the nominal GDP in the Republic of North Macedonia. Although there is a strong linear relationship between the two variables, it can be concluded that the growth dynamics is higher in money supply than in GDP. This results in a significantly higher average level of M3 as a percentage of GDP in the post-crisis period (49%) than in the pre-crisis period (25%). However, the money supply explains a relatively small part of the nominal GDP in the Republic of North Macedonia, i.e., about 3%. Additionally, given that in the first periods the impact of the money supply is linear (about 3%), it testifies to a possible time lag in the effects that money supply has on the overall economy. From an economic point of view, this result calls into question the effectiveness of the overall monetary policy in the country, primarily from the aspect of its use in order to stimulate economic activity and raise the aggregate demand curve. On the other hand, unlike the experiences of many other countries, trade openness has a statistically significant short-term and positive impact on nominal GDP. Namely, it explains only about 3% of the variations in GDP, which indicates that there are other dominant sectors that drive the output in the country. In addition, trade openness is an indicator of the country's

integration into international markets. Hence, this result may mean that the Republic of North Macedonia has not yet reached its potential in that regard. According to the economic literature, countries with more open trade and financial policies can experience faster economic growth, since it is believed that trade policies and financial liberalization reduce inefficiencies in the production process. It is important to emphasize that the conducted analysis focuses only on one aspect in the interrelationship of the observed variables. Therefore, the indications regarding the effectiveness of the monetary policy and the development of the financial sector, as well as regarding the foreign trade integration of the country can be taken as a basis for further, more detailed analysis.

REFERENCES

Altaee, H., Saied, S., Esmaeel, E. & Adam, M., (2014), "Financial Development, Trade Openness and Economic Growth: Evidence from Sultanate of Oman (1972-2012)", *Journal of economics and sustainable development*, Volume 5, pp. 64-75.

Ariç, K. H., (2014), "The Effects of Financial Development on Economic Growth in the European Union: A Panel Data Analysis", *International Journal of Economic Practices and Theories*, 4(4).

Asteriou, D. & Spanos, K., (2019), "The relationship between financial development and economic growth during the recent crisis: Evidence from the EU", *Finance Research Letters, Elsevier*, 28(C), pp. 238-245.

Baliamoune-Lutz, M., (2013), Financial Development and Income in African Countries. *Contemporary Economic Policy*, 31(1), pp. 163-175.

Bednarik, R., (2010), Money Supply and Real GDP: The Case of the Czech Republic, Available at: *https://ssrn.com/abstract=1539390* [Accessed: 15. 07. 2021].

Caporale, G. M., Rault, C., Sova, R. & Sova, A., (2009), "Financial Development and Economic Growth: Evidence from Ten New EU Members", *Discussion Papers of DIW Berlin 940, DIW Berlin, German Institute for Economic Research*.

Chaitipa, P., Chokethaworn, K., Chaiboonsri, C. & Monekeo, (2015), "Money Supply Influencing on Economic Growth-wide Phenomena of AEC Open Region", *Procedia Economics and Finance*, Volume 24, pp. 108-115.

Chandrashekar, R., Sampath, T. & Chittedi, K. R., (2018), "Financial development, trade openness and growth in India", *Theoretical and Applied Economics, Spring*, XXV, No. 1(614), pp. 113-124.

Demetriades, P. O. & Hussein, K. A., (1996), Does financial development cause economic growth? Time-series evidence from 16 countries, *Journal of Development Economics*, Volume 51, pp. 387-411.

Dingela, S. & Khobai, H., (2017), "Dynamic Impact of Money Supply on Economic Growth in South Africa. An ARDL Approach", *MPRA Paper No. 82539, University Library of Munich, Germany*.

Elijah, S. & Hamza, N., (2019), "The Relationship between Financial Sector Development and Economic Growth in Nigeria: Cointegration with Structural Break Approach", *International Journal of Engineering and Advanced Technology (IJEAT)*, 8(5C).

Ewetan, O. O. & Okodua, H., (2013), "Is There a Link Between Financial Sector Development and Economic Growth in Nigeria?", *International Journal of Financial Economics*, 1(4), pp. 108-118.

Finch, W., (2016), "Comparison of Multivariate Means across Groups with Ordinal Dependent Variables: A Monte Carlo Simulation Study", *Front. Appl. Math. Stat*., 2(2).

Ginevičius, R., Dudzevičiūtė, G., Schieg, M. & Kęstutis, (2019), "The inter-linkages between financial and economic development in the European Union Countries", *Economic Research-Ekonomska Istraživanja*, 32:1, pp. 3315-3332.

Granger, C. & Newbold, P., (1974), "Spurious Regressions in Econometrics", *Journal of Econometrics*, 2(2), pp. 111–120.
Gries, T. & Redlin, M., (2012), "Trade Openness and Economic Growth: A Panel Causality Analysis", *Working Papers CIE 52, Paderborn University, CIE Center for International Economics*.
Haque, M. I., (2020), "The Growth of Private Sector and Financial Development in Saudi Arabia", *Economies, MDPI*.
Huchet, M., Mouël, C. L. & Vijil, M., (2018), "The relationship between trade openness and economic growth: Some new insights on the openness measurement issue", *The World Economy, Wiley*, 41 (1), pp. 59-76.
Hussain, M. E. & Haque, M., (2017), "Empirical Analysis of the Relationship between Money Supply and Per Capita GDP Growth Rate in Bangladesh", *Journal of Advances in Economics and Finance*, 2(1).
Johansen, S., (1991), "Estimation and hypothesis testing of co-integration vectors in Gaussian vector autoregressive models", *Econometrica*, 59(6), pp. 1551-1580.
KAR, M., NAZLIOGLU, S. & Huseyin AGIR, (2014), Trade Openness, Financial Development, and Economic Growth in Turkey: Linear and Nonlinear Causality Analysis, *Journal of BRSA Banking and Financial Markets, Banking Regulation and Supervision Agency*, 8(1), pp. 63-86.
Khan, M. A. & Qayyum, A., (2007), "Trade, financial and growth nexus in Pakistan", *Economic Analysis Working Papers*, 6(14).
Korauš, A., Simionescu, M. & Schönfeld, J., (2017), "The impact of monetary variables on the economic growth and sustainable development: case of selected countries", *Journal of Security and Sustainability Issues*, 6(3), p. 383–390.
Levine, R., (1997), "Financial development and economic growth: Views and Agenda", *Journal of Economic Literature*, 35(2), p. 688–726.
Levine, R., (2003), "Finance and Growth: Theory, Evidence, and Mechanisms", *University of Minnesota and NBER*.
Lewis, W. A., (1995), *The theory of economic growth*, London: Allen and Unwin.
Murthy, D. S., Patra, S. K. & Samantaraya, A., (2014), "Trade Openness, Financial Development Index and Economic Growth Evidence from India (1971-2012)", *Journal of Financial Economic Policy*, 6(4), pp. 362-375.
National Bank of the Republic of North Macedonia, (2017), *nbrm.mk*, [Online] Available at: https://www.nbrm.mk/ns-newsarticle-monetarni-aggregati-en.nspx [Accessed 22 07 2021].
Nwadike, G. C., Johnmary, A. K. & Alamba, C. S., (2020), "Impact of Trade Openness on Nigerian Economic Growth: An Empirical Investigation, 1970–2011", *Foreign Trade Review*, 1(9).
Obeid, R. & Awad, B., (2018), "The Effect of Trade Openness on Economic Growth in Jordan: An Analytical Investigation (1992-2015)", *International Journal of Economics and Financial Issues*, 8(2), pp. 219-226.
Popov, A., (2017), Evidence on finance and economic growth, *European Central Bank*, 2115.
Quy-Toan, D. & Levchenko, A., (2004), "Trade and Financial Development", *World Bank*.
Rajan, R. G. & Zingales, L., (2001), "The Great Reversals: The Politics of Financial Development in the 20th Centry", *NBER Working Paper*, 8178.
Shahbaz, M., (2012), Does trade openness affect long run growth? Cointegration, causality and forecast error variance decomposition tests for Pakistan, *Economic Modelling, Elsevier*, 29(6), pp. 2325-2339.
Shahbaz, M. & Rahman, M. M., (2012), "The Dynamic of Financial Development, Imports, Foreign Direct Investment and Economic Growth: Cointegration and Causality Analysis in Pakistan", *Global Business Review*, Volume 13(2), pp. 201-219.

Simionescu, M., Balcerzak, A. P., Bilan, Y. & Kotásková, A., (2018), "The impact of money on output in Czech Republic and Romania", *Journal of Business Economics and Management*, 19(1), pp. 20-41.
Simionescu, M., Popescu, J. & Firescu, V., (2017), The relationship between gross domestic product and monetary variables in Romania, A Bayesian approach. *Economic Research-Ekonomska Istraživanja*, 30:1, pp. 464-476.
Sultana, N., (2018), "Impacts of money supply, inflation rate and interest rate on economic growth: A case of Bangladesh", *JETIR*, 5(10).
Tsaurai, K., (2017), "Investigating the Relationship between Financial Development, Trade Openness and Economic Growth in Argentina: A Multivariate Causality Framework", *Acta Universitatis Danubius*, Œconomica, 13(3).
Wajda-Lichy, M., Kawa, P., Fijorek, K. & Denkowska, S., (2019), "Trade Openness and Financial Development in the New EU Member States: Evidence from a Granger Panel Bootstrap Causality Test", *Eastern European Economics*, 58(3), pp. 242-263.
Yucel, F., (2009), "Causal Relationships between Financial Development, Trade Openness and Economic Growth: The Case of Turkey", *Journal of Social Sciences*, 5(1), pp. 33-42.
Yugang, H., (2017), "A Study on the Relationship between Money Supply and Macroeconomic Variables in China", *Mediterranean Journal of Social Sciences, Sciendo*, 8(6), pp. 99-107.

FISCAL POLICIES IN PANDEMIC TIMES: EUROPEAN EXPERIENCES

Gligor Bishev
Faculty of Economics in Prilep, St. Kliment Ohridski in Bitola) and Sparkasse Bank Skopje
bishevgligor@gmail.com

Aleksandar Stojkov
Iustinianus Primus Faculty, Ss. Cyril and Methodius University in Skopje
a.stojkov@pf.ukim.edu.mk

Fatmir Besimi
Faculty of Business and Economics, South East European University and Ministry of Finance
fatmir.besimi@finance.gov.mk

ABSTRACT
The pandemic recession was fundamentally different from ordinary recessions, and thus required a different policy response. We review the empirical literature on fiscal consolidation and fiscal multipliers. Then, we assess the impact of fiscal policies on the pace of recovery and public debt sustainability. A premature or a strong fiscal consolidation might result in lower rates of economic growth and elevated public debt as a share of GDP. We critically analyze different adjustment paths across Europe and offer policy-relevant recommendations. The issue is particularly relevant for countries with a strong fiscal stimulus and moderate to high levels of public debt.

Key words: *economic recovery; fiscal stimulus; public debt; sustainability.*

JEL classification: *H30; H62; F34.*

1. INTRODUCTION

The pandemic recession in 2020 caused a sharp and sudden economic contraction across the globe. The economic calamity was a result of disrupted global supply chains, eroded consumer and investor confidence, strict health prevention measures (incl. international travel bans), limited fiscal space for intervention, etc. Nevertheless, the immediate government responses limited a more severe socio-economic impact and protected a large share of vulnerable households and firms. Many European governments vigorously responded to the medical and socio-economic emergencies by designing and implementing flexible fiscal policies and large fiscal stimulus packages.

Another indication of the magnitude of the crisis was the activation of the general escape clause at the EU level, effectively leading to a temporary suspension of European fiscal rules since March 2020. The goal of this policy change was to enable member states to take emergency measures against the pandemic crisis. The reactivation of the fiscal rules is now foreseen not before the end of 2022, contingent on a new political agreement on reforming the fiscal framework (e.g., Martin, Pisani-Ferry and Ragot, 2021).

In light of the high level of uncertainty, there is a difference in fiscal projections by international financial institutions regarding the European economies in 2021. Fiscal deficits in EU and euro area in 2021 are projected to either slightly decline as pandemic-related support expires (IMF, 2021) or slightly increase by ½ and ¾ a percentage point of GDP (European Commission, 2021a).

http://hdl.handle.net/20.500.12188/15919
http://doi.org/10.47063/EBTSF.2021.0007

One thing is for certain, the governments of European countries will continue to provide sizeable fiscal stimulus packages. According to the European Commission (2020), the EU member States have taken sizeable fiscal measures in response to the pandemic (4.2% of GDP in 2020 and 2.4% of GDP in 2021). On average, the advanced European economies allocated greater stimulus packages to support the fragile economic recovery. The fiscal support by the European peripheral economies and EU candidate countries is lower, given their limited fiscal space and overstretched public finances. As of October 2021, the direct health toll of the crisis is still unclear, as COVID-19 infections started to surge again because of the rapidly spreading delta variant.

The central goal of this paper is to evaluate fiscal experiences in Europe and outline the main challenges for fiscal policy in the post-pandemic context. This is particularly relevant, given that the Global Financial Crisis 2008-09 provides limited experience and guidance in combatting the pandemic-induced recession. Since Europe itself is a rather homogenous group, we focus on several country groups based on their political and institutional proximity: (i) EU member states (EU27); (ii) 15 "old" EU member states (EU15); (iii) eight new EU member states from Central and Eastern Europe (CEE8); and (iv) EU candidate countries from Western Balkans (WB6). [1] The more specific research questions are: (i) to assess the recent fiscal and related institutional developments in Europe; (ii) to explore whether the discretionary fiscal policy responses to COVID-19 were effective so far; and (iii) to outline the priorities for the fiscal policies in the post-pandemic period.

The structure of the paper is as follows. The next section provides a critical review of the most recent academic studies of fiscal and related institutional policies in Europe. The most recent fiscal developments across Europe are presented in the third section. The empirical investigation of the nexus between fiscal balances and (contemporaneous and past) economic growth is provided in the next section. The fifth section elaborates the concluding remarks along with policy recommendations.

2. LITERATURE REVIEW

We confine our literature review only on the most recent academic studies of fiscal and institutional developments in Europe. Given the brief time span since the pandemic outbreak, most publications exist either as working papers or academic columns. This crisis is indeed different, as the shocks affect both aggregate demand and the aggregate supply. In many ways it is different from prior pandemics in terms of the economy, the policy response, and the shutdowns (Kennedy, 2020).

2.1. Time for reflection on the European fiscal rules

As already outlined in the introduction, in response to the pandemic crisis, the EU resorted to activation of the general escape clause of the Stability and Growth Pact on March 20th, 2020

[1] Since Europe is a heterogenous group, we differentiate several country groups based on the political and institutional arrangements:

- EU27: 27 European Union (EU) member states
- EU15: 15 EU member states prior to the accession of ten candidate countries on 1 May 2004 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom)
- CEE8: Eight new EU member states from Central and Eastern Europe (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, and Slovenia) and
- WB6: Six countries from the Western Balkans (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia).

(European Commission, 2020).[2] This is an effective temporary suspension of the fiscal rules until the end of 2022. As underscored by the EU Commissioner for Economy, Paolo Gentiloni in March 2021, "For 2022, it is clear that fiscal support will still be necessary: better to err towards doing too much rather than too little" (Valero, 2021).

Even well before the pandemic, there was a discontent with the rules-based approaches to govern national debt and budget deficits. For instance, Bilbiiie, Monacelli and Perotti (2021) openly criticize the European debt rules as "largely ineffective". This is especially relevant for the EU and euro area member states with highly persistent differences in their economies, which cannot be mitigated even with large, persistent, and unidirectional transfers to the distressed countries from Southern Europe.

In the past decade, many economists and public officials were calling for a major reform of the European fiscal rules (e.g., Bénassy-Quéré et al. 2018; Darvas et al. 2018a, 2018b; Feld et al. 2018, Thygesen et al. 2018). For instance, Beetsma et al. (2018) argue that the network of European fiscal rules and exceptions, resulting from the political compromises of the past two decades, have made the fiscal framework confusing, subjective, and arbitrary in its enforcement.

Blanchard, Leandro and Zettelmeyer (2021) argue for replacing budgetary rules by qualitative standards. They propose elimination of all numerical fiscal rules in favor of fiscal standards, i.e., qualitative prescriptions that leave room for judgment. Central to this judgment would be country-specific assessments using stochastic debt sustainability analysis, led by national independent fiscal councils and/or the European Commission. Martin, Pisany-Ferry and Ragot (2021) move a step forward and propose country-specific debt targets. More precisely, they underscore that "uniform numerical criteria are misplaced because debt sustainability depends fundamentally on the differential between the interest rate and the growth rate and on a state's capacity to maintain a sufficient primary surplus." How feasible would this be - in political terms - is another challenge.

Thygesen et al. (2020) also call for a reform of the European fiscal rules without a delay. They underscore the low compliance to the Stability and Growth Pact (SGP). For example, the European Commission (2021a) found that ten countries fell short of the SGP's required fiscal adjustments by a large margin (Belgium, Estonia, Spain, France, Hungary, Poland, Portugal, Slovenia, Slovakia, and the UK) while three were unsuccessful in reducing their high debt levels at the required pace (Belgium, France, and Spain). Some of their main conclusions are that the EU fiscal framework needs to be simplified and more effective, and growth-enhancing budget needs must be protected.

Even in times of crisis, there have been improvements of the fiscal rules' framework in the Western Balkans. For instance, the enactment of the new organic Budget Law (OBL) and the ensuing introduction of fiscal council and fiscal rules in North Macedonia are expected to further strengthen the fiscal discipline and transparency.

2.2. Fiscal policies in the pandemic period

[2] The general escape clause allows Member States to undertake budgetary measures to deal adequately with such situation, within the preventive and corrective procedures of the Stability and Growth Pact. Specifically, for the preventive arm, Articles 5(1) and 9(1) of Regulation (EC) 1466/97 state that "in periods of severe economic downturn for the euro area or the Union as a whole, Member States may be allowed temporarily to depart from the adjustment path towards the medium-term budgetary objective, provided that this does not endanger fiscal sustainability in the medium term". For the corrective arm, Articles 3(5) and 5(2) stipulate that in the case of a severe economic downturn in the euro area or in the Union as a whole, the Council may also decide, on a recommendation from the Commission, to adopt a revised fiscal trajectory.

Budget deficits and debt-to-GDP ratios recorded the largest ever increase in a single year in the post-WWII history of Europe. Much of the academic and policy focus during the ongoing health crisis has been on designing a centralized European fiscal response and to a lesser extent on national fiscal policies.

Devereux et al. (2020) highlight that early monetary policy responses to the crisis have shown that monetary policy alone cannot counter the detrimental effects of Covid-19 on the real economy. Within the discretionary fiscal measures, they make a distinction between direct liquidity support and measures aiming to change behaviour. In the same spirit, Bilbiie, Monacelli and Perotti (2021, p. 78) underscore that budget deficits and government debt have become "even more central to the debate on the reform of the eurozone, at least until the pandemic recession".

Faria-e-Castro (2021) focuses on the magnitude of fiscal multipliers during pandemic. He finds that a pandemic shock changes the ranking of policy multipliers. Unemployment benefits are the most effective tool to stabilize income for borrowers, who are the hardest hit during a pandemic.

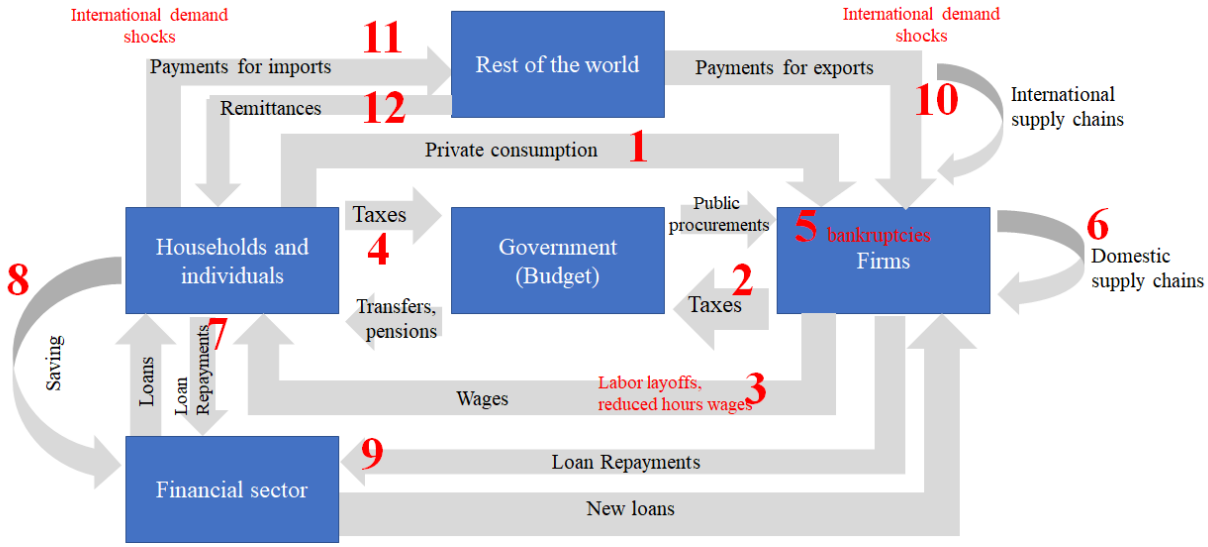
Cuesta Aguirre and Hannan (2021) study recoveries after pandemics and discover that countries that had provided higher fiscal support had comparatively better output outcomes, with an output decline of 1.5% after three years, compared to 3.4% for those with relatively low support. Ma, Rogers, and Zhou (2020) take a much longer historical perspective and conclude that, when fiscal support encompasses higher budget expenditure (especially in the health system), economies enjoy more bounce-back in output growth compared to countries with less of a fiscal expenditures' response.

Regarding the post-pandemic context, the scarce academic literature focuses on the growth-conducive impact of the Next Generation EU, an unparalleled tool that provides significant financial support for reforms and investment, resulting in a coordinated fiscal expansion across the EU (e.g., Verwey, Langedijk and Kuenzel (2020); Bankowski et al. (2021); Mahieu et al. (2021); Pfeiffer, Varga and Veld (2021).

3. RECENT FISCAL DEVELOPMENTS IN EUROPE

Multiple strikes in the circular flow of income. From a macroeconomic perspective, the COVID-19 pandemic produced (and still produces) multiple strikes on the circular flow of the national economy, which are illustrated in Figure 1. The disruptions caused by these strikes put a strong upward pressure on the unemployment and poverty rates and threaten to wipe out some of the pre-crisis development achievements.

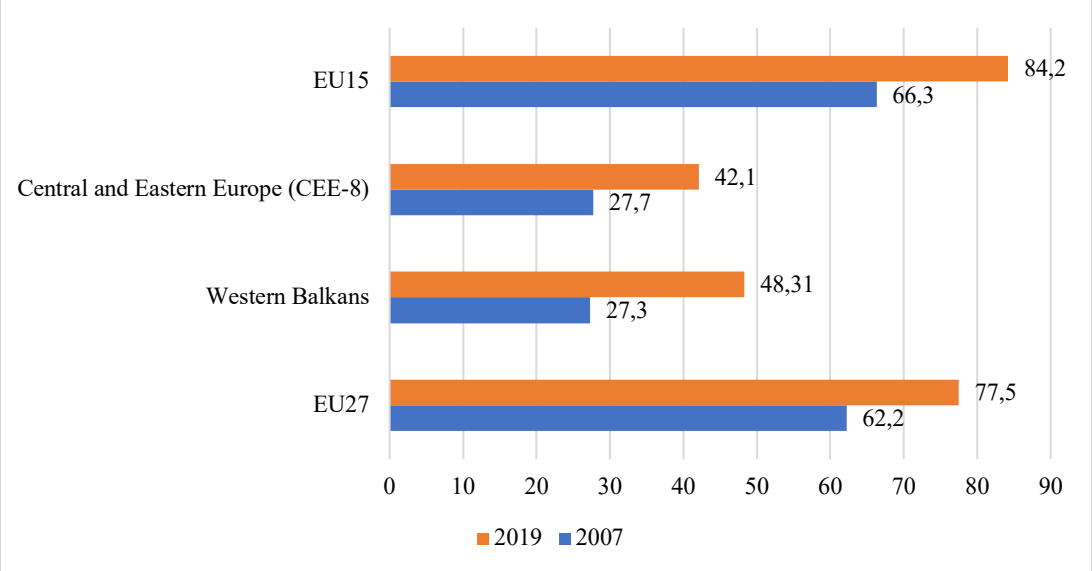
Figure 1. COVID-19's multiple strikes in the circular flow of income diagram



Source: Adaptation of a simpler diagram from Baldwin, Richard (2020), "Keeping the lights on: Economic medicine for a medical shock", VoxEU.org, March 13th, 2020.

Unfavorable initial conditions. As opposed to the Global Financial Crisis (2008-09), the European countries had higher public debt levels and much lower fiscal space to tackle the pandemic recession (Figure 2). The gross general government levels in percent of GDP at end-2019 were much higher than those observed in pre-crisis 2007 across all groups of European economies: EU27, EU15, the eight EU member states from Central and Eastern Europe, and Western Balkans (WB6).

Figure 2. Gross general government debt (in percent of GDP), 2019 vs. 2007

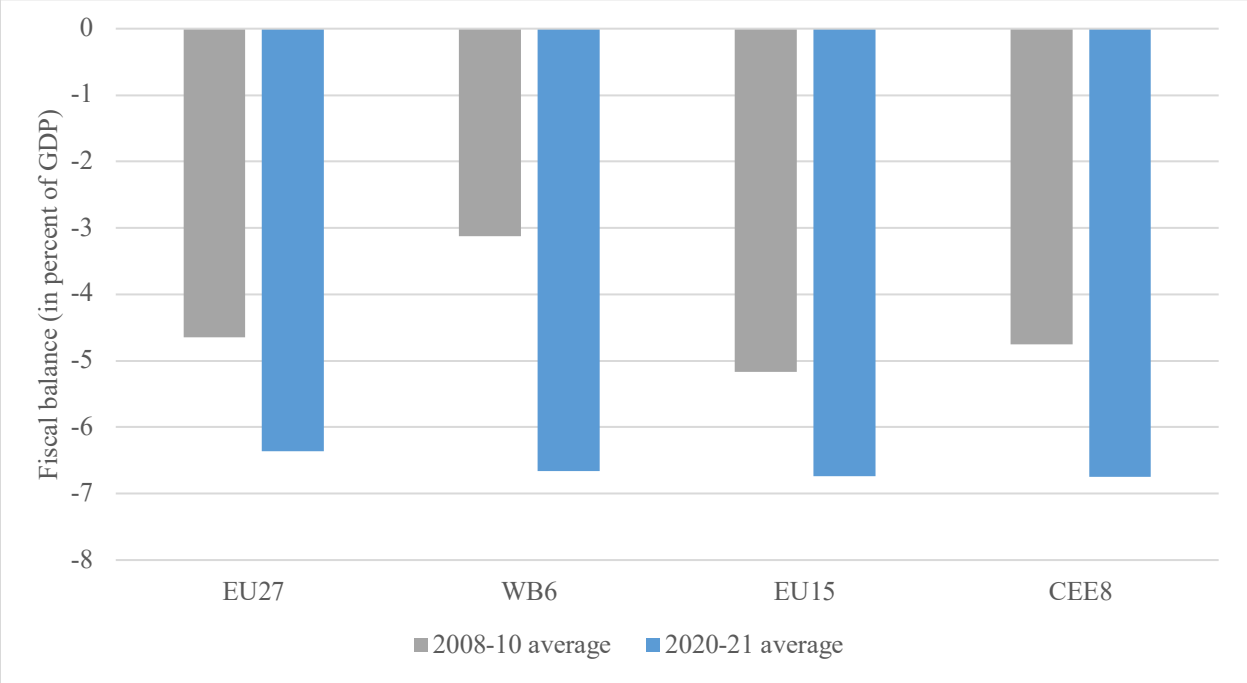


Source: Authors' calculations based on data from IMF World Economic Outlook Database (October 2021).

Unprecedented fiscal challenges. Fiscal challenges associated with the pandemic recession in 2020 were unparalleled in the past two decades. It is not surprising therefore that the amount of fiscal support in 2020 was much larger than the historical norm for business cycle fluctuations (IMF, 2021). General government budget deficits as a share of GDP – or simply, fiscal deficits - were significantly higher than those observed during the Global Financial Crisis and the European sovereign debt crisis (2008/10). It is estimated that nearly half of the increase in public deficits is due to the discretionary fiscal measures and the other half due to the workings of automatic stabilizers (European Commission, 2021a).

As presented in Figure 3, the average general government deficit (in percent of GDP) in EU27 in 2020/21 is projected to be 37% higher than the average budget deficit recorded during the Global Financial Crisis (2008-10). Public finances in the six countries of Western Balkans (WB6), on average, deteriorated even more significantly. The average fiscal deficit of 6.7% of GDP forecasted for the 2020/21 period is more than twice higher than the average fiscal deficit during the 2008/10 period (3.1% of GDP). Put differently, the crisis impact and the response of fiscal policy to the Covid-19 emergencies have been unprecedented in speed and size.

Figure 3. Global Financial Crisis vs. Pandemic recession: Average fiscal balances in percent of GDP

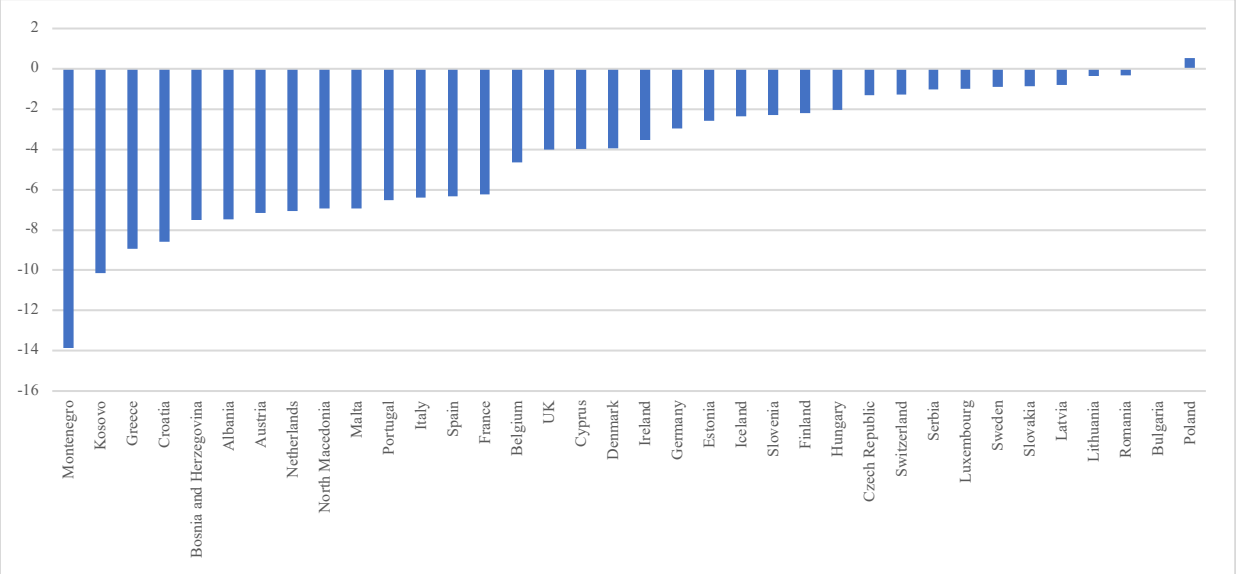


Source: Authors' calculations based on data from IMF World Economic Outlook Database (October 2021).

Proportional fall in budget revenue. The rise in deficits in advanced European economies resulted from roughly equal increases in spending and declines in revenues, whereas in CEE8 and WB6 countries, it stemmed primarily from the drop in revenues caused by the economic downturn. Figure 4 illustrates that the fall of general government budget revenue in 2020 (compared to 2019) was in the range between -13.9% (Montenegro) and -0.33% (Romania). However, since the revenue reduction was proportional to the economic contraction, the share of general government budget revenue in GDP was only slightly lower than the pre-crisis period across all groups of

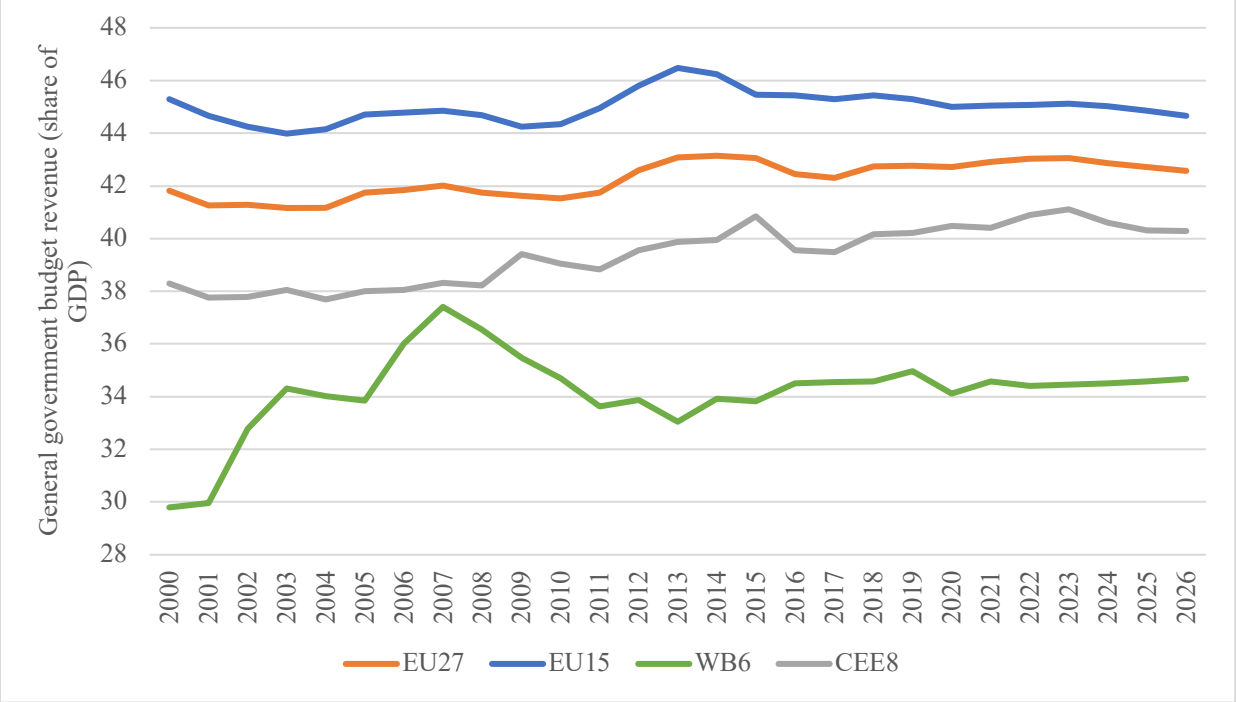
European economies (Figure 5). A mild decline in government revenue as a share of GDP is only observed in the WB6 region.

Figure 4. Drop in general government budget revenue (annual percent change, 2020/2019)



Source: IMF World Economic Outlook Database (October 2021).

Figure 5. General government budget revenue (in percent of GDP, 2000-2026)



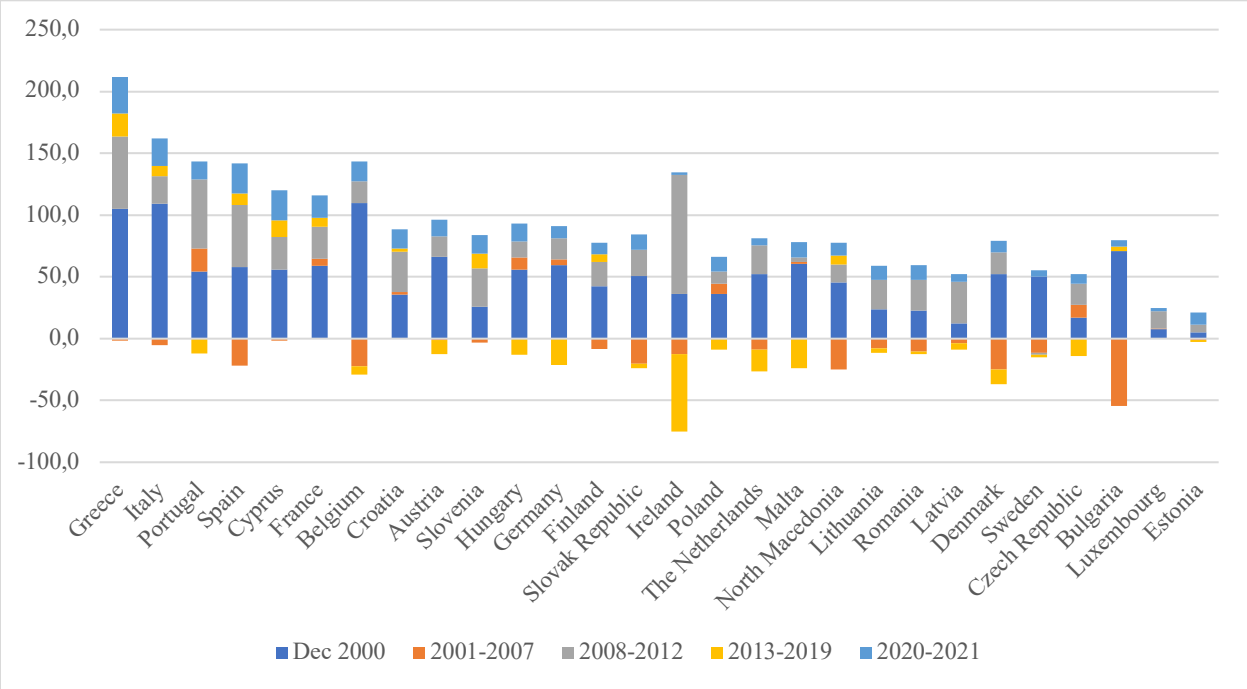
Note: Projections for the 2021-26 period. Source: IMF World Economic Outlook Database (October 2021).

Safeguarding capital expenditure. In the EU member states, the implementation of the national Recovery and Resilience Plans under the Next Generation EU programme is likely to strengthen

the pace of recovery (European Commission, 2021a). Most European governments understand the need to preserve capital and other growth-enhancing expenditure to improve the medium-term prospects of recovery and growth.

Public debt accumulation. Since the sizeable fiscal stimulus packages were accompanied by a drop in budget revenues, the increase of public debt levels was a norm, rather than an exception (Figure 6).

Figure 6. Debt accumulation during the global financial crisis and the pandemic recession

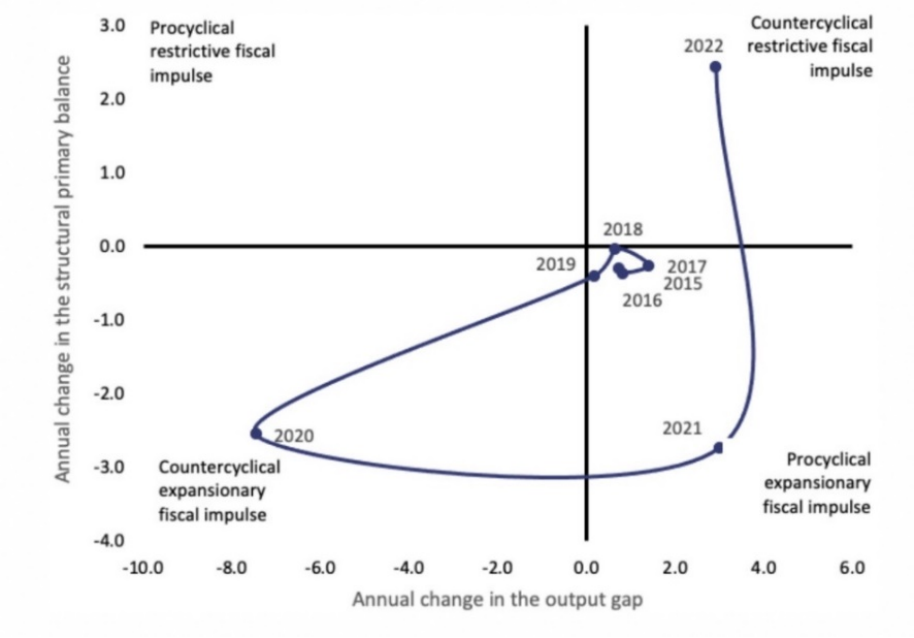


Source: Authors' calculations based on data from Eurostat (2021).

In the EU27, the government debt-to-GDP ratio increased from 77.5% at the end of 2019 to 90.7% at the end of 2020, while in the euro area it increased from 83.9 % to 98.0 %. For comparison only, average public debt across the globe reached an unprecedented 97 percent of GDP in 2020 and is projected to stabilize at around 99 percent of GDP in 2021.

Fiscal impulse. The research by the European Commission (2021) for the euro area reveal a mildly procyclical expansionary fiscal impulse in the 2016-19 period, followed by strong and abrupt shift to countercyclical expansionary fiscal impulse in 2020 (Figure 7). If the pace of recovery is satisfactory, the procyclical expansionary fiscal impulse will resume in 2021. A countercyclical restrictive fiscal impulse is estimated for 2022, when most euro area countries would return to the pre-crisis growth trajectory.

Figure 7. Euro area fiscal impulse and degree of economic slack



Source: European Commission (2021a).

Having outlined the main stylized facts on the fiscal arena in Europe, we now elaborate our empirical strategy, selected econometric methods, and the results.

4. EMPIRICAL APPROACH

It is a well-established fact in macroeconomics that fiscal balances and economic growth are endogenously determined variables due to their simultaneity. Higher rates of economic growth often generate higher budget revenue, which depending on the magnitude of the budget expenditure response, usually translates into an improved fiscal position. On the other hand, higher fiscal deficits are often justified on presumably strong fiscal multipliers that would foster economic recovery and growth acceleration.

The academic literature on fiscal multipliers is vast and beyond the scope of this paper. Many empirical studies have used quarterly data, introduced a distinction between government revenue and expenditure, and examined their relationship with country's Gross Domestic Product (GDP). The most commonly used empirical techniques for assessing the variable of interest (fiscal multipliers) are the structural Vector Autoregression (SVAR) or panel Vector Autoregressions (panel VARs). In theory, the fiscal multiplier is defined as the ratio of a change in output to an exogenous change in government spending (ΔG) or tax revenue (ΔT) with regard to their respective baselines (Batini et al. 2014). The assessment of fiscal multipliers provides valuable information to fiscal policymakers in: (i) evaluating the effects of fiscal policy: (ii) estimating the growth impact of fiscal stimulus or contraction; (iii) predicting the necessary adjustment and achievement of fiscal targets, such as the budget deficit or the debt-to-GDP ratio, etc.

We examine the nexus between economic growth and fiscal balances in Europe by employing two different empirical specifications: (i) a parsimonious specification of the empirical determinants of fiscal balances (in percent of GDP) as a dependent variable; and (ii) a medium-term growth specification based on a Bayesian averaging of classical estimates.

4.1. The impact of economic growth on fiscal balances

4.1.1. Empirical strategy

From an econometric standpoint, the difference generalized method of moments (GMM) based on Arellano and Bond (1991) regression and the system GMM based on Arellano and Bover (1995) and Blundell and Bond (1998) models enable appropriate treatment of the hypothesized current account dynamics. Both are discussed in turn. The first-differenced Arellano and Bond (1991) GMM specification is particularly suitable for empirical analysis of panels with many cross-sectional units and relatively short time series. Their procedure uses the GMM estimation, which is a semi parametric estimation that relaxes some of the assumptions of the other methods (maximum likelihood and least squares estimation methods). An important advantage of the GMM estimation is that it may use more moments than there are parameters to be estimated. The instrumentation is necessary to overcome the problem of endogeneity, which is present in both fixed-effects and random-effects static panel data models with lagged dependent variables. The first-differenced Arellano and Bond (1991) GMM specification has the following form:

$$y_{it} = \sum_{j=1}^{p} \alpha_j y_{i,t-j} + x_{it}\beta_1 + w_{it}\beta_2 + \upsilon_i + \varepsilon_{it} \qquad [1]$$

where the variable y_{it} is observed for the unit i at period t, x_{it} is a vector of exogenous variables and w_{it} is a vector of endogenous variables, υ_i stands for the unobserved country-specific effects, $|\alpha_j| < 1$, and ε_{it} are identically and independently distributed error terms over the whole sample. Both x and w may contain lagged independent variables and the empirical specification should also include time dummies (Roodman, 2006). Because the country-specific effects υ_i are correlated with the past value of the dependent variable, the equation [2] is differenced to give (assuming just one lag of the dependent variable):

$$y_{it} - y_{i,t-1} = \delta\,(y_{i,t-1} - y_{i,t-2}) + (\varepsilon_{it} - \varepsilon_{i,t-1}) \qquad [2]$$

so that the regression equation in differences allows elimination of the country-specific factors. The use of instruments is required to deal with possible endogeneity of the explanatory variables, which is reflected in the correlation between them and the error term, as well as with the correlation between the newly constructed error term ($\varepsilon_{i,t}$-$\varepsilon_{i,t-1}$) and the differenced lagged dependent variable. The system GMM creates a system of two equations for each time period: the first one is based on the Arellano and Bond (1991) model in differences, in which differences are instrumented by levels, and an additional one in which the original levels are instrumented with differences (Roodman, 2006). One of the important innovations brought by the system GMM is that it circumvents the main problem of difference GMM, which is associated with the weak assumption that past levels of the variable are good instruments for first differences. More precisely, for variables that may be close to a random walk, past changes may be more predictive of current levels than past levels are of current changes. The system GMM uses more moment conditions because the explanatory variables expressed in first differences are instrumented with lags of their own levels, and the explanatory variables in levels are instrumented with lags of their own first differences. In panel datasets with a short time dimension and persistent time series, the Blundell and Bond (1998) version of the system GMM is found to bring "dramatic efficiency gains in

comparison with the basic first-difference GMM" (Baltagi, 2005, p. 148). Hence, when the number of time periods available is small, the first-differenced GMM estimator may be subject to a large downward finite-sample bias (Blundell and Bond, 1998). For these reasons, the system GMM is the preferred estimation technique.

The instrumentation can apply to both the lagged dependent variable and to any other potentially endogenous explanatory variable. This additional advantage of the dynamic panel data model is used to address the potential endogeneity of several regressors. Given the formulation of the empirical model, there is strong theoretical justification to treat the contemporaneous growth pf GDP per capita and current account balance as jointly determined variables with the fiscal balance (the twin-deficit hypothesis).

The diagnostic *m2* test for both the general and the parsimonious empirical specification does not reject the null hypothesis of no second order autocorrelation of the residuals, while the *m1* test provides sufficient evidence that there is significant negative first-order autocorrelation in the residuals, as should be the case if the error term (in levels) is white noise. An inquiry into the statistical significance of a richer lag structure has also been conducted, but without significance of the second or the third lag. To avoid instrument proliferation, the number of instruments is limited to the maximum extent possible. All empirical results have been calculated by using the econometric software Stata 16.

4.1.2. Empirical results

The empirical investigation in determinants of the changes in fiscal balances in Europe is based on the estimation of the following parsimonious dynamic panel data model:

$$fb_{i,t} = \alpha_1 fb_{i,t-1} + \beta_1 gr_{i,t} + \beta_2 cab_{i,t} + \delta_i + \mu_t + u_{i,t} \quad [3]$$

where $fb_{i,t}$ refers to fiscal balances (in percent of GDP) as a dependent variable; $fb_{i,t-1}$to past values of the dependent variable, $gr_{i,t}$ refers to growth of real GDP per capita (in PPP terms, in 2017 U.S. dollars); $cab_{i,t}$ denote the current account balances (in percent of GDP); δ_i are sets of country dummies; μ_t denote the time effects and $u_{i,t}$ is the stochastic term. Subscripts *i* and *t* denote the cross-sectional units and the time period, respectively, so that *i*= 1, 2,…, 36 (*N*=36), and *t* = 2000, 1995, … 2020 (*T*=21). Since there are serious limitations in estimating cyclically adjusted fiscal balances for all European economies, we consider the original or unadjusted data.

The empirical results refer to the relationship with contemporaneous growth of GDP per capita, which is explicitly modelled as an endogenous variable (Table 1) and with past year's growth of GDP per capita (Table 2). In addition to the entire period under investigation (2000-20), three sub-periods are also taken into consideration: (i) the pre-crisis 2000-07 period; (ii) the crisis period (2008-12); and (iii) the post crisis 2013-20 period.

Both contemporaneous and past rates of growth of GDP per capita are important explanatory variables of fiscal balances. An acceleration of the real growth of GDP per capita by 1 percentage point is, on average, associated with an improvement of fiscal balances in the range between 0.284 and 0.605 percentage points of GDP, depending on the period under investigation (Table 1). To check whether the specification still suffers from a potential endogeneity problem, we replace contemporaneous growth of rates of real GDP per capita with their past values ($gr_{i,t-1}$).

As presented in Table 2, lagged GDP growth (in PPP and per capita terms) is also a statistically and economically significant driving forces of fiscal balances in Europe. However, the coefficient

is of a smaller magnitude and in the range between 0.138 and 0.294 (Table 2). A similar study by Tujula and Wolswijk (2004) finds that income elasticity of the budget was 0.15 during the 1970-2002 period.

Table 1. European sample: System GMM results with contemporaneous growth of GDP per capita

Dependent variable: Fiscal balance (in percent of GDP), Annual data (2000-20)

Explanatory variables	**European sample**			
	Entire period 2000-20	Sub-periods		
		2000-07	2008-12	2013-2020
Lagged fiscal balance (In percent of GDP)	0.675***	0.891***	0.602***	0.438***
	[0.047]	[0.066]	[0.064]	[0.109]
Growth of GDP per capita	0.284***	0.303***	0.399***	0.605***
	[0.030]	[0.103]	[0.041]	[0.078]
Current account balance (In percent of GDP)	0.096***	0.005	0.140***	0.082**
	[0.028]	[0.026]	[0.048]	[0.037]
Dummy 2008	-0.777			
	[0.585]			
Dummy 2020	-4.428***			
	[0.466]			
Constant	-1.093***	-1.061**	-1.600***	-2.356***
	[0.199]	[0.419]	[0.308]	[0.307]
Number of observations	738	257	185	296
Number of countries	37	37	37	37

*Notes: Contemporaneous growth of GDP per capita treated as an endogenous variable. Asterisks ***, **, and * indicate 1%, 5% and 10% level of significance.*

Table 2. European sample: System GMM results with past year's growth of GDP per capita

Dependent variable: Fiscal balance (in percent of GDP), Annual data (2000-20)

Explanatory variables	**European sample**			
	Entire period 2000-20	**Sub-periods**		
		2000-07	**2008-12**	**2013-2020**
Lagged fiscal balance (In percent of GDP)	**0.631*** **	**0.908*** **	**0.449*** **	**0.279** **
	[0.053]	[0.070]	[0.083]	[0.173]
Lagged Growth of GDP per capita	**0.196*** **	**0.138***	**0.233*** **	**0.294** **
	[0.047]	[0.122]	[0.080]	[0.128]
Current account balance (In percent of GDP)	**0.093*** **	-0.011	**0.134** **	**0.225*** **
	[0.030]	[0.037]	[0.060]	[0.059]
Dummy 2008	-1.087			
	[0.735]			
Dummy 2020	**-6.637*** **			
	[0.440]			
Constant	**-0.975*** **	-0.431	**-1.929*** **	**-2.536*** **
	[0.267]	[0.429]	[0.425]	[0.735]
Number of observations	736	255	185	296
Number of countries	37	37	37	37

*Note: Asterisks ***, **, and * indicate 1%, 5% and 10% level of significance.*

In the next stage, a multiplicative term for the variable of interest (growth of GDP per capita, in PPP terms) and an intercept dummy is introduced only for the Western Balkan (WB6) countries. If the country belongs to the Western Balkans, then WB6 is equal to one and zero otherwise. The results are presented in Table 3. The multiplicative term is not statistically significant, implying that Western Balkans is not different from the European sample.

Table 3. System GMM results: Multiplicative term for Western Balkans (WB6)

Explanatory variables	System GMM Estimation
Lagged fiscal balance (In percent of GDP)	**0.705*** **
	[27.23]
Growth of GDP per capita	**0.235*** **
	[5.64]
WB6 Dummy x Growth of GDP per capita	0.006
	[0.12]
Current account balance (In percent of GDP)	**0.083*** **
	[2.99]
Dummy 2008	-0.792
	[-1.57]
Dummy 2020	**-4.986*** **
	[-8.89]
Constant	**-1.040*** **
	[-7.15]
Western Balkans (WB6) Dummy	0.454
	[1.26]
Number of observations	736
Number of countries	37

*Note: Asterisks ***, **, and * indicate 1%, 5% and 10% level of significance.*

4.2. The impact of economic growth on fiscal balances

The analytical framework of the growth model builds upon the investigation by Sala-i-Martin et al. (2004) of the statistical significance of growth determinants. Their methodology is based on a Bayesian averaging of classical estimates and aims at narrowing the gap between the growth theories and the empirical work. The noted study examines the relationship between economic growth and a list of 67 explanatory variables (identified in the cross-country growth regressions from articles in peer-reviewed or refereed journals) using data for 88 countries.

The selection of the variables is based on the criteria of: (i) sufficient time length of the published or computed variables (from 1960 onwards) and (ii) maximisation of the product of the number of countries with observations for all variables and the number of variables. The strength of the association between each variable and economic growth is ranked according to the (posterior) inclusion probability. The latter is a measure of the weighted average goodness-of-fit of models including a particular variable, relative to models not including the variable.

From the narrow list of variables that is found to be significantly and robustly partially correlated with economic growth (eighteen, in particular) in the study by Sala-i-Martin et al. (2004), five are selected as core explanatory variables in the empirical model adopted here. As examined below, the inclusion of these five determinants (initial GDP per capita, human capital, population growth, and relative price of investment goods) has been strongly advocated by growth theories.

The inclusion of the initial level of GDP per capita tests the propositions of the beta-convergence hypothesis, implying that low-income countries tend to display higher rates of growth. Hence, the expected sign of the coefficient on this variable is negative. The human capital indicator captures the important role of education and skills of the labor force. Given the lack of alternative education indicators, this measure plays a satisfactory role in many growth regressions. The relative price of capital goods serves as a proxy for the costs of investment. This measure is constructed as a ratio between the price level of investment and the GDP deflator. The empirical studies seem to offer compelling evidence in favour of a strong negative relationship between the relative price of capital goods and investment. As the accumulation of physical capital is growth conducive, the expected sign on the relative price of investment goods is negative.

A standard approach in the academic literature to mitigate the persistence in the time series of macroeconomic variables is to rely on multi-year intervals or averages. Therefore, the dependent variable is average growth of GDP per capita (in Purchasing Power Parity terms), organized in three-year non-overlapping intervals (1981-1983, 1984-1986, …, 2017-2019). The decision to use three-year intervals is due to data availability issues. Using a five- or four-year non-overlapping intervals would produce insufficient number of observations for the sample of European countries. The insufficient number of observations is particularly pronounced for the transition economies when data is organized at the five- and four-year frequencies. Additionally, the longer the time spans at which data are considered, the smaller the standard deviation is.

Our second-best empirical strategy is to employ a fixed-effects panel data model as the main estimation technique when data is organized at the three-year frequencies. There are several arguments that support this empirical strategy: firstly, the fixed-effects panel data model is considered as an appropriate specification when focusing on a specific set of countries and when the inference is restricted solely to their behaviour (Baltagi, 2005). Secondly, the Hausmann specification test provides formal support for this estimation technique.

Table 4. Growth specification (Fixed effects)

Dependent variable: Average growth of GDP per capita (PPP), 1981-2019, three-year non-overlapping intervals

Explanatory variables	**Coefficient**	**t-stat**
Initial GDP per capita (natural logarithm)	-0.374***	[-4.93]
Population growth	1.303**	[2.28]
Human capital	4.796**	[2.36]
Relative price of investment	-4.964	[-1.53]
Average fiscal balance in the previous three-year period	-0.161***	[-3.19]
Constant	43.075***	[5.85]
Number of observations	322	
Number of countries	36	

*Notes: t-statistics in brackets, based on robust standard errors. Asterisks ***, **, and * indicate 1%, 5% and 10% level of significance. The averages refer to three-year non-overlapping intervals (1981-1983, 1984-1986, ..., 2014-2016, 2017-2019), using fixed effects with clustered standard errors. Unless otherwise indicated, the values for the right-hand side variables are for*

the year preceding the three-year interval (e.g., 2016 for the 2017-2019 period). Constants and time dummies are not reported.

To address the problem of potential endogeneity, observations of the core explanatory variables refer to the year preceding the three-year non-overlapping interval (e.g., 2016 for the 2017-2019 period). An important exception is the fiscal balance (in percent of GDP), which enters either for the year preceding the interval or as average fiscal balances in the previous three-year interval. To minimize the potential problem of cross-sectional interdependence, all empirical specifications include period (time-specific) dummies, which are not reported here.

In line with the beta-convergence hypothesis, initial per capita income is negatively correlated with economic growth, implying that an increase in the initial per capita income of 1 percent, on average, is associated with 0.37 percentage points lower rate of medium-term growth of GDP per capita of the analyzed economies (see Table 4). In line with our *a priori* expectations, human capital is positively related to the medium-term rates of economic growth, whereas relative price of investment displays a negative association. Population growth has also a positive impact on the average growth of GDP per capita (in PPP terms).

The coefficient of interest is statistically significant and reveals strong and consistent impact of fiscal balances on the economic growth. A deterioration of the fiscal-balance-to-GDP ratio by 1 percentage point in the previous period is likely to be associated with 0.16 percentage points higher rate of medium-term economic growth, ceteris paribus. The result is also conditional on country's initial GDP per capita as a proxy for the level of economic development.

5. CONCLUDING REMARKS

Fiscal policy will continue to play a key role in the post-pandemic period. As the recovery takes hold, the policies should switch from damage control to strengthening the economic recovery and resilience of the national economies.

Our empirical evidence suggests that, during the past two decades, higher-growth periods led to improvement of fiscal positions across Europe, even when past year's growth was considered. An acceleration of the real growth of GDP per capita by 1 percentage point is, on average, associated with an improvement of fiscal balances in the range between 0.284 and 0.605 percentage points of GDP, *ceteris paribus,* depending on the period under investigation. The results also hold for the sub-sample of Western Balkan countries.

In the growth specifications referring to the 1981-2019 period, budget deficits in the previous three-year interval were associated with higher economic growth in the subsequent three-year period. A deterioration of the fiscal-balance-to-GDP ratio by 1 percentage point in the previous period is likely to be associated with 0.16 percentage points higher rate of medium-term economic growth, ceteris paribus. The result is also conditional on country's initial GDP per capita as a proxy for the level of economic development

In the near future, fiscal responses across Europe will continue to depend on health factors (rates of vaccination, effectiveness of vaccines, stringency of new containment measures) and real factors (the pace of economic recovery). Despite the high public debt levels, there is a growing consensus that fiscal policies should remain supportive and flexible. Fiscal policy priorities should include continuing support for the vulnerable households and viable firms.

There appears to be a growing consensus that European countries should avoid withdrawing fiscal support abruptly. A premature fiscal consolidation (an early withdrawal of the liquidity and financial support for affected companies and socially vulnerable households) would delay the

economic recovery. A sharp fiscal contraction could easily result in lower rates of economic growth and elevated public debt as a share of GDP. The fiscal policy should therefore continue to support the economic recovery, the restructuring and acceleration of economic growth.
Different recovery paths are to be expected across Europe. Fiscal sustainability must be ensured by a credible medium-term fiscal framework outlining the authorities' commitment to the adjustment process. More precisely, feasible medium-term fiscal frameworks are needed to encapsulate a vision of gradual fiscal consolidation and a return to fiscally sustainable positions. This would also contribute to lower costs of sovereign borrowing and higher confidence by the financial investors.
Our views are in line with Blanchard, Leandro and Zettelmeyer (2021), implying that if the European fiscal rules are reinstated, they will need to be modified to account for elevated public debt levels and country specificities. Furthermore, rebuilding fiscal buffers and dealing with long-standing structural problems would be crucial for resilience in the event of further shocks.

REFERENCES

Arellano, M., Bond, S. (1991) Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations, *Review of Economic Studies* 58 (2): 277-297.
Arellano, M., Bover, O. (1995) Another Look at the Instrumental Variables Estimation of Error-Component Models, *Journal of Econometrics* 68 (1): 29-51.
Baltagi, B. (2005) *Econometric Analysis of Panel Data*, Third Edition, John Wiley & Sons, Ltd.
Bańkowski, K., M. Ferdinandusse, S. Hauptmeier, P. Jacquinot, and V. Valenta (2021) "The macroeconomic impact of the Next Generation EU instrument on the euro area", ECB Occasional Paper No. 2021/255.
Batini, Nicoletta, Luc Eyraud, Lorenzo Forni, and Anke Weber (2014) *Fiscal Multipliers: Size, Determinants, and Use in Macroeconomic Projections.* Technical Notes and Manuals. The International Monetary Fund, Washington D.C.
Beetsma, O., N. Thygesen, A. Cugnasca, E. Orseau, P. Eliofotou, and S. Santacroce (2018) "Reforming the EU fiscal framework: A proposal by the European Fiscal Board", VoxEU.org, 26 October.
Bénassy-Quéré, A., M. Brunnermeier, H. Enderlein, E. Farhi, C. Fuest, P. O. Gourinchas, P. Martin, J. Pisani-Ferry, H. Rey, I. Schnabel, and N. Véron (2018) "Reconciling Risk Sharing with Market Discipline: A Constructive Approach to Euro Area Reform", CEPR Policy Insight No. 91.
Bilbiie, F., T. Monacelli, and R. Perotti (2021) "Fiscal Policy in Europe: Controversies over Rules, Mutual Insurance, and Centralization", *Journal of Economic Perspectives* 35(2): 77-100.
Blanchard, O., Á. Leandro, and J. Zettelmeyer (2021) "Redesigning EU Fiscal Rules: From Rules to Standards", Peterson Institute for International Economics Working Paper No. 21/1.
Blundell, R., Bond, S. (1998) Initial Conditions and Moment Restrictions in Dynamic Panel Data Models, *Journal of Econometrics* 87 (1): 115-143.
Cuesta Aguirre, J. P., and S. A. Hannan (2021), "Recoveries After Pandemics: The Role of Policies and Structural Features", IMF Working Paper Series WP/21/181.
Darvas, Z., P. Martin, and X. Ragot (2018a) "Reforming European Budgetary Rules: Simplification, Stabilization and Sustainability", Notes du CAE, no. 47, September 2018.
Darvas, Z., P. Martin, and X. Ragot (2018b) *European Fiscal Rules Require a Major Overhaul*. French Council of Economic Analysis.

Devereux, M. P., I. Güçeri, M. Simmler, and E. H.F. Tam (2020) "Discretionary Fiscal Responses to the Covid-19 Pandemic", *Oxford Review of Economic Policy,* 36 (I): S225-S241.
European Commission (2020) *The 2021 Draft Budgetary Plans: Overall Assessment*, November.
European Commission (2021a) *Spring 2021 Economic Forecast: Rolling up sleeves*.
European Commission (2021b), *Debt Sustainability Monitor 2020*, February .
Faria-e-Castro, M. (2021) "Fiscal policy during a pandemic", *Journal of Economic Dynamics and Control*, 125 (C): 104088.
Feld, L., C. Schmidt, I. Schnabel, and V. Wieland (2018) "Refocusing the European Fiscal Framework", VoxEU.org, 12 September.
Huidroma, Raju, Ayhan Kose, Jamus J. Lim, and Franziska L. Ohnsorge (2020) Why do fiscal multipliers depend on fiscal positions?, *Journal of Monetary Economics,* 114 (2020): 109-125.
Kennedy, S. (2020) Harvard's Reinhart and Rogoff Say This Time Really Is Different Simon Kennedy. https://www.bloombergquint.com/coronavirus-outbreak/harvard-s-financial-crisis-experts-this-time-really-is-different, Interview, BloombergQuint, May 19 2020.
Ma, C., J. Rogers, and S. Zhou (2020) "Modern Pandemics: Recession and Recovery", International Finance Discussion Papers no. 1295. Washington DC: Board of Governors of the Federal Reserve System.
Mahieu, G., P. Pfeiffer, J. Varga, and J. in 't Veld (2021) A stylised quantitative assessment of Next Generation EU investment
Martin, P., J. Pisani-Ferry, and X. Ragot (2021) "Reforming the European Fiscal Framework", *Les notes du conseil d'analyse économique*, no 63.
Pfeiffer, P, J Varga and J in 't Veld (2021), "Quantifying Spillovers of NGEU investment", European Economy Discussion Papers No. 144.
Roodman, D. (2006) How to Do xtabond2: An Introduction to "Difference" and "System" GMM in Stata, Working Paper No. 103, Center for Global Development, http://www.cgdev.org/content/publications/detail/11619.
Roodman, D. (2007). A Short Note on the Theme of Too Many Instruments, Working Paper No. 125, Center for Global Development, August, (www.cgdev.org/files/14256_file_Instruments.pdf).
Sala-i-Martin, X., Doppelhofer, G., Miller, R. (2004) "Determinants of Long-term Growth: A Bayesian Averaging of Classical Estimates (BACE) Approach", *American Economic Review* 94 (4): 813-835.
Thygesen, N., R. Beetsma, M. Bordignon, S. Duchêne, and M. Szczurek (2018) *Second Annual Report of the European Fiscal Board*, European Budget Committee.
Thygesen, N., R. Beetsma, M. Bordignon, X. Debrun, M. Szczurek, M. Larch, M. Busse, M. Gabrijelcic, E. Orseau, and S. Santacroce (2020), "Reforming the EU fiscal framework: Now is the time" , VoxEU.org, 26 October.
Valero, J. (2021) "Commission wants to keep fiscal rules suspended in 2022.", *Euractiv.com,* March 3rd, 2021. https://www.euractiv.com/section/economic-governance/news/commission-wants-to-keep-fiscal-rules-suspended-in-2022/
Verwey, M., S. Langedijk and R. Kuenzel (2020) "Next Generation EU: A recovery plan for Europe", VoxEU.org, 09 June.

FISCAL POLICY IN BOSNIA AND HERZEGOVINA - AN INSTRUMENT FOR FASTER GROWTH OR ECONOMIC STAGNATION?

Faruk Hadžić
University of Sarajevo, School of Science and Technology - Sarajevo
faruk.hadzic@ssst.edu.ba

Nebojša Savanović
University of Banja Luka, Economic faculty –
nebojsasavanovic87@gmail.com

ABSTRACT
The paper investigates the impact of fiscal policy on economic growth, foreign direct investment and employment in Bosnia and Herzegovina. The focus of research is fiscal policy, which as a lever of economic policy that affects economic growth and development. The aim of the research is to determine the impact of fiscal policy on the economy of Bosnia and Herzegovina and propose solutions for higher growth and development, a higher degree of foreign direct investment and reducing the unemployment rate. The results of the research show that the fiscal policy for the years that are the subject of the research, has affected the public debt of the state. High taxes and contributions have contributed to the spread of the gray economy, fiscal discipline is at a low level due to the management in this way of this lever of economic policy. Public financial management should be one of the key macroeconomic goals, with special emphasis on fiscal policy. The research went in the direction of analyzing current trends and proposals for improving the situation. The research aims to show the current statistical impact of variables on gross domestic product, on growth and development and the impact after the application of expansionary fiscal policy on the same variables. It is recommended that economic policy be conducted in the direction of releasing additional funds through the redistribution of taxes in favor of workers, in the direction of capital investments that will repay themselves, to reduce the rate of taxes and contributions on wages and with incentives for investors, to go towards stimulating production and tax reliefs for export-oriented activities with an effort to try to produce products whose production is possible in our conditions, and all this is mostly possible with the implementation of an expansive fiscal policy.

Keywords: *Macroeconomics, Fiscal Policy, GDP, Public Expenditure, Investments*

JEL classification: *E62, O23*

1. INTRODUCTION

If we analyze countries around the world, it can be noticed that each country conducts its fiscal policy differently, and it is therefore difficult to find two countries that have identical fiscal policies. Some economies, such as the United States, operate on a more significant use of direct taxes as part of fiscal policy (Turnovsky *et al*., 1987) in contrast to the EU, where the ratio of indirect taxes to the functioning of fiscal policy is more significant (Wildasin, 2000).
Bosnia and Herzegovina, like the EU, has a high importance of indirect taxes in conducting fiscal policy. Competence in the field of fiscal policy in BiH is divided between the state level and the entities. Until 2005, the competence in the areas of taxes was at the level of the entities, and with the reform of the tax system, ie the introduction of VAT, the competence was transferred to the level of the state. VAT revenues are collected in a single state account at a flat rate of 17%, from where they are distributed to the entities according to the agreed

http://hdl.handle.net/20.500.12188/15920
http://doi.org/10.47063/EBTSF.2021.0008

coefficient. Jurisdiction in the field of direct taxes is legally regulated at the entity level. Income tax is 10% in both entities (Hadzic *et al*., 2010), as well as corporate income tax, while contribution rates vary between entities in Bosnia and Herzegovina. The division in the competences of fiscal policy leads to the entities pursuing different economic policies, which have different effects at the level of the economy.

The balanced budget policy in Bosnia and Herzegovina represents the distribution of collected current tax revenues on expenditures without significant investment in productive purposes that can lead to higher long-term rates of economic growth. On the other hand, the lack of investment as a consequence of a balanced budget has led to limited economic progress accompanied by a reduction in the active labor force and a growing emigration of people from Bosnia and Herzegovina.

In this paper, we explore the relationship between government expenditure and GDP through a created model of linear regression, to show that a balanced budget policy has led to limited economic growth in Bosnia and Herzegovina. In addition, through a simulation based on our model, we want to show that through higher government expenditures, which would be based on fiscal expansion, there can be a significant increase in GDP, and thus faster economic progress of Bosnia and Herzegovina.

2. LITERATURE REVIEW

Robert J. Barro, the Paul M. Warburg Professor of Economics at Harvard University, conducted a profound empirical study of growth factors both in the countries with advanced economies, as well as in the countries with moderate per capita income. He discovered that the excessive state influence on the national economy slowed down the growth of real GDP (Barro, 1996).

Agell *et al.* (1997) did not make a unified conclusion about the impact (either positive or negative) of the share of GDP redistribution through the budget system.

Swedish researchers Fölster and Henrikson (1999) determined that a substantial share of GDP redistribution through the budget system and public finances had rather strong negative effect on economic development in advanced market economies. At the same time, there are some scientific studies showing that in terms of economic instability the public institutions (responsible for the fiscal policy) play a key role to secure the restoration of positive macroeconomic dynamics through additional public spending or redistribution of the budget expenditures.

DeLong and Summers (2012) emphasized the vital role of fiscal policy aimed to restore positive economic dynamics. Cogan *et al.* (2013) identified the measures of fiscal policy ensuring economic growth both in the short and long run.

Paparas *et al.* (2014) investigated the relationship between fiscal policy and economic growth in the EU-15, with an attempt to determine which of the fiscal policy instruments enhance economic growth. They have deployed panel data techniques and included both sides of budget, spending and taxation. They have concluded that gross fixed capital formation of the private sector as a percentage of GDP has no significant impact on economic growth.

Pasichnyi (2017) examined the role of fiscal policy in the economic growth ensuring in advanced and emerging market economies over the period from 2001 to 2015. The research indicates the growing role of the state and the budget in regulation of social and economic processes.

Hanush *et al.* (2017) analyzed the effectiveness of public expenditures on economic growth within the analytical framework of comprehensive Neo-Schumpeterian economics. Their results revealed that the impact of innovation-related spending on economic growth is much higher than that of the other macro variables.

Shaw (2016) extended a model of fiscal policy volatility and output growth by including more general institutional processes. The results provided empirical support to the notion that fiscal policy stability generates higher long-run growth.
Hodžić *et al.* (2020) explored the relationship and effects of fiscal policy and economic growth in 21 Central and Eastern European (CEE) countries over the period 2000-2018. The results, implied that an increase in taxation, but not in non-productive expenditures, can positively affect economic growth.
Golemi and Muco (2020) examined the impact of fiscal policy on economic growth in the eight western Balkan countries for the period 2005-2018. The results suggest that fiscal revenues have a positive impact on the economic growth of the countries under consideration. The empirical results also suggest that tax increases have a relatively low negative impact on the flow of foreign direct investments in these countries.
Karalić and Kumalić (2019) investigated in its paper fiscal policy measures that need to determine the level of tax burden that will stimulate investments primarily private sector economy. They have concluded that the balance between indirect and direct taxes should be seen in the sensitivity to the regressive effects of the value added tax and include a broad base of taxation on income and income tax.
Bošnjak and Zlatković (2015) analized the effects of public expenditure reduction on economic growth in B&H, where they used the VAR model with monthly data of the following variables: GDP, Unemployment, Real Wages, Exports, Imports and Public Expenditure. Their results showed that the TFP shock will not have permanent effects, while the Public Expenditure shock will have more persistent effects on the observed variables.
Taking into account all the previous studies, the continuation of scientifc research had to determine the importance and impact of budgetary and tax instruments ensuring the social and economic development is essential.

3. METHODOLOGICAL FRAMEWORK

As part of the research, we set a hypothesis:
H0: Fiscal policy of balanced budget did not lead to significant economic growth, employment growth and inflow of foreign direct investment in BiH in the period 2014-2019.
For the purposes of the research, secondary data were collected for the analysis of the movement of the gross domestic product of BiH, in the period 2000 - 2019, according to the expenditure approach. In addition, data on the movement of total government expenditures for the same period were collected. The time series covers 85 quarterly values of GDP and government expenditure at current prices. In order to create an economic model, a regression model was prepared between the independent variable “Government expenditure” and the dependent variable “GDP”. The regression model should show a direct link between these variables in order to prove that the current conduct of government fiscal policy has not had a significant effect on economic growth.
In order to compare GDP trends in the period 2014-2019 for Bosnia and Herzegovina, and to compare with neighboring countries, secondary World Bank data on GDP trends per capita were collected to establish a direct link between government expenditures and GDP, and finally between GDP per capita movements between countries.
Data from the Agency for Statistics of Bosnia and Herzegovina, related to labor force movements, according to the Labor Force Survey, were used to show labor force movements in the period.
The measurement of the level of foreign direct investment is shown through the collected secondary data of the World Bank.
Finally, population emigration trends are shown through Eurostat secondary data collected.

4. DISCUSSION AND RESULTS

In order to prove the hypothesis, a regression model was created between the independent variable Government expenditures and the dependent variable GDP based on 85 quarterly values of GDP values and government expenditures at current prices. Based on the data shown in Table 1., it can be seen that there is a very strong relationship between the observed variables, which is confirmed by R Square which is 0.95. Additionally, the value of $p < 0.05$ for the value of the variable and the coefficient, which indicates that the obtained results are statistically significant.

Table 1. – Research results – Regression output

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,97513528
R Square	0,9508888
Adjusted R Sq	0,9502971
Standard Erro	402445,117
Observations	85

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	2,6028E+14	2,6028E+14	1607,04236	4,3227E-56
Residual	83	1,3443E+13	1,6196E+11		
Total	84	2,7372E+14			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95,0%*	*Upper 95,0%*
Intercept	-179928,82	170681,173	-1,0541808	0,29485924	-519406,81	159549,165	-519406,81	159549,165
X Variable 1	5,02174187	0,12526817	40,0879328	4,3227E-56	4,77258853	5,27089522	4,77258853	5,27089522

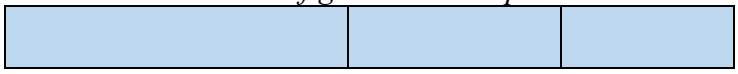
(Source: Calculation of authors based on data from the Agency for Statistics of BiH)

Based on this research results of regression model we have established formula to predict value of GDP for given Government expenditure:

GDP = -179928,823745701 + 5,02174187242985 x „Government Expenditure“

The link between these two variables is very important because it proves that government expenditures have a significant impact on GDP growth in Bosnia and Herzegovina. In order to further confirm this thesis, we analyzed the annual amounts of government expenditure and GDP in the period 2001-2020. According to these data, which are shown in Table XX, two periods can be observed, the first period from 2001 - 2008, when the expansionary fiscal policy in Bosnia and Herzegovina was pursued, and the period after the arrival of the Great Depression from 2009-2020, when the policy of a balanced budget was pursued while maintaining a certain level of government expenditure, and thus slow GDP growth. In the first period from 2001 to 2008, government expenditures increased by 75.5%, while GDP increased by 81.5% in the same period. In the second observed period from 2009 to 2020, which is four years longer than the first period, the growth of Government Expenditures amounted to 20.9%, while GDP grew by 32.7%. In other words, over a period of 12 years, Bosnia and Herzegovina has managed to increase its GDP by less than 1/3.

Table 2. - The annual amounts of government expenditure and GDP of BiH



Categories →	*Of general Government*	*Gross domestic product*
Time ↓	*Total*	
2001	2.793.251	13.893.017
2002	2.983.010	15.084.499
2003	3.438.828	16.297.360
2004	3.356.602	17.137.937
2005	3.560.422	18.141.976
2006	3.937.011	20.499.951
2007	4.360.316	23.059.336
2008	4.902.967	25.219.074
2009	5.698.487	26.256.823
2010	5.915.571	26.505.970
2011	5.813.472	27.133.810
2012	6.130.722	27.471.859
2013	6.114.443	28.604.041
2014	6.203.694	29.039.716
2015	6.258.447	30.105.850
2016	6.290.377	31.387.644
2017	6.358.870	32.733.878
2018	6.426.110	34.183.465
2019	6.669.225	35.862.083
2020*	6.888.611	34.843.099

(Source: Agency for Statistics of BiH)

World Bank data show that in the period 2014-2019, according to the GDP per capita indicator, there was a slowdown in growth for Bosnia and Herzegovina, and in relation to neighboring countries there was a further increase in the difference. According to the data from Table 3, it can be seen that the GDP of the pc for Bosnia and Herzegovina increased by $ 744, for Croatia $ 1,253 for Serbia $ 802, and for Montenegro $ 1,444. By converting these data and comparing them with Croatia, which has the highest amount of GDP per capita in the region, it can be seen that Bosnia and Herzegovina is at the level of 40.89% of the Croatian level. The details are shown graphically in Table 3.

Table 3. - GDP per capita of BiH in relation to neighboring countries

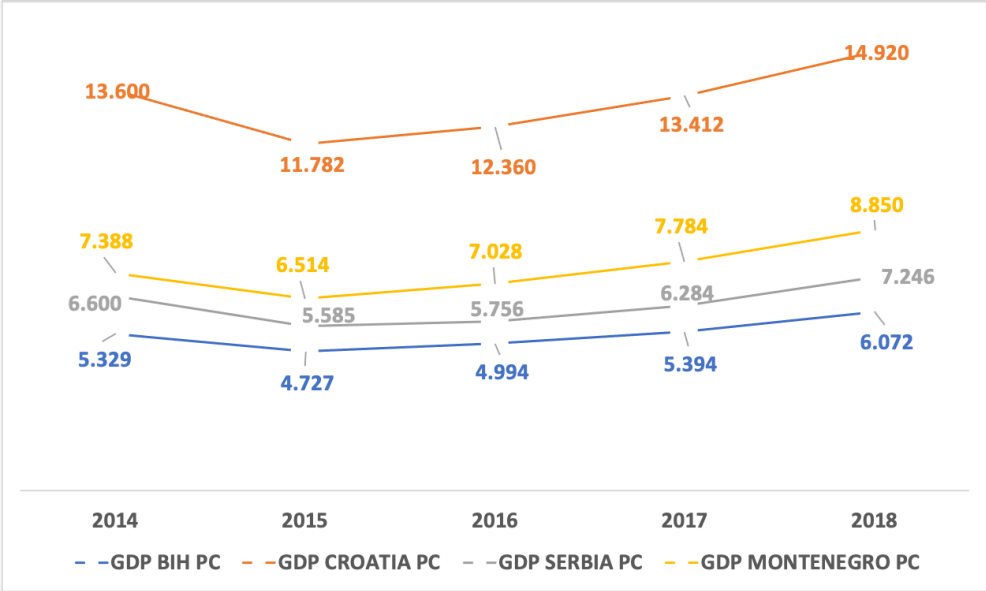
IN MILLIONS CURRENT $	2014	2015	2016	2017	2018	2019	INCREASE	% 2018/2015
GDP B&H	18.558	16.212	16.913	18.080	20.183	20.048	1.490	7,43%
GDP CROATIA	57.643	49.531	51.597	55.320	60.991	60.416	2.773	4,59%
GDP SERBIA	47.062	39.629	40.630	44.120	50.597	51.409	4.347	8,46%
GDP MONTENEGRO	4.594	4.053	4.374	4.845	5.507	5.495	901	16,40%

IN CURRENT $	2014	2015	2016	2017	2018	2019	INCREASE	% 2018/2015
GDP B&H PC	5.329	4.727	4.994	5.394	6.072	6.073	744	12,14%
GDP CROATIA PC	13.600	11.782	12.360	13.412	14.920	14.853	1.253	8,82%
GDP SERBIA PC	6.600	5.585	5.756	6.284	7.246	7.402	802	8,92%
GDP MONTENEGRO PC	7.388	6.514	7.028	7.784	8.850	8.832	1.444	16,59%

IN CURRENT $	2014	2015	2016	2017	2018	2019	INCREASE
GDP B&H PC	39,18%	40,12%	40,40%	40,22%	40,70%	40,89%	1,70%
GDP CROATIA PC	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	0,00%
GDP SERBIA PC	48,53%	47,40%	46,57%	46,85%	48,57%	49,84%	1,31%
GDP MONTENEGRO PC	54,32%	55,29%	56,86%	58,04%	59,32%	59,46%	5,14%

(Source: Author's creation based on World Bank Data)

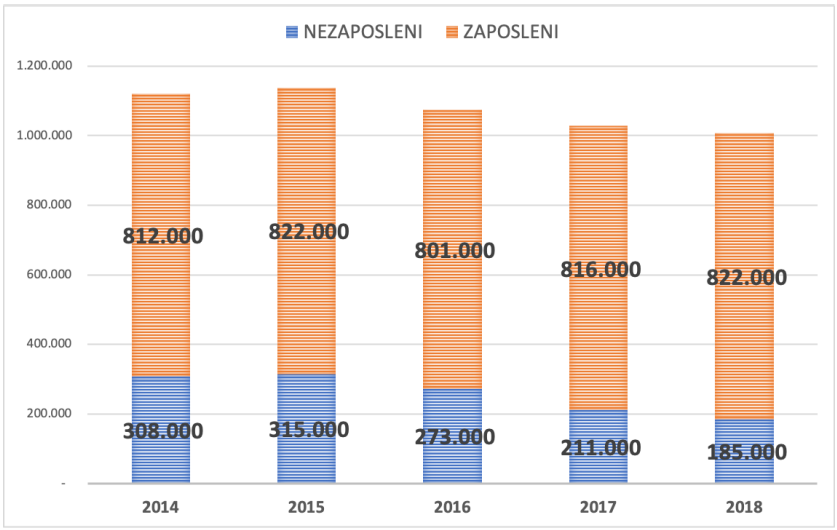
Graph 1. - The number of employed workers in BiH and neighboring countries



(Source: Juric et al, 2021)

If we observe the trends in the number of employed workers in Bosnia and Herzegovina during the period 2014-2018, according to the data from the BiH Labor Force Survey, it can be seen that in the past period there was an increase in the number of employed workers by 10,000, but also a decrease in the number of unemployed workers. by 123,000 workers, which ultimately led to a reduction in the total workforce by 113,000. Considering that in the observed period of conducting a balanced budget policy, there was no significant increase in employed workers, and that the total labor force decreased, there was a slowdown in economic growth in Bosnia and Herzegovina. Details on the movement of the number of workers are shown in Graph 2.

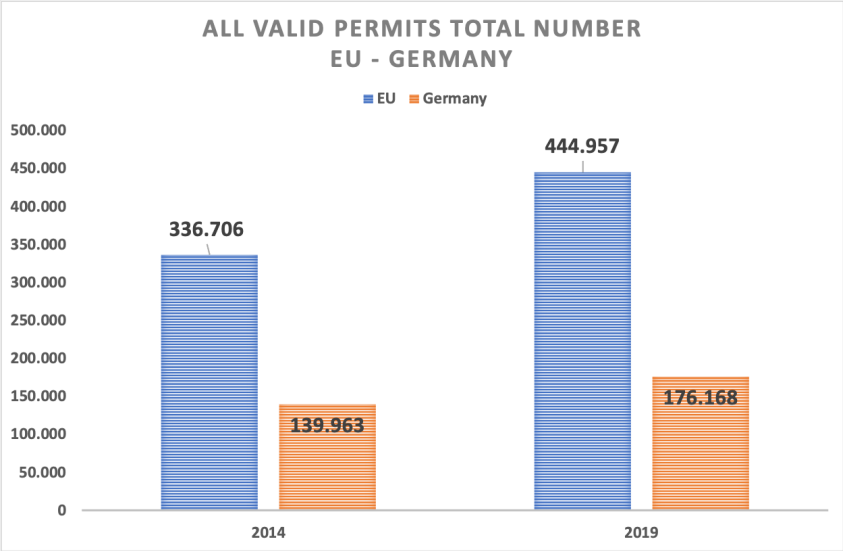
Graph 2. – The number of unemployed workers, the labor force in BiH



(Source: Juric et al, 2021)

The stated number of reductions in the number of unemployed workers, as well as the labor force in BiH, could mean that the mentioned persons left Bosnia and Herzegovina and moved to the countries of the European Union. Eurostat data (EUROSTAT, 2019a) relating to all valid permits by reason, length of validity, and citizenship on 31. December of each year, show that in the period 2014 -2019 the total number of citizens of Bosnia and Herzegovina increased, which had a permanent permit by any reason in EU countries. According to these data for the observed period, the number of citizens increased by 108,251 (Juric *et al*., 2021), which is shown in Figure 3.

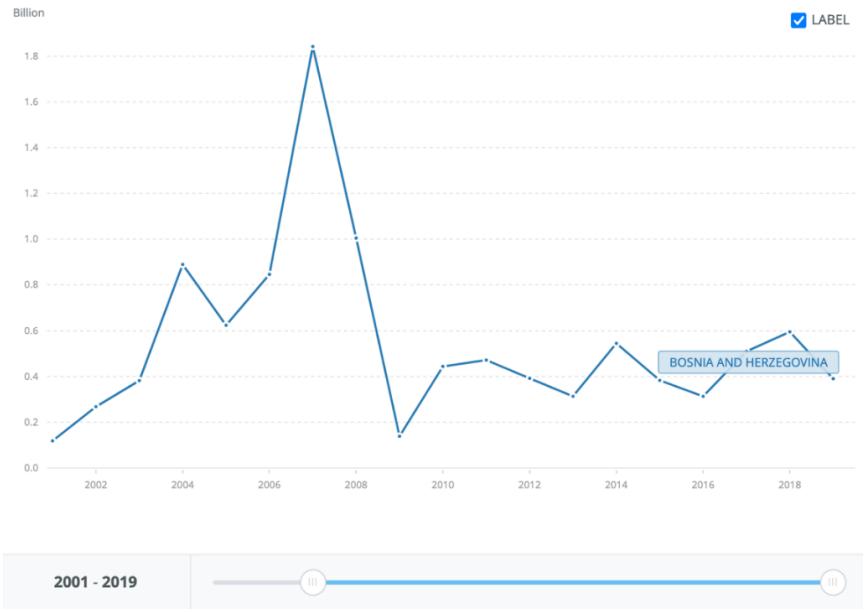
Graph 3. - Citizens of BiH, which had a permanent permit in EU countries



(Source: Juric et al., 2021)

The final indicator that the fiscal policy of a balanced budget has led to a reduced inflow of FDI is also shown graphically in Graph 4. According to the World Bank, BiH had a significant increase in FDI inflows in the period 2001-2008, when an expansive fiscal policy was pursued, and in the period 2009-2019 there was a reduced and limited amount of FDI arrivals in Bosnia and Herzegovina.

Graph 4. - BiH and FDI inflows



(Source: World Bank Data)

In order to increase the level of economic activity through the conduct of expansionary fiscal policy in the coming years, based on our proposed regression model, we offered a simulation of GDP growth, in case of annual increase in government expenditures, which can occur by reducing the tax burden on labor, where most of the reduction would be aimed at increasing lower wages, which, along with the growth of household consumption, would lead to more taxes collected in the coming years. Based on the assumptions of our model and the assumption that in this way government expenditures would grow by 10% per year, it can be seen from Table 4, that there would be a significant increase in GDP in BiH in the amount of 31.9%. In this case, there would be an increase in BiH's GDP in just four years to the same extent as the increase in the last 12 years through a balanced budget policy.

Table 4. - Simulation of GDP growth

Categories →	***Of general Government***	***Gross domestic product***
Time ↓	***Total***	
2021	7.577.472	37.872.179
2022	7.956.345	39.774.784
2023	8.354.163	41.772.520
2024	9.189.579	45.967.765

(Source: Author's own calculations based on BiH Agency for Statistics)

The growth of tax revenues can be achieved in several ways. Currently, high contribution rates for pension and health insurance are a major problem, with a significant number of employers hiring undeclared workers[1]. It is necessary to make a reform in this segment, where the obligations for pension and health insurance will be further reduced, which would introduce employers who work in the gray zone and who employ illegal workers in the system, and start the process of paying contributions. The initial loss, which would be realized by reducing the

[1] It is estimated that over 200,000 people in BiH work illegally.

contribution rates, would be compensated through the introduction of people from the gray zone into the system. On the other hand, relieving the economy by reducing contributions, and introducing a stimulating tax rate on salaries[2], would lead to new employment of unemployed persons, and the establishment of new legal entities, which directly stimulates economic activity. The introduction of people from the gray zone, as well as new employment, will lead to an increase in income, which will be spent, thus increasing the demand for goods and services. In that way, there is a direct growth of production, expansion of production capacities, and companies will decide to expand production or purchase some new machines, which also increases investment consumption. Every type of consumption is taxed through value added tax, which increases the collected indirect taxes, which make up the majority of total tax revenues, which is one of the goals of stabilizing public finances.

5. CONCLUSIONS

- Expansive fiscal policy in BiH during the period 2001-2008 led to a significant increase in GDP, which at the end of the period increased by 81.5% compared to the beginning.
- The policy of balanced budget in BiH during the period 2009-2020 led to limited and insufficient GDP growth in BiH in the amount of 32.7%.
- Slower economic growth has led to a reduction in the labor force in BiH in the period 2014-2018 by 113,000 workers, emigration of 109,000 workers in the period 2014-2019, reduced levels of foreign direct investment and an increase in the gap with GDP pc compared to neighboring countries of the region.
- According to the regression analysis model, a simulation of government expenditures and the impact on GDP growth in the next four years was done. According to this model, a 10% increase in government expenditures per year will lead to a 31.9% increase in GDP.

REFERENCES

Agell, J., Lindh, T. and Ohlsson, H. (1997) "Growth and the public sector: A critical review essay", *European Journal of Political Economy*, Vol. 13 No. 1, 33-52, available at: https://doi.org/10.1016/S0176-2680(96)00031-6

Barro, R. J. (1996). *Determinants of Economic Growth: A Cross Country Empirical Study* (1st ed.). The MIT Press.

Bosnjak, N. and Zlatkovic, M. (2015) "The Influence of Public Expenditures and Total-factor Productivity on the Economic Growth of Bosnia and Herzegovina" in Krstic, B. and Paszek, Z. (Eds), *The Determinants of Competitiveness*, pp.161-182.

DeLong, J. B. and Summers, LH. (2012) "Fiscal policy in a depressed economy", Brookings Papers on Economic Activity, 1, 233-297.

EUROSTAT, (2019a) "All valid permits by age, sex and citizenship on 31 December of each year", available at: https://ec.europa.eu/eurostat/databrowser/view/MIGR_RESVALID__custom_591679/default/table?lang=en (Accessed 20 February 2021).

Fölster, S. and Henrekson, M. (1999) "Growth and the public sector: a critique of the critics", *European Journal of Political Economy*, Vol. 15 No. 2, 337-335, available at: https://doi.org/10.1016/S0176-2680(99)00010-5

Golemi, E. and Muço, K. (2020) "Fiscal policy's impact on economic growth-an estimation on eight Balkan countries", *International Journal of Economic Policy in Emerging Economies*, Vol. 13 No. 5, pp.514-525.

Hadzic, F., Imamovic, A. and Klepo, A., *State Taxation System in Bosnia and Herzegovina and Redistribution of Resources*. na.

[2] Salaries up to the amount of the consumer basket would be exempt from income tax.

Hanusch, H., Chakraborty, L. and Khurana, S. (2017) “Fiscal policy, economic growth and innovation: An empirical analysis of G20 countries”, Levy Economics Institute, Working Paper, (883).
Hodžić, S., Demirović, A. and Bečić, E. (2020) “The relathionship between fiscal policy and economic growth in CEE countries”. In *Proceedings of Rijeka Faculty of Economics: Journal of Economics and Business,* Vol. 38, No. 2, pp. 653-666.
Jurić, T. and Hadžić, F., INSTITUT ZA MIGRACIJE I NARODNOSTI.
Turnovsky, S.J. and Wohar, M.E. (1987) “Alternative modes of deficit financing and endogneous monetary and fiscal policy in the USA 1923–1982”, *Journal of Applied Econometrics*, Vol. 2 No. 1, pp.1-25.
Karalić, A. and Kumalić, J. (2020) “FISCAL AND TAX ADJUSTMENTS IN THE SERVICE OF ECONOMIC PROSPERITY OF BOSNIA AND HERZEGOVINA”, *International Journal of Sales, Retailing & Marketing*, Vol. 9 No. 1.
Paparas, D., Richter, C. and Paparas, A. (2015) “Fiscal policy and economic growth, empirical evidence in European Union” *Turkish Economic Review*, Vol. 2 No. 4, pp.239-268.
Pasichnyi, M. (2017) “Empirical study of the fiscal policy impact on economic growth”, *Problems and perspectives in management*, Vol. 15 No. 3, pp.316-322.
Shaw, C. (2016) *Fiscal Policy and Economic Growth*. Working paper.
Wildasin, D.E. (2000) “Factor mobility and fiscal policy in the EU: policy issues and analytical approaches”, *Economic Policy*, *15*(31), pp.338-378.

CORRELATION OF COVID-19 IN THE ONLINE PURCHASING PROCESS

Saso Josimovski
Faculty of Economics – Skopje, Ss. "Cyril and Methodius" University
saso.josimovski@eccf.ukim.edu.mk

Lidija Pulevska Ivanovska
Faculty of Economics – Skopje, Ss. "Cyril and Methodius" University
lidija.pulevska@eccf.ukim.edu.mk

Martin Kiselicki
Faculty of Economics – Skopje, Ss. "Cyril and Methodius" University
martin.kiselicki@eccf.ukim.edu.mk

Brankica Boceva
Digital Present | Digital Agency
brankica.sk@hotmail.com

ABSTRACT
The paper establishes the central point for researching factors that influence buying decisions in the online purchasing process. The benefits of e-commerce for both buyers and sellers place it as the default method of shopping in the near future. Through empirical research, e-commerce growth is being established as rapidly rising through recent years, which has been accelerated by specific factors introduced by the COVID-19 pandemic. Data shows that e-commerce is dependent on several different factors during normal circumstances, which also include the level of development of the country as one of the main precursors.
The beginning of the COVID-19 pandemic influenced greatly the importance of these established factors for online purchasing, rendering many of them obsolete. The paper structures the research to outline the most relevant factors influencing online purchasing decisions pre-pandemic and during pandemic times, and to draw relevant conclusions and recommendations for future practical implementations of e-commerce models. Research shows that new factors need to be introduce in these types of abnormal times, as the nature of the pandemic made non-contact interactions the norm in the past year. By introducing the six stages of pandemic behavior, online retailers can better understand the factors influencing online purchasing process in pandemic times. Finally, specific recommendations can be made to improve the e-commerce acceptance both at industry and company levels.

Keywords*: E-commerce, Purchasing process, Buying intent, COVID-19*

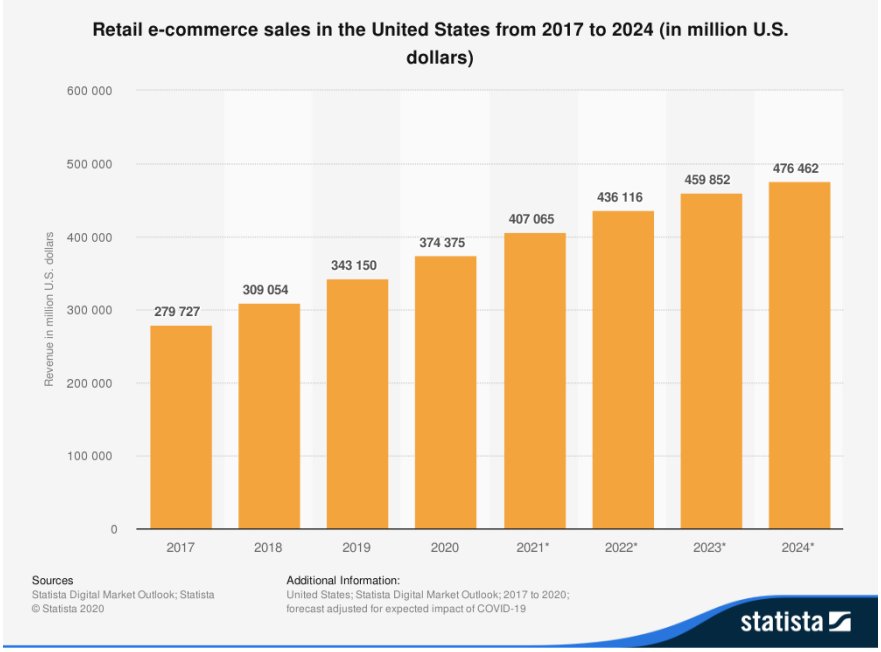
JEL classification*: M30, M31*

http://hdl.handle.net/20.500.12188/15921
http://doi.org/10.47063/EBTSF.2021.0009

1. INTRODUCTION

E-commerce has developed a rapid growth in recent years, especially evident during the COVID-19 pandemic. Changes in technology are certainly driving the growth of e-commerce, along with global circumstances. Today, in wake of the pandemic, e-commerce must meet consumer expectations for safety and convenience. Examples from practice show increased online purchases during pandemic times (from March 2020 onwards), as businesses notice an influx in e-commerce activity. Companies such as United Parcel Service Inc, are experiencing a pandemic increase in e-commerce to higher profits and a 13% jump in revenue during the June 2020 quarter. During the same quarter, the company recorded a 65% increase in deliveries to homes (UPS Investors, 2020). In 2019, Amazon online retail in the US increased by 19.1% and amounted to over 222.6 billion US dollars (eMarketer, 2021). Figure 1. shows that experts predict that by the end of 2024, online spending will exceed $476 billion across the globe (Statista, 2021).

Figure 1. Rise of B2C e-commerce in US from 2017 to 2024



Source: Statista (2021)

The impact of e-commerce is pervasive and wide-ranging with the effect of rippling from small business to global enterprise.

- Large retailers are forced to sell online;
- E-commerce helps small businesses sell directly to customers;
- Rise of e-commerce markets;
- Supply chain management is evolving;
- New jobs are created, at the expense of that, traditional retail jobs are reduced;
- Social media allows users to easily access and share products for online shopping;

Mobile and other innovations are driving e-commerce into the future and changing its landscape. 90% of companies now use social media for their business, and many platforms now have custom e-commerce features (Altus Host, 2016). The growth of e-commerce is driven by the rapid technological adaptation led by the increasing use of devices such as smartphones and tablets, and Internet access via broadband, 4G, 5G etc. In terms of highlights, the growth shown by

corporations like Amazon and Alibaba and the huge investor interest in these and similar companies are a testament for the huge market potential (Keelery, 2020).
The impact of social media on online shopping is extensive. It serves as a vital goal in online marketing by helping companies establish a stronger digital presence, generate leadership and increase traffic (Velayanikal, 2016). A significant percentage of advertising campaigns take place through social media websites. Involving social media in an effort to promote e-commerce can be very rewarding, especially as an effective way to attract the interest of a large audience that uses social media (Chaffey, 2020). Many businesses choose to use the opportunities presented by social media networks to gain more customers.

2. METHODOLOGY

For the purposes of the paper, secondary data was used the research the topic. Literature review was used as the main method for obtaining secondary data, including theoretical and background data through books, scientific papers and articles. Theoretical data is obtained through a comprehensive literature review, including books, scientific papers, and articles by relevant authors, dealing with the e-commerce related factors before and during pandemic times.

- o The observation method is used for collecting, as well as for researching the literature;
- o The historical method is applied when using secondary data sources such as scientific publications, books, empirical studies, reports and articles from the Internet of domestic and foreign literature, which contains topics relevant to the subject of research;
- o The paper also uses the method of analysis to analyze all selected materials from domestic and foreign literature, the method of specialization to create their own views based on the read literature and the method of synthesis;
- o The inductive and deductive method is used in formulating the conclusions and recommendations and elaborating the working hypotheses;

3. LITERATURE REVIEW

There are numerous studies present on online shopping, however there is still a lack of a coherent model for understanding mixed conclusions or findings on online purchasing decisions. Therefore, the findings are most often synthesized in the Online Shopping Acceptance Model (OSAM), which is considered to be the most accurate in predicting consumers' considerations to accept online shopping. This model expands the reference model (Chang et al., 2005) and provides a deeper analysis of the consumption factors associated with online shopping acceptance. Although it is difficult to fully cover all the potential factors and problems, it is still beneficial to include as many findings as possible on the influential consumer factors in accepting online shopping.
Online shopping is a process by which consumers buy goods and services directly from a seller without an intermediary service online. Online shopping has a number of advantages over the traditional shopping process (Chaffey, 2020; Boice, 2020; Prajapati, 2021). There are a set number of factors that are influencing the decision-making process of consumers during the online shopping process, including awareness; trust, security and privacy; availability; perceived price; perceived quality and buying intention.
Awareness is described as a human perception and intellectual response to the state of what is consumed or used (Bashir et al., 2018). Awareness describes the knowledge and information of consumers about the capabilities of a system or technology, its features, potential use, benefits and costs (Abubakar and Ahmed, 2013). In addition, awareness refers to the way it is undertaken to

procure a product or service. The first step in the buying process is usually considered, in which consumers who are not initially familiar with the product or service become familiar with it (Bashir et al., 2018). In support, Ansari and Alhazemi (2016) report that awareness is the first step in consumer behavior regarding anything that may lead to interest followed by other stages in the buying process. Many studies emphasize that awareness has a positive effect on consumer intent (Abubakar and Ahmed, 2013; Agwu and Murray, 2014; Bashir et al., 2018; Kabango and Asa, 2015; Kiwanuka, 2015; Mohamad and Kassim, 2018). It is important to note that in countries in development, such as the Republic of North Macedonia, there is a lack of awareness and understanding of the potential benefits of online shopping, which is also one of the main obstacles to its acceptance and use.

According to Meyer et al. (1995) **trust** is described as "a willingness to depend or become vulnerable to the other party when the other party's actions cannot be controlled" (Abdulgani and Suhaimi, 2014). In the history of commerce, trust issues have always been very crucial and have influenced business processes and strategy, brand, organizational structure, including multiple operating practices that go hand in hand in day-to-day business (Abdulgani and Suhaimi, 2014). It is important to note that success in buying and selling on the Internet is predetermined by trust. Trust is also key to building economic relationships, especially in a networked environment, as a result of increased perceptions of doubt and risk (Chiemeke and Evwiekpaefe, 2011). Studies show that consumers' intentions and attitudes towards online shopping have been influenced by trust and perceived benefits of relative advantage (Al-Debei et al., 2015). It has been noted that lack of trust and risk can be the biggest challenge that will prevent many customers from purchasing through Internet channels. In support, Kumar and Bajaj (2019) point out that the perceived risk has a negative impact on online retail. This means that trust is one of the important factors that can easily influence consumer behavior in the use of technology (Faqih, 2016; Saprikins et al., 2018). Trust improves the level of adjustment and acceptance of online transactions. Additionally, trust can enhance customer commitment and satisfaction, which will ultimately lead to loyalty. Trust through the Internet ensures long-term relationships with customers and helps to achieve a competitive advantage. Trust also reduces concerns and fears about consumer information.

Security can be described as the degree to which consumers consider their online payment to be free from unauthorized access, use, alteration and destruction. This may be due to a higher risk of possible fraudulent behavior such as network security breaches where important personal information may be stolen. Thus, security is a major predictor of consumers' intentions to shop online. Security is also a known challenge for online transactions around the world (Tarhini et al, 2015). Hence, the perception of Internet security risk is recognized as a concern for both experienced and inexperienced users of Internet technologies (Kabango and Asa, 2015). Recently, Merhi et al (2019) conducted intercultural research on mobile banking intentions among Lebanese and British clients. They found that the intent of the behavior was influenced by perceived security, perceived privacy, trust and habits of both Lebanese and British mobile banking users. In the same direction, according to the findings of Tarhini et al. (2015) exposed the issue of security that was cited as the main reason why respondents were afraid to accept online banking. In this regard, it must be ensured that online transactions are secure, as well as the protection of consumer privacy by e-commerce web-sites (Kumar and Dange, 2012).

Availability can be described as the degree to which the technology needed for online transactions is readily available to humans (Chiemeke and Evwiekpaefe, 2011). Because the Internet is fast becoming the basis for information and services, a well-structured e-commerce website has become crucial for users to obtain information and expand their involvement. Retail websites can

also serve as an avenue for communication and customer relations and the general public (Kabango and Asa, 2015).

The term "**price**" refers to the collection of services through online transactions of customers in relation to transaction costs and savings arising from the effectiveness of e-commerce and financial incentives. As such, transaction costs in the network environment should be low for both the client and the person determining them, especially if micro payments are supported (Chiemeke and Evwiekpaefe, 2011). Price is always a significant issue for consumers in their purchasing decisions. In a study conducted by Olasanmi (2019), the results show that the level of online shopping is negatively correlated with the costs involved. The results also highlight better prices as one of the reasons consumers preferring specific online retailers. In addition, from the work of Ng et al., (2018) it can be seen that the perceived value has a significant and positive impact on the purchasing intentions of consumers for electric cars. This result is also in line with the findings of Escobar-Rodriguez and Bonson-Fernandez (2017), which indicate the perceived price as one of the key determinants of online consumer clothing purchase in Spain.

Perceived quality is described as the degree to which the product or service meets the needs and expectations of consumers. It is a critical factor that determines customer behavior in the context of online shopping (Ibrahim et al., 2018). A comparative study between Taiwan and Japan conducted by Hsu et al. (2017) identifies the perceived quality of service as one of the key factors influencing the purchasing intentions of consumers in both countries. It has been reported that service quality plays a significant role in ensuring consumer trust in the website (Gao et al., 2015). Therefore, customers are expected to be encouraged to shop online if they recognize the high quality of service that prevails on the website. In support, Liao et al., (2011) point out that the quality of service has a statistically significant effect on the willingness of customers to shop online. Similarly, the findings of Ibrahim, Hassan and Yusuf (2019) show a strong positive relationship between service quality and the consumer's intention to accept online shopping. In addition, the findings of the empirical study of Tarhini et al., (2018) indicate that the intentions of online shoppers in the UK were influenced by the quality of service.

The term **buying intentions** has received particular attention in recent times and is generally applied to models associated with the adoption and adoption of technology. Behavioral intentions are described as the intentions of an individual to achieve various behaviors (Ajzen, 1991). In other words, intent is defined as "the subjective possibility of individuals that they will commit some behavior" (Saprikins et al., 2018). As such, behavioral intent is seen as a direct precursor to the use of behavior and the indication of individuals' willingness to engage in certain behaviors. Hasan's study (2018) reveals that product attributes and store attributes have a positive effect on the intention to buy. However, Ali and Sudan (2018) points out that the intent of consumer behavior depends on long-term orientation, distance from power, as well as masculinity. A recent study by Nasution et al. (2019) reveals that utility, ease of use, and cost are key factors influencing student shopping intentions. Another research by Aldousari and El-Sayed (2017) reveals that payment options, nationality and the day of the week are the main determinants of consumer behavior intent. Additionally, Eshaghi et al. (2016) conducted an intercultural study, in which they compared the precursors of the intention to shop online among consumers. The results showed that trust in the web-site (based on perceived quality, security and privacy) significantly reflects the frequency of online shopping.

4. RESEARCH FINDINGS

The reality of this new pandemic surprised the world. People are still trying to adapt to the idea of longer stays indoors and social isolation, as well as to avoid shopping in "brick and mortar" stores, ie trying to adapt to the establishment of new and permanent habits (Murillo-Vargas, 2020). Current established factor in the Literature review section no longer influence online purchasing behavior in the same manner through the COVID-19 pandemic. In countries under the strong influence of Covid-19, consumers collected food and other basic items while isolating themselves from the crowd. To find out how and when consumers began to show these behavioral changes, Nielsen Group (2020) conducted a behavioral survey of consumers which started during the beginning. Following trends, consumers go through six stages of behavior based on their awareness of the spread of COVID-19 in their communities:

- **Proactive health-oriented shopping**: Increased interest in purchasing products that maintain well-being or health;
- **"Recreational health" management:** Prioritize products for preventing infections (eg. face masks);
- **Stocking supplies**: Larger purchases of products on the shelves in order to reduce visits to physical stores;
- **Preparing to live in isolation:** Increased online shopping, reduced store visits and the first signs of a supply chain burden;
- **Limited living:** Possible price increase due to limited stocks;
- **Living a new normal life:** Increased health awareness even when people return to their typical daily activities.

At the time of research, China has been the only country that has adopted all six stages of adjustment. The study also found that long-term changes in consumer behavior are likely to be fully anticipated, but it is clear from observed trends that, if maintained, could lead to significant changes in the way we shop in the future. With the spread of the pandemic, it is evident that online shopping has become the first choice of consumers. It is therefore of particular importance to businesses to identify the main factors influencing consumers online during the COVID-19 pandemic.

Research on this topic has shown that the main factors influencing online shopping at the time of the pandemic are quite different from those under normal conditions (Chen et al., 2021). Specifically those key factors such as consumer gender, level of education, price of goods and services, attitudes towards online business services, lack of products and "blind shopping" caused by boredom, which is also confirmed by several studies, that have a significant effect on online shopping under normal circumstances, have failed the significance test. In contrast, the non-contact features of online shopping services, people's opinions about the pandemic situation, the exclusion of offline shopping channels, low-efficiency logistics, official pandemic information and pandemic panic are the main factors influencing online shopping. to the general public in this pandemic (Chen et al., 2021).

From the analysis of the impact factors, it was found that the key factors influencing the online shopping behaviour of the general public during the pandemic differ significantly from those under a normal background. For example, key factors such as gender and level of education that have been shown to have a significant effect on online shopping under a normal background are not significant under an abnormal background. In contrast, the non-contact features of online shopping services are the most important factor influencing online shopping due to the impact of the pandemic. It should be noted that with the gradual improvement of the situation, the influences of

some factors will decrease, while others will increase, giving a greater effect and will dominate again. Among all the critical impact factors, the non-contact features of online shopping services and the exclusion of offline shopping channels are unique features of this pandemic. The impact of these two features seemed to weaken as the pandemic situation improved, but still, the convenience and other experiences that Internet shopping brings can further influence the general public's choice of online shopping regardless of the variations in the number of patients affected by the pandemic. Hence, while reaping the benefits of the pandemic in the industry, e-commerce companies need to pay more attention to fostering customer loyalty after the pandemic. Other influencing factors during a pandemic include: cost, fast and professional delivery, online retailer brand reputation, and ease of use for website users (Statista, 2021).

5. CONCLUSIONS

Pandemic behavior in online shopping has significant differences when applied to online shopping and purchasing decisions. As evident from various studies, established factors influencing online shopping have varying influence, as well as some being rendered completely obsolete. For companies to monitor changes online purchase behavior during pandemic times and adapt accordingly, adjustments have to be made in current factors influencing online purchasing behavior:

- **Reputation** - reputation is everything, and online e-commerce platforms provide the perfect opportunity to communicate with customers and solve their problems in a fast way. During pandemic times, companies are exposed to new customers who may solely base their purchasing decision on the reputation of the company.
- **Delivery times** - Focusing on the 4Ps, place is the single attribute that is being completely digitalized, as consumers replace their visits to physical stores with online shopping. During traditional shopping the consumer has the product right after payment, so reducing delivery times should be one of the company top priorities.
- **Monitor stages of behavior** – as pointed by the Nielsen group, consumers go through six stages of changes in their online purchasing behavior. Companies need to monitor the stage the customers are in, so they can adapt their marketing strategies, as well as anticipate changes in demand based on the next stages.
- **Brand personality** - Since online shopping is non-contact, the social media channels and web-site of a company become the only point of interaction with the consumers. Thus, it is becoming more important than ever for businesses to have a strong voice and deal with customers on a human level.
- **Digitalized products or services** – one of the main players during pandemic times are products or services in digital form, making them instantly accessible across the world without any delivery times. Companies need to adapt (within industry boundaries) to deliver products and services solely through Internet channels.
- **Security and privacy** – in countries with low e-commerce participation, security and privacy are one of the main precursors for failed online shopping initiatives. By focusing on the payment system as a whole (or using third party providers trusted by consumers), companies can positively influence e-commerce adoption.

The paper gives an overview of the main factors influencing e-commerce adoption, as well as their significance in abnormal times. This research can be expanded further with focus on countries in development, where the general levels of e-commerce adoption were low before pandemic times.

Additionally, the research can be updated after the pandemic period is over, to see whether increased e-commerce adoption level will continue steadily or decline.

REFERENCES

Abdulgani, M.A. and Suhaimi, M.A. (2014) 'Exploring factors influence Muslim intention to purchase online', *5th International Conference on Information and Communication Technology for the Muslim World (ICT4M)*, pp.1-6.

Abubakar, F.M. and Ahmed, H.B. (2013) 'The moderating effect of technology awareness on the relationship between UTAUT constructs and behavioral intention to use technology: A conceptual paper', *Australian Journal of Business and Management Research,* 3(2), pp.14-23.

Agwu, E. and Murray, P.J. (2014) 'Drivers and inhibitors to e-Commerce adoption among SMEs in Nigeria', *Journal of Emerging Trends in Computing and Information Sciences*, 1(3), pp.18-24.

Ajzen, I. (1991) 'The Theory of Planned Behavior', *Organizational Behavior and Human Decision Processes,* 50(2), pp. 179-211.

Akroush, M.N. and Al-Debei, M.M. (2015) 'An integrated model of factors affecting consumer attitudes towards online shopping', *Business Process Management Journal,* 21(6), pp.1353-1376.

Ali, S.W. and Sudan, S. (2018) 'Influence of cultural factors on impulse buying tendency: A study of Indian consumers', *Vision*, 22(1), pp.68-77.

Al-Debei, M.M., Akroush, M.N. and Ashouri, M.I. (2015) 'Consumer attitudes towards online shopping: the effects of trust, perceived benefits, and perceived web quality', *Internet Research*, 25(5), pp. 707-733.

Aldousari, A.A. and El-Sayed, I.M. (2017) 'Factors influencing consumers' patronage intentions in Kuwait', *Journal of Business and Retail Management Research*, 11(3).

Ansari, Z.A. and Alhazemi, A. (2016) 'An Empirical Study of the Consumer Awareness and Acceptance of Online Shopping in Saudi Arabia', *Internet Journal of Development Research,* 6(2), pp. 6918-6925.

Bashir, A.M., Bayat, A., Olutuase, S.O. and Abdul Latiff, Z.A. (2018) 'Factors affecting consumers' intention toward purchasing halal food in South Africa: a structural equation modelling', *Journal of Food Products Marketing,* 25(1), pp.26-48.

Boice, M.(2020) 'The 13 Top Reasons Consumers Shop Online'. *JungleScout*, 17 November. Available at: https://www.junglescout.com/blog/reasons-consumers-shop-online/(Accessed: 10 October 2021).

Chang, M.K., Cheung, W. and Lai, V.S. (2005) 'Literature Derived Reference Models for the Adoption of Online Shopping', *Information and Management,* 42, pp. 543-559.

Chaffey, D. (2020) 'Global social research summary 2021', Smart Insights, 11 March. Available at: https://www.smartinsights.com/social-media-marketing/social-media-strategy/new-global-social-media-research/ (Accessed: 19 August 2021).

Chiemeke, S.C. and Evwiekpaefe, A.E. (2011) 'A conceptual framework of modified unified theory of acceptance and use of technology (UTAUT) Model with Nigerian factors in E-commerce adoption', *Educational Research,* 2(12), pp.1719-1726.

Chen, Y., Guang-Wen, Z., Abu Bakkar, S., Quan Li, D. and Chang, D. (2021) 'Factors Affecting the Consumers Online Shopping During the COVID-19 Pandemic in China', *Revista Argentina de Clinica Psicologica,* 30(1), pp. 853-864.

Escobar-Rodriguez, T. and Bonson-Fernandez, R. (2017) 'Analyzing online purchase intention in Spain', *Journal of Information Systems and e-Business Management,* 15(3), pp.599-622.

Eshaghi, S.M.S., Afshardoost, M. and Ahmadi, M.M. (2016) 'Antecedents of online purchase intention: A cross-national study between Iran and Malaysia', In *10th International Conference on e-Commerce in Developing Countries – with focus on e-Tourism (ECDC)*, pp.1-13.

Faqih, K.M.S. (2016) 'An empirical analysis of factors predicting the behavioral intention to adopt Internet shopping technology among non-shoppers in a developing country context: Does gender matter?', *Journal of Retailing and Consumer Services,* 30, pp. 140-164.

Gao, L., Waechter, K.A. and Bai, X. (2015) 'Understanding consumers' continuance intention towards mobile purchase: A theoretical framework and empirical study – A case of China', *Computers in Human Behavior,* 53(9), pp. 249-262.

Hasan, A. (2018) 'Impact of store and product attributes on purchase intentions: An analytical study of apparel shoppers', *Vision*, 22(1), pp. 32-49.

Hsu, C.L., Chen, M.C., Kikuchi, K. and Machida, I. (2017) 'Elucidating the determinants of purchase intention toward social shopping sites: A comparative study of Taiwan and Japan', *Telematics and Informatics*, 34(4), pp. 326-338.
Ibrahim, A.M., Hassan, M.S. and Gusau, A.L. (2018) 'Factors Influencing Acceptance and Use of ICT Innovations by Agribusinesses', *Journal of Global Information Management (JGIM)*, 26(4), pp. 113-134.
Kabango, C.M. and Asa, R. (2015) 'Factors influencing e-commerce development: Implications for the developing countries', *ResearchGate*, 1(1), pp.64-72.
Keelery, S. (2020) 'E-commerce in India – statistics and facts', *Statista*, 04 August. Available at: https://www.statista.com/topics/2454/e-commerce-in-india/ (Accessed: 19 August 2021).
Kiwanuka, A. (2015) 'Acceptance process: The missing link between UTAUT and diffusion of innovation theory', *American Journal of Information Systems,* 3(2), pp. 40-44.
Kumar, P. and Bajaj, R. (2019) 'Exploring the influence of demographic factors on perceived performance risk among youth towards online shopping', *International Journal of Business and Globalisation*, 23(1), pp. 47-68.
Kumar, V. and Dange, U. (2012) 'A study of factors affecting online buying behavior: A conceptual model'. Ujwala, A Study of Factors Affecting Online Buying Behavior: A Conceptual model (25 August).
Liao, Z. and Cheung, M.T. (2001) 'Internet-Based E-Shopping and Consumer Attitudes an Empirical Study', *Information and Management,* 38(5), pp. 299-306.
Meyer, R.C., Davis, J.H. and Schoorman, F.D. (1995) 'An Integrative Model of Organizational trust', *The Academy of Management Review,* 20(3), pp. 709-734. [Online] Available at: https://www.jstor.org/stable/258792?seq=1#metadata_info_tab_contents (Accessed: 29 July 2021).
Merhi, M., Hone, K. and Tarhini, A. (2019) 'A cross-cultural study of the intention to use mobile banking between Lebanese and British consumers: Extending UTAUT2 with security, privacy and trust', *Technology in Society,* 59, pp. 1-12.
Mohamad, S.A. and Kassim, S. (2018) 'Examining the Relationship between UTAUT Construct, Technology Awareness, Financial Cost and E-Payment Adoption among Microfinance Clients', In 1st Aceh Global Conference (AGC 2018).
Murillo-Vargas, D. (2020) 'How the COVID-19 Pandemic is Influencing Consumer Behavior', *Contentserv*, 26 March. Available at: https://www.contentserv.com/en/blog/how-covid-19-pandemic-is-influencing-consumer-behavior/ (Accessed: 11 August 2021).
Nasution, M.D.T.P., Rossanty, Y., Ariffin, K.H.K., and Zaini, N.I.B.M. (2019) 'An empirical examination of the factors influencing consumer's purchase intention toward online shopping', *Journal of Business and Retail Management Research,* 13(4), pp. 1-12.
Ng, M., Law, M. and Zhang, S. (2018) 'Predicting purchase intention of electric vehicles in Hong Kong', *Australian Marketing Journal (AMJ),* 26(3), pp. 272-280.
Olasanmi, O.O. (2019) 'Online shopping and customers' satisfaction in Lagos state, Nigeria', *American Journal of Industrial and Business Management*, 9, pp. 1446-1463.
Prajapati, V.(2021) *Why Do People Shop Online? – Top 10 Reasons You Can't Ignore.* Available at: https://www.techprevue.com/reasons-prefer-online-shopping/ (Accessed: 10 October 2021).
Saprikins, V., Markos, A., Zarmopou, T. and Vlachopoulou, M. (2018) 'Mobile shopping consumers' behavior: An exploratory study and review', *Journal of theoretical and applied electronic commerce research,* 13(1), pp. 71-90.
Tarhini, A., Mgbemena, C., Trab, M.S.A. and Masa'Deh, R. (2015) 'User adoption of online banking in Nigeria: A qualitative study', *The Journal of Internet Banking and Commerce*, 20(3).
Velayanikal, M. (2016) 'The latest numbers on web, mobile, and social media in India (Infographic)', *TechInAsia*, 06 September. Available at: https://www.techinasia.com/india-web-mobile-data-series-2016 (Accessed: 17 August 2021).

Online sources

AltusHost, (2016) Available at: https://www.altushost.com/the-history-of-e-commerce-online-shopping-evolution-and-buyers-behaviour/ (Accessed: 23 July 2021).
eMarketer (2021) Available at: https://www.emarketer.com/chart/234148/amazon-us-retail-ecommerce-sales-2017-2021-billions-change-of-us-retail-ecommerce-sales-sales (Accessed: 23 July 2021).
NielsenIQ (2020) Available at: https://nielseniq.com/global/en/insights/analysis/2020/a-guide-to-winning-in-store-in-2021/(Accessed: 11 August 2021).
Statista, (2020) Available at: https://www.statista.com/statistics/272391/us-retail-e-commerce-sales-forecast/ (Accessed: 23 July 2021).

UPS Investors (2020) Available at: http://www.investors.ups.com/news-releases/news-release-details/ups-releases-2q-2020-earnings#:~:text=UPS%20(NYSE%3AUPS)%20today,the%20same%20period%20in%202019 (Accessed: 20 July 2021).

ONLINE FOOD PURCHASING CONSUMER BEHAVIOUR IN NORTH MACEDONIA AMID COVID-19 PANDEMIC: AN EXTENDED TAM APPROACH

Kalina Trenevska Blagoeva
Faculty of Economics – Skopje, Ss Cyril and Methodius University
kalina@eccf.ukim.edu.mk

Marina Mijoska
Faculty of Economics – Skopje, Ss Cyril and Methodius University
marina@eccf.ukim.edu.mk

Marija Trpkova-Nestorovska
Faculty of Economics – Skopje, Ss Cyril and Methodius University
marija.trpkova-nestorovska@eccf.ukim.edu.mk

ABSTRACT
The current COVID-19 pandemic has changed the world on irreversible way towards digitalization. It has changed people's attitude and behaviour towards online shopping, leading to global e-commerce unprecedented growth. The pandemic crisis accelerated an expansion of e-commerce worldwide, but impacted it in different ways. The progress varies between developed and developing countries, as well as between different industries. The biggest increase in online shopping is evident in food and daily use products category, especially during lockdowns. Despite the cross-country difference of e-commerce growth, the e-commerce in North Macedonia has increased at high rates as a result of COVID-19 with evident increase in online food purchasing. The goal of this study is to analyse which factors affect young consumer intention to buy food online during COVID-19. In order to get insights regarding the young consumer behaviour towards online food purchasing in the country, a survey was conducted among more than 150 young people during April and May 2021. This study examines the crucial factors encouraging young consumers to use online food delivery channels on the basis of the extended Technology Acceptance Model (TAM), including the following constructs: perceived ease of use, perceived usefulness, attitude towards using, actual use and website trust. The analysis revealed that perceived usefulness, perceived ease of use, and website trust are important drivers of attitude towards online food purchasing. Attitude towards online food purchasing has the highest positive and statistically significant impact on the Intention towards online food purchase. This research provide relevant theoretical and practical implications by confirming that the above factors are critical in attitude towards online food purchasing in a developing country context.

Key words: *Online Food Purchasing, Technology Acceptance Model, North Macedonia.*

JEL classification: *D12, D91, L81, L66, M31.*

1. INTRODUCTION

The current COVID-19 pandemic has changed the world, doing business and human life on irreversible way towards digitalization. Companies are urging rapid and unprecedented digital transformation that affects not only workers, but humans as consumers (Vaska et al, 2021). It has changed people's attitude and behavior towards online shopping, leading to global e-commerce growth especially during long periods of lock-downs.

http://hdl.handle.net/20.500.12188/15922
http://doi.org/10.47063/EBTSF.2021.0010

Online food shopping is a way of purchasing food products online using a web-based shopping service (or app-based). It can be defined as the process of ordering food from a website or other application. The product can be either ready-to-eat food (e.g., direct from a home-kitchen, restaurant, etc.) or food that has not been specially prepared for direction consumption. Food is a specific good. Food needs can't be delayed and food is usually purchased on a daily basis. The elasticity of demand is low and price sensitivity as well. In the pre-COVID era if a person wants to buy a meal, they can choose to have dinner in restaurants or buy fast foods in convenience stores. Still, today people change their behavior to cope with "next experiences" (Li, 2021). Nowadays, catering service providers can build their e-commerce store and place social media advertisements on food deliveries portals like Uber Eats that is the most popular site in the USA, so they can enjoy all-in-one food ordering/ delivery services at their earliest convenience. (Li, 2021). Even restaurants offering their products only through delivery have emerged; a practice that provides the opportunity to new entrants with low fixed costs. Therefore, nowadays this activity has gained relevance not only for established but also for new businesses.

The global online food ordering/delivery market can be segmented using different criteria. The first segmentation is by the business model type into restaurant-to-consumer delivery and platform-to-consumer delivery. Restaurant-to-consumer delivery providers make the food and deliver it, as typified by providers (for ex. KFC). The order can be made directly through the restaurant's online platform or via a third-party platform. These third-party platforms vary from country to country, and include examples, such as Uber Eats in the USA, Eleme in China and Just Eat in UK. Third-party platforms also provide online delivery services from partner restaurants which do not necessarily offer delivery services themselves, a process which is defined as platform-to-consumer delivery. By business model online food delivery can be segmented on three different concepts such as order focused food delivery system, logistics focused food delivery system and full service food delivery system. By platform type, online food delivery/ordering can be web based and application based. By food source, the classification is restaurants and food outlets, grocery stores and supermarkets. Finally, the market of online food delivery can be divided in two categories by payment method -online payment and cash on delivery (Goldstein Research, 2021). On the basis of business model, logistic based food delivery system accounted for larger market share of 48.6% in 2017. This has been even beneficial to restaurants which do not have their own established delivery system. Full service food ordering system is a flourishing business model type, which is beneficial for small scale and independent restaurants that have their own kitchen and logistics. North America consists of major global players and also the large customer base ordering the food through online platforms. Further, Asia-Pacific region accounts for maximum millennial population, who are handy with online platforms for ordering food and the growing restaurant industry in the region, are expected to flourish the online food delivery market at a CAGR of 4.1% over the forecast period (Goldstein Research, 2021). Over the years pizza has been the major food type, but even after the evolution of online portals and smartphones, pizza acquires 60% of the total food ordered. The evolution of food ordering app has boosted the global food ordering market. In USA, 50% of the people ordering food for delivery enjoy using food delivery apps. The convenience of ordering food by comparing the menu of various restaurants and quick delivery of meals straight at home/offices has attracted the people towards using food app services.

The online food delivery sector has been growing at high rates worldwide in the last years. The factors such as improved logistics, increasing penetration of internet and smartphones and development of user-friendly food apps are majorly impacting the growth of global online food delivery market. Its revenues have risen from US$76,193 million in 2017 to projected US$306,808m in 2021. Revenue is expected to show an annual growth rate (CAGR 2021-2025)

of 10.01%, and a revenue growth of 16.6% in 2022. The market's largest segment is Platform-to-Consumer Delivery with a projected market volume of US$172,944m in 2021, and the most revenue will be generated by China. In the Online Food Delivery segment, the number of users is expected to amount to 2,897.1m users by 2025. User penetration in the Online Food Delivery segment will be at 26.5% in 2021. (Statista, 2021).
E-commerce is growing in North Macedonia, but is still relatively limited, both in terms of local retail selling and consumers shopping online. According to the UNCTAD report of 2020, measuring the B2C e-commerce index of countries North Macedonia was ranked 52 out of 152 countries. But luckily, the country was no exception regarding the dynamic growth in e-commerce boosted by the COVID-19 pandemic, witnessing online sales growth, exclusively for grocery shopping (www.unctad.org). The restrictions on movement and fears of spreading the corona virus have changed people's behavior and habits in North Macedonia, leading to increased online shopping and online payments. E-commerce was no longer a choice but a necessity for companies to grow and reach new customers. Customers, on the other hand, acquire digital skills and change their habits, which is reflected in the three-digit growth of 126% in the value of realized transactions with domestic cards to domestic e-merchants (www.nbrm.mk). Digital skills, trust in domestic e-shops, e-transactions and domestic supply are growing exponentially during pandemic (www.ecommerce.mk). According to the Annual Report of the Association for E-commerce for 2020 for North Macedonia, the value of online transactions in 2020 was increased for 56% compared to 2017 and the number of online transactions in 2020 was increased for 56.4% compared to 2017. The E-Commerce Association of the country has confirmed that during the corona crisis, clothes and sports equipment are still the most purchased categories, but the biggest increase in online shopping is in food and daily use products (www.ecommerce.mk).
According to the latest official statistics of the NBRNM for the first quarter of 2021, the value of online transactions realized in the country and abroad amounted to 86.6 million euros, which compared to the same period in 2020 is an increase of 74.6%. According to the data on the number of devices at the virtual sale points (e-commerce websites), as of March 31, 2021, there are 1,552 active points of sale in the country. For the first quarter of 2021, the number of online stores increased by 93 newly opened. Compared to March 31, 2020, when the number of active e-shops was 1,029, we can conclude that in one year a total of 523 new e-shops were opened, which is an increase of 51% (www.nbrm.gov.mk).
In these globally changed circumstances and increased e-commerce opportunities in the food purchasing sector especially because of pandemic, the goal of this paper is to analyze which factors affect young consumer intention to buy food online during COVID-19 in North Macedonia.

2. RESEARCH BACKGROUND

During the current COVID-19 pandemic, businesses in almost every industry and type were pushed to udergone rapid transformation moving towards online shopping channels, especially retailers. Studying consumer behavior in the field of online shopping reached new levels during pandemic. Knowing what influences consumer behavior in online shopping during pandemics has become priority in creating strategies that will ensure first of all survival of retailers on short run, and likely long-term growth.
In the literature, different theories and subsequent models are available that are in broad use to measure end users' acceptance of a new technology since 1990s, but the most widely used are Technology Acceptance Model (TAM) (Davis, 1989) and Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Morris, Davis & Davis, 2003). The Technology Acceptance Model (TAM) is widely used and popular model for exploring factors that influence use of new technology. TAM is one of the most renewed approaches to explain and predict user

acceptance of information systems (Davis, 1989). Even though TAM has been tested broadly in different situations/samples and proved to be valid and reliable model explaining information system acceptance and use, many extensions to the TAM have been proposed and tested continuously (Venkatesh and Davis, 2000; Lai, 2017).
Online food purchasing (ordering/delivery) is gaining popularity rapidly especially in recent times. Therefore, literature review for research on this subject is focused on the last few years. Different authors research various aspects of this topic. Troise et al (2021) found out that contextual factors and subjective norms more important than technical factors. AIDA model (Attention, Interest, Desire, Action) is strongly connected to constructs in TAM and it was confirmed that attitude towards the adoption of technology is a mediator that promotes interest for the app for food delivery (Song et al, 2021). In Choe et al (2021) a merger of two models (TAM and TPB) is investigated for the use of drone food delivery and implications on food industry and tourism. Extended TAM is used in Nguyen et al (2019). Website trust is added construct proven to be important for intention to use online food shopping having broad managerial implications. In Preetha and Iswarya (2019) a concrete app is analyzed and its quality is the most important factor for their adoption. Lee et al (2017) found that user-generated information, firm-generated information, and system quality had a significant effect on perceived usefulness, and system quality and design quality have impact on the perceived ease of use, which improved perceived usefulness, that affected attitude toward the use of mobile apps. Zhao and Bacao (2020) examined FDAs (food delivery apps) during the COVID pandemic and proposes a comprehensive model integration. Their statistical results and discussions proved that satisfaction is the most significant construct, together with perceived task-technology fit, trust, performance expectancy, social influence and confirmation. Characteristics of the customers can be used to explain customer behaviour while OFD (online food delivery) and it was proven that only 22% of the decision towards OFD can be explained using personal charactesristics (Mehrolia et al., 2020). In Prasetyo et al. (2021) structural equation modeling (SEM) proved that hedonic motivation has the highest effect on customer satisfaction, than price, the quality of information and promotion. Interestingly, the authors found out that usability factors, (design and perceived ease of use) were not significant during the time of COVID-19. In Hong et al. (2021) the reserches discuss whether consumer intention depens on different types of OFD services.They proved that perceived usefuleness and trust are the most significant predictors. Intresting and comparable to our research is the work of Pal et al. (2021) because they are interested in the behaviour of students while using apps for online food ordering. Their results showed that among the mobile app characteristics information design has the highest impact on both satisfaction and loyalty, together with navigation and visual design.
Based on the discussion above, in this empirical study, the proposed research model which is based on the technology acceptance model (TAM) as the basic theoretical model, is adjusted/extended with website trust in order to predict the customers' adoption intention of online food purchasing during pandemic. The theoretical framework used in this research is a combination of the existing information available in the literature on online shopping behavior and new insights specifically defined to understand the influence of the COVID-19 pandemic on the adoption of online food purchasing by young consumers. Based on the research model, seven hypotheses are defined (Figure 1).

2.1. Research method and data collection

For the analysis in this study, authors designed the research in two segments: the first step was to create a structured questionnaire entailing the extended TAM model, in order to create reliable constructs that can be used in the second segment, the regression analysis. Similar

approach was implemented in Alaimo et al, (2020), Troise et al (2021), Song et al (2021), Choe et al (2021), Nguyen et al (2019), Bauerová and Klepek (2018) and others.
This study employs a quantitative research design and questionnaire was distributed by using electronic survey or e-survey via Google Form. A questionnaire was developed to be the instrument for data collection, adopted from basic TAM and extended by additional construct. Since, it has been recognized that youth are very representative sample of today's online population in the country, the population of interest in this research are young people (mostly students) aged 18-25. Facing the pandemic restrictions and lock-downs, the data was collected by distributing online questionnaire on Google platform (April and May 2021), targeting around 200 internet users.
The items that were chosen for measuring of each variable are as follows: *Perceived Usefulness* (3 items): Online food purchase saves (me) time. Using website for online food purchase makes buying more effective. Using website for online food purchase makes comparison easier. *Perceived Ease of Use* (3 items): Learning how to use online food purchase is easy for me. I think it is easy to become skillful in online food purchase. It is easy to purchase food online. *Website Trust* (4 items): Products from the online food purchase sites are safe and reliable. I trust in the food information provided by the web sites. The conditions for online food purchase are clearly stated on the site. The website provides customer privacy. *Attitude towards Online Food Purchase* (3 items): Online food purchase is a good idea, online food purchase is a wise decision. I like to buy food from online sites. *Intention towards Online Food Purchase* (3 items): I intend/plan to start using online purchase web sites soon. I anticipate that I will use online food purchase sites regularly in the future. I intend to recommend online food purchase to my friends. Five-point Likert scale was included with level of agreement from 1-Strongly disagree, 2- Disagree, 3-Neither agree nor disagree, 4-Agree, and 5-Strongly agree.

3. DATA ANALYSIS AND RESULTS

The purpose of this analysis is to determine the main factors that influence and encourage customers to use online websites for food purchase. Extended TAM model will be applied to examine the potential relationships. The sample is comprised of 175 survey responses, where 6 of them were taken out the analysis because they stated that they do not use online food purchasing websites, and yet they completed some part of the given questionnaire. Demographic structure of the responders is presented in Table 1.

Table 1. Demographic structure of the respondents

VARIABLE	VARIABLE CATEGORIES	FREQUENCY	PERCENTAGE
Gender	Female	115	68.0
	Male	54	32.0
Residence	Skopje	92	54.4
	Other	77	45.6
What device do you use for Internet	Laptop	17	10.1
	Mobile phone	148	87.6
	Desktop computer	4	2.4
How often do you use Internet for buying any type of products?	Every day	2	1.2
	Few times a week	13	7.7
	Once a week	13	7.7
	Once a month	62	36.7
	Rarely	79	46.7
How often do you use Internet to buy food during the pandemic?	Few times a week	14	8.3
	Once a week	17	10.1
	Once a month	31	18.3

	Rarely	107	63.3
How often did you use Internet to buy food before the pandemic?	Few times a week	10	5.9
	Once a week	9	5.3
	Once a month	34	20.1
	Rarely	116	68.6
Which site do you use to buy food online?	Food Guru	15	8.9
	Gruper	15	8.9
	Klikni jadi	103	60.9
	One stop shop	2	1.2
	Other	28	16.6
	No answer	6	3.6
What is the amount that you pay per order on average?	Up to 500 denars	59	52.7
	500 – 1000 denars	74	43.8
	More than 1000 denars	4	2.4
	No answer	2	1.2
What type of food do you order by Internet?	Food products	9	5.3
	Previously cooked food	129	76.3
	Both	28	16.6
	No answer	3	1.8

(Source: Authors calculations)

A typical respondent of this survey would be female that lives in Skopje, mostly uses mobile phone for Internet access, buys products via Internet once a month, rarely buys food via online websites pre-pandemic and post-pandemic, Klikni Jadi is a website of preference, spends from 500 to 1000 denars on average order and mostly orders previously prepared (cooked) food.

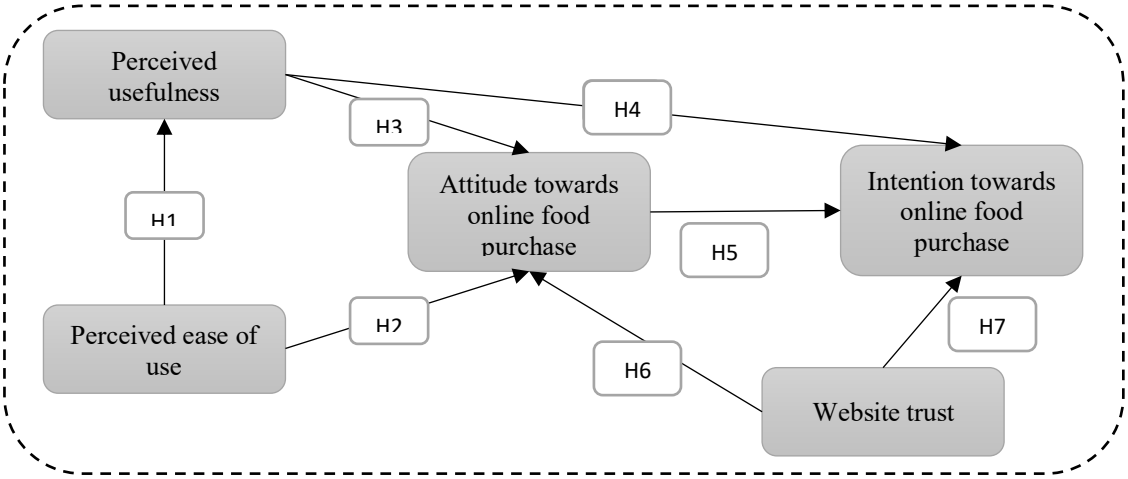
Respondents were asked to evaluate the characteristics of the online food purchase sites regarding simplicity and convenience, expense effectiveness, availability 24/7, easy way of payment, delivery, diverse menu, safety, and easy way to order. The lowest grade is 1 (poor performance) and the highest grade is 5 (best performance). Detailed responses are presented in Figure 2.

Highest average grade regarding the site performances was assigned to Easy way of payment (4.49) and Easy way to order (4.46). Respondents find websites to be simple to use, for ordering food and payment, and as presented most of the grades are with highest score, with almost no low scores.

Websites for food ordering are also evaluated with high scores for diverse menu (4.31), safe food for consummation (4.16) and availability (4.0). Characteristics such as simplicity and convenience and delivery have lower average grades, 3.98 and 3.85 respectively. The lowest average score of 3.53 was given to expense effectiveness, which can also be seen as area for improvement for the web sites, besides the delivery.

To examine possible relationship that stimulate online food purchase, TAM model with five constructs is used (Figure 1): Perceived usefulness, Perceived ease of use, Attitude towards online food purchase, Intention towards online food purchase and Website trust. Constructs are tested for their reliability, as defined by Filed, 2005, it means that a scale should consistently reflect the construct it is measuring. The results of the reliability analysis are presented in Table 2.

Figure 1. Research model with estimated regression coefficients



(Source: Authors calculations based on survey data)

As the research model implies, there are five constructs derived as variables for the regression model. All the variables, (constructs), can be implemented in regression models, as their respective reliability coefficients are greater than 0.7 which is acceptable value for reliable scale (Hair at al., 2005). Results from the reliability analysis are presented in Table 2. All constructs are with satisfactory internal consistency. Values for Cronbach's alpha if item is deleted point out that even if some of the variables are deleted, there will be no increase in reliability of the construct's Cronbach α. Thus, every construct remains with its designated variables. The moderating effect of variables like age and gender, on the online food purchasing acceptance was not tested since in the chosen sample of young consumers these individual characteristics of respondents are similar.

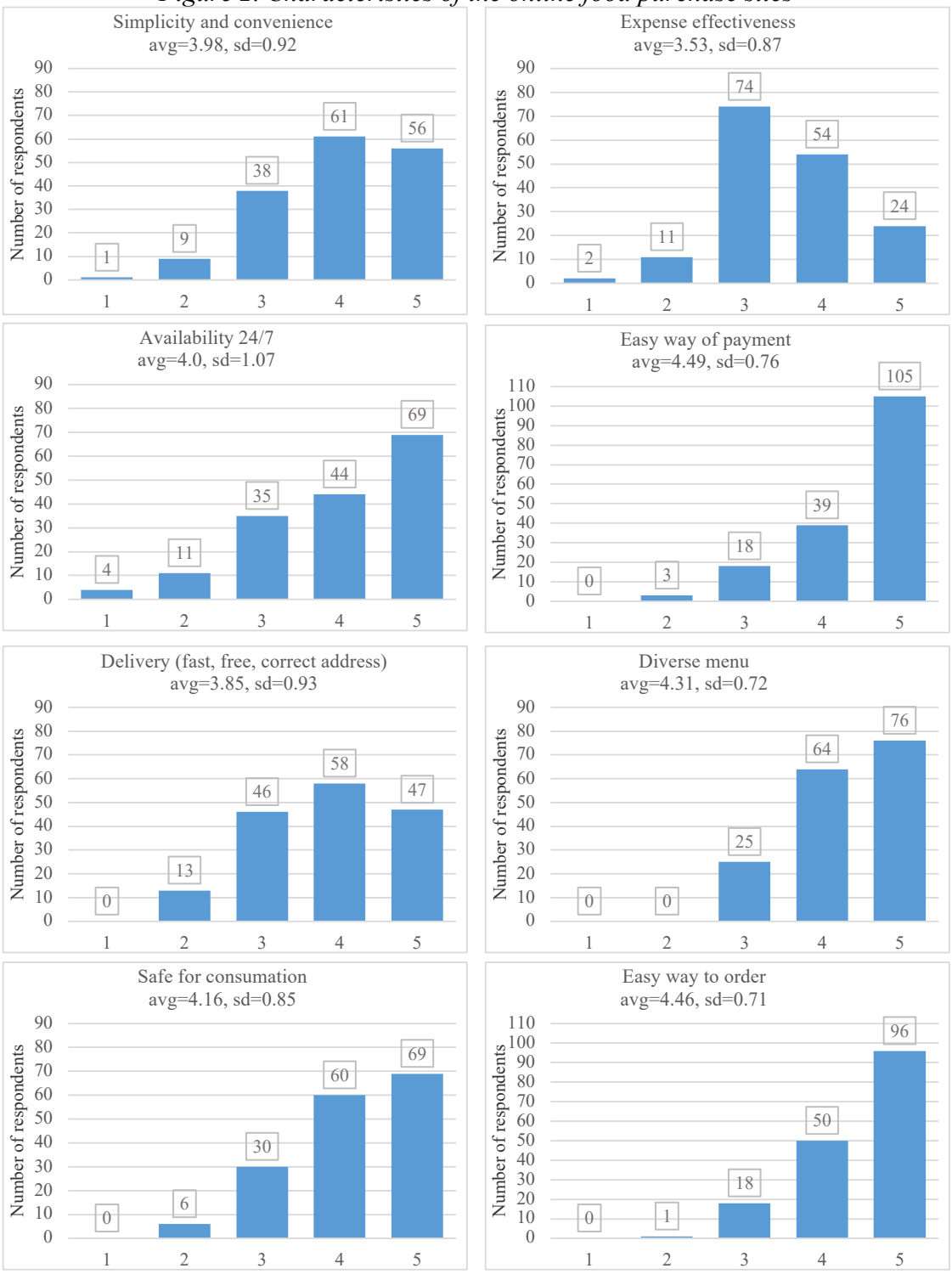
Table 2. Scale reliabilities for defined variables

VARIABLE	**CRONBACH'S α**
Perceived Usefulness	0.774
Perceived Ease Of Use	0.851
Website trust	0.769
Attitude towards online food purchase	0.881
Intention towards online food purchase	0.865

(Source: Authors calculations based on survey data)

Perceived ease of use has the highest average value of 4.52 out of 5, which is in accordance with the previous finding regarding the characteristics of the online food purchase sites – respondents find online websites for food purchase to be easy to use regarding payment and ordering. Also, most of the respondents trust the websites for online food ordering, its average value is 3.87. Lowest average score is given to Intention towards online food purchase, which could be interpreted that most respondents don't really tend to use online websites for food purchase, even though their attitude towards online food purchase has higher score (3.74). Having in mind that most of the respondents were young people that tend to socialize more than the older generations, this can be explained as their preference to go out more after the pandemic is put in order, even though they find it the idea for online web purchase to be good and wise.

Figure 2. Characteristics of the online food purchase sites



Source: Authors calculations based on survey data

3.1. Testing hypotheses of the research model

The proposed research model and its internal relationships are presented on Figure 2. The model includes seven hypotheses. To examine if there is any potential multicollinearity between variables, Pearson's correlation coefficients and two tailed tests of significance are calculated in Table 3. The relationships between each variable for each hypothesis are examined:

H1: Perceived ease of use influences Perceived usefulness – correlation coefficient of 0.41, statistically significant at 0.01 level;
H2: Perceived ease of use influences Attitude towards online food purchase - correlation coefficient of 0.40, statistically significant at 0.01 level;
H3: Perceived usefulness influences Attitude towards online food purchase - correlation coefficient of 0.66, statistically significant at 0.01 level;
H4: Perceived usefulness influences Intention towards online food purchase - correlation coefficient of 0.59, statistically significant at 0.01 level;
H5: Attitude towards online food purchase influences Intention towards online food purchase - correlation coefficient of 0.75, statistically significant at 0.01 level;
H6: Website trust influences Attitude towards online food purchase - correlation coefficient of -0.57, statistically significant at 0.01 level;
H7: Website trust influences Intention towards online food purchase - correlation coefficient of -0.41, statistically significant at 0.01 level.

Table 3. Pearson's Correlation Analysis

Variables		Perceived usefulness	Perceived ease of use	Website trust	Attitude towards online food purchase	Intention towards online food purchase
Perceived usefulness	Pearson Correlation	1	H1 0.41**	0.51**	H3 0.66**	H4 0.59**
	Sig. (2-tailed)		0.00	0.00	0.00	0.00
Perceived ease of use	Pearson Correlation	0.411**	1	0.58**	H2 0.40**	0.27**
	Sig. (2-tailed)	0.00		0.00	0.00	0.00
Website trust	Pearson Correlation	0.51**	0.58**	1	0.57**	0.41**
	Sig. (2-tailed)	0.00	0.00		0.00	0.00
Attitude towards online food purchase	Pearson Correlation	0.66**	0.40**	H5 0.57**	1	0.77**
	Sig. (2-tailed)	0.00	0.00	0.00		0.00
Intention towards online food purchase	Pearson Correlation	0.59**	0.27**	H6 0.41**	H5 0.77**	1
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	

***Correlation is significant at the 0.01 level*

Source: Authors calculations based on survey data

All seven hypotheses have significant correlation coefficients implying that statistically significant relationships in the regression models can also be confirmed.
Regression models for the seven hypothesis and their results are presented in Table 4. As previously confirmed by the correlation matrix, all regression coefficients are statistically significant, confirming the overall TAM model. Perceived ease of use has positive and statistically significant impact on the perceived usefulness. This can be interpreted that if the respondents find the process of online purchase to be simple and easy, they will further recognize the online food purchase to be effective, time saving and makes easier comparison between products.
Second hypothesis confirms that the perceived ease of use has positive and significant influence on the Attitude towards online food purchase. If the process for online food ordering is easy, than the customers may find that the online food purchase is a good and wise decision, and they might increase their usage of the online websites for food ordering.

Table 4. Single regression models for analyzed variables

Variable	Coef.	Std. Error	t-stat.	R^2	Adj. R^2	Durbin-Watson
H1: Perceived ease of use influences Perceived usefulness	0.55	0.10	5.67**	0.17	0.16	1.93
H2: Perceived ease of use influences Attitude towards online food purchase	0.60	0.11	5.43**	0.16	0.15	2.02
H3: Perceived usefulness influences Attitude towards online food purchase	0.74	0.07	11.20**	0.44	0.44	1.97
H4: Perceived usefulness influences Intention towards online food purchase	0.71	0.08	9.11**	0.35	0.34	1.97
H5: Attitude towards online food purchase influences Intention towards online food purchase	0.83	0.06	14.97**	0.59	0.58	2.06
H6: Website trust influences Attitude towards online food purchase	0.80	0.09	8.56**	0.32	0.32	1.97
H7: Website trust influences Intention towards online food purchase	0.62	0.11	5.53**	0.17	0.16	1.97

***Coefficient is significant at the 0.01 level*

(Source: Authors calculations based on survey data)

Perceived usefulness also has positive impact on the Attitude towards food online purchase. If the websites continue to be time saving, effective and easy to use, the attitude and the overall perception of the customers will be in favor of the online food purchasing. Perceived usefulness influences the Intention towards online food purchase in a positive manner. Not only than the Attitude towards food online purchase will change, also the plans for further usage of online websites for food ordering will remain, creating a habit for this type of shopping.

Attitude towards online food purchase has the highest positive and statistically significant impact on the Intention towards online food purchase. If a positive attitude towards online food purchase is created, it will significantly contribute as an incentive for further usage and recommendation of websites for online food ordering.

Website trust is important factor that significantly contributes to the perception of the online food purchase. If the customers find the websites to be safe, with correct information, clearly stated conditions for purchase and with guaranteed privacy, they will be encouraged to think that online food purchase is a good idea, they will begin to like to concept and to use this type of purchase in the future.

4. CONCLUSION

During the pandemic, the country witnessed unexpected and enormous e-commerce growth, exclusively for online grocery shopping. This study is among the first of its kind in providing empirical evidence regarding the effects of TAM based constructs and website trust on attitude and behavioral intention among young online food shoppers in the country during COVID-19 pandemic. Facing the uncertainty of the duration of the pandemic and the uncertainty of how the behavior and habits of consumers obtained/gained during pandemic will be/change afterwards, this model developed and validated in our study can serve as a framework for evaluating online food shopping in other research contexts.

This research provides relevant theoretical and practical implications. From a theoretical point of view, our study contributes to enrich the literature on the consumer intention to adopt online food purchasing demonstrating the importance of defined determinants and their relationships. The results of this study will serve as a solid base and after pandemic, in order to explore this phenomenon and give insights whether online food purchase behavior may vary in the future and in which direction. There is no doubt, that COVID-19 pandemic has forced world population to use and rely on online grocery service more than before. From managerial perspective, the practical implications refer to revealing the characteristics affecting the

decisions of young consumers that buy food via online shopping. Knowing how young consumers behave online is an important aspect for retailers and producers as well as marketers. These findings have important overall implications for key stakeholders, such as online food retailers, associations, and policy makers. Another practical implication is that online food sellers must endeavor to make their websites simple to use, easy to navigate, reliable, and secure Some of the evident changes in the e-commerce landscape in the country will likely be of a long-term nature, in light of the convenience of the new purchasing habits, time and money savings, comparison facilities, boosting the incentive of firms/retailers to capitalize on investments in new online sales channels The COVID-19 pandemic imposes a rethinking of online purchasing process and online consumers' behaviour especially in developing countries. The results of this study are adding practical value to this challenge. In other words, the research question for future attention is will there be a lasting impact on young consumers' grocery shopping preferences in the country i.e. will young consumers continue to make use of online grocery services after pandemic.

5. REFERENCES

Alaimo, L.S., Fiore, M. and Galati, A. (2020), "How the COVID-19 pandemic is changing online food shopping human behaviour in Italy", *Sustainability,* Vol. 12 No. 22, p.9594.

Bauerová, R. and Klepek, M. (2018), "Technology acceptance as a determinant of online grocery shopping adoption", *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, Vol. 66 No. 3, pp.737-746.

Choe, J.Y., Kim, J.J. and Hwang, J. (2021), "Innovative marketing strategies for the successful construction of drone food delivery services: Merging TAM with TPB" *Journal of Travel & Tourism Marketing*, Vol. 38 No.1, pp.16-30.

Davis, F.D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology" *MIS quarterly*, Vol. 13 No. 3, pp.319-340.

Dvorak, J., Komarkova, L. and Stehlik, L. (2021), "The effect of the COVID-19 crisis on the perception of digitization in the purchasing process: customers and retailers perspective", *Journal of Entrepreneurship in Emerging Economies*. https://doi.org/10.1108/JEEE-07-2020-0260

Field, A. (2005), *Discovering statistics using SPSS* (2nd ed.). Thousand Oaks, CA, US: Sage Publications, Inc.

Global Online Food Delivery Market Report (2021), available at https://www.goldsteinresearch.com/report/global-online-food-delivery-market, (accessed August 2021)

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E. and Tatham, R. L. (2006), *Multivariate data analysis* (Vol. 6), Upper Saddle River, NJ: Pearson Prentice Hall.

Hong, C., Choi, H., Choi, E. and Joung, H. (2021), "Factors Affecting Customer Intention To Use Online Food Delivery Services Before And During The COVID-19 Pandemic", *Journal of Hospitality and Tourism Management,* Vol.48, pp.509-518.

Lai, P.C. (2017), "The literature review of technology adoption models and theories for the novelty technology" *JISTEM-Journal of Information Systems and Technology Management*, Vol. 14 No. 1, pp.21-38.

Lee, E.Y., Lee, S.B. and Jeon, Y.J.J. (2017), "Factors influencing the behavioral intention to use food delivery apps", *Social Behavior and Personality: An International Journal*, Vol. 45 No. 9, pp.1461-1473.

Li, S. (2021), "How Does COVID-19 Speed the Digital Transformation of Business Processes and Customer Experiences?", *Review of Business*, Vol. 41 No. 1, pp.1-14.

Macías-Rendón, W., Rodríguez-Morales, K. and Barriga-Medina, H.R. (2021), "COVID-19 lockdown and the satisfaction with online food delivery providers", *Estudios Gerenciales*, Vol. 37 No. 159, pp. 200-209.
Mehrolia, S., Alargasamy, S., Soalaikutty, V.M. (2020), "Customer Response to Online food Delivery Services during COVOD-19 outbreak Using Binary Logistic Regression", *International Journal of Consumer Studies*, Vol. 45 No. 3. DOI: 10.1111/ijcs.12630
Nguyen, T.T.H., Nguyen, N., Nguyen, T.B.L., Phan, T.T.H., Bui, L.P. and Moon, H.C. (2019), "Investigating consumer attitude and intention towards online food purchasing in an emerging economy: An extended TAM approach", *Foods*, Vol. 8 No. 11, p. 576.
OECD (2020), 'E-commerce in the time of COVID-19' available at https://www.oecd.org/coronavirus/policy-responses/e-commerce-in-the-time-of-covid-19-3a2b78e8/, (accessed August 2021).
Pal, D. Funilkul,S. Eamsinvattana, W. and Siyal, S. (2021), "Using online food delivery applications during the COVID-19 lockdown period: What drives University Students' satisfaction and loyalty?", *Journal of Foodservice Business Research*, DOI: 10.1080/15378020.2021.1964419
Prasetyo, Y.T. et al. (2021), "Factors Affecting Customer Satisfaction and Loyalty in Online Food Delivery Service during the COVID-19 Pandemic: It's Relation with Open Innovation", *Journal of Open Innovation: Technology, Market, and Complexity*, Vol. 7 No. 1, pp.76.
Preetha, S. and Iswarya, S. (2019), "Factors influencing the intension to use food online order and delivery app via platforms-using TAM (Technology Acceptance Model)", *International Journal of Recent Technology and Engineering*, Vol. 7 No. 65, pp. 1141-1147.
Song, H., Ruan, W.J. and Jeon, Y.J.J. (2021), "An integrated approach to the purchase decision making process of food-delivery apps: Focusing on the TAM and AIDA models", *International Journal of Hospitality Management*, Vol. 95, p.102943.
Statista (2021). "Online food delivery", available at https://www.statista.com (Accessed August 2021).
Troise, C., O'Driscoll, A., Tani, M. and Prisco, A. (2021), "Online food delivery services and behavioural intention – a test of an integrated TAM and TPB framework", *British Food Journal*, Vol. 123 No. 2, pp. 664-683. https://doi.org/10.1108/BFJ-05-2020-0418
Vaska, S., Massaro, M., Bagarotto, E.M. and Dal Mas, F. (2021), "The digital transformation of business model innovation: A structured literature review", *Frontiers in Psychology*, Vol. 11, p. 3557.
Venkatesh, V. and Davis, F. (2000), "A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies", *Management Science,* Vol. 46 No. 2 pp. 186-204.
Zhao, Y. and Bacao, F. (2020), "What factors determining customer continuingly using food delivery apps during 2019 novel coronavirus pandemic period?", *International Journal of Hospitality Management*, Vol. 91, p. 102683.

DOES SOCIAL CAPITAL FOCUS DETERMINE USERS' INTENTIONS TO LIKE, COMMENT AND SHARE LIFESTYLE BRAND-RELATED CONTENT ON SOCIAL MEDIA?

Anita Ciunova-Shuleska
Professor at Faculty of Economics - Skopje
anita@eccf.ukim.edu.mk

Nikolina Palamidovska-Sterjadovska
Professor at Faculty of Economics - Skopje
nikolina.palamidovska-sterjadovska@eccf.ukim.edu.mk

Irena Bogoevska-Gavrilova
Assistant at Faculty of Economics - Skopje
irena.bogoevska.gavrilova@eccf.ukim.edu.mk

ABSTRACT
The purpose of this research is to analyze the differences in users' intentions to like, comment and share lifestyle brand-related content on social media based on the social capital focus. In this paper, social capital is conceptualized as a positive outcome of users' interaction on social media, focusing on bonding and bridging dimensions of social capital. However, in order to examine the differences in intentions to like, comment and share between social media users with bridging and bonding focus, social capital is analyzed as a cause of social media engagement, i.e. users' contribution in terms of liking, commenting and sharing brand-related content on social media. A survey with social media users was carried out, using questionnaires as a method of data collection. A data set of 415 effective responses is collected and ANOVA test was used. The respondents were divided into two groups: social media users with bridging focus and social media users with bonding focus. ANOVA test revealed significant differences in intention to contribute to life-style brand-related content among the social media users with different level of social capital focus. Namely, the results indicated existence of significant differences in intention to like, intention to share and intention to comment lifestyle brand-related content depending on the social media users' social capital focus. Social media users with bridging focus showed stronger intentions to like, share and comment life-style brand-related content comparing to social media users with bonding focus. The findings of this research study may help social media marketing managers to successfully design and implement effective life-style brand-related content depending on the social capital focus of the users.

Keywords*: social media, like, comment, share, life style content, social capital, intentions*

JEL classification*:* M31

http://hdl.handle.net/20.500.12188/15923
http://doi.org/10.47063/EBTSF.2021.0011

CORRELATION OF TOTAL GDP AND NUMBER OF SMALL AND MEDIUM ENTERPRISES IN THE EU-28

Mirjana Štaka
Faculty of Economics Banja Luka
mirjana.staka@gmail.com

ABSTRACT
Micro, small and medium enterprises play a major role in the country's economic growth and development. The connection and correlation of GDP and the number of small and medium-sized companies represents a key not only economic but also social role of EU countries. This paper seeks to explore small and medium enterprises as an important role in economic growth and development. Micro, small and medium enterprises play a very important role in the economic development of the country, which is the reason for many studies and analyzes. In addition to contributing to gross domestic product creation, they also play a key social role as they reduce unemployment.
The aim of this paper is to assess the relationship between the components of gross domestic product (GDP) and the development of small and medium enterprises (SMEs) in the EU-28 in the years 2009-2019. To achieve this goal, we reviewed the literature, presented statistical data that confirm the importance of these companies in economic development, such as: indicator of entrepreneurship (calculated as the number of SME companies per 1000 inhabitants), participation of SMEs in creating added value. We have presented this data for selected EU countries.
Material and methods of work will be performed statistical analysis of data collected for SMEs in the EU and thus enable verification of the hypothesis set in the paper. Secondary data downloaded from the Eurostat site will be used. Based on the downloaded data and the application of a simple regression model, a universal and original model will be presented. Before presenting the model, a correlation will be made in order to present the comprehensiveness of the model. The model will be presented in the form of a function, which will have the value of parameters on the basis of which the influence of independent variables on dependent ones will be determined.
The results and conclusions are presented at the end of the paper. The results of the research confirm the theoretical significance and role of small and medium enterprises, as well as the need for their internalization and growth into global market leaders. If the unemployment rate increases by 1 unit (if one person loses his job) in the EU, it will cause a decrease in total domestic value (GDP) by 0.509 units. Every new unemployed worker will cost the EU so much unproduced output and new added value. Assuming that there is no unemployment in the EU, ie that the rate is equal to 0, the EU would produce a gross domestic value of 16,135 euros (note: only the impact and the relationship between the unemployment rate and GDP is taken into account here). Thus, it is clear how much costs and effects unemployment has on the gross domestic product and economic policy of EU countries.

Keywords*: GDP, development, small companies, growth, EU*

JEL classification: *E01, M13*

http://hdl.handle.net/20.500.12188/15924
http://doi.org/10.47063/EBTSF.2021.0012

1. INTRODUCTION

The role of small and medium enterprises (SMEs) in the national economy cannot be underestimated. These companies have received increasing attention in recent years, in part due to growing frustration with the results of development strategies focused on capital-intensive large-scale industrial plants. The impact of SMEs is felt in the following ways: greater use of domestic raw materials, new jobs, encouraging rural development, entrepreneurship development, mobilization of local savings, ensuring regional balance by more even expansion of investments, providing ways for self-employment and training opportunities for managers and semi-skilled workers. The vast majority of developed and developing countries rely on the dynamism, resourcefulness and task of small and medium-sized enterprises to start and maintain the process of economic growth. In the overall economic development, small and medium enterprises play a crucial role (Osborne, 2010). Small and medium-sized enterprises are committed, above all, to withstanding competition and entrepreneurship and therefore to have external benefits for the economy through broader productivity growth. At this level, the perspectives are focused on government support and involvement in reaping the social benefits of countries with greater completion and entrepreneurship. Second, SME advocates support the frequent claims that SMEs are generally more productive than large firms, but the financial market and other institutional improvements, direct government financial support to SMEs can stimulate economic growth and development. Some have argued that the expansion of small and medium-sized enterprises encourages employment more than the large growth of firms. Small and medium enterprises play a crucial role in the economic development of many countries. Business globalization is not a "short-term event" but a "continuous process" with the help of which companies gain experience, get to know the local market, and adjust the intensity of internationalization of their business (Đorđević, 2016). The research problem addresses a key question: Does the number of SMEs have an impact on the GDP of the EU-28? In order to successfully monitor the development path of small and medium enterprises, it is necessary to monitor their performance as factors that determine whether small enterprises will grow into global ones. Labor hypothesis reads H0: There is a significant correlation between the number of small enterprises and the total GDP of the EU-28. Alternative Hypothesis H1: There is a significant correlation between the number of medium-sized enterprises and GDP in EU countries. The time period of the analysis is from 2009 - 2019. adjust and adjust the intensity of internationalization of their business (Đorđević, D. 2016). The research problem addresses a key question: Does the number of SMEs have an impact on the GDP of the EU-28? In order to successfully monitor the development path of small and medium enterprises, it is necessary to monitor their performance as factors that determine whether small enterprises will grow into global ones.

Hypothesis of the work is H0: There is a significant correlation between the number of small enterprises and the total GDP of the EU-28.

Alternative Hypothesis H1: There is a significant correlation between the number of medium-sized enterprises and GDP in EU countries.

The time period of the analysis is from 2009 - 2019. adjust and adjust the intensity of internationalization of their business (Đorđević, D. 2016). The research problem addresses a key question: Does the number of SMEs have an impact on the GDP of the EU-28? In order to successfully monitor the development path of small and medium enterprises, it is necessary to monitor their performance as factors that determine whether small enterprises will grow into global ones. Hypothesis of the work is H0: There is a significant correlation between the number

of small enterprises and the total GDP of the EU-28. Alternative Hypothesis H1: There is a significant correlation between the number of medium-sized enterprises and GDP in EU countries. The time period of the analysis is from 2009 - 2019. Does the number of SMEs have an impact on the GDP of the EU-28? In order to successfully monitor the development path of small and medium enterprises, it is necessary to monitor their performance as factors that determine whether small enterprises will grow into global ones. Labor hypothesis reads H0: There is a significant correlation between the number of small enterprises and the total GDP of the EU-28. Alternative Hypothesis H1: There is a significant correlation between the number of medium-sized enterprises and GDP in EU countries. The time period of the analysis is from 2009 - 2019. Does the number of SMEs have an impact on the GDP of the EU-28? In order to successfully monitor the development path of small and medium enterprises, it is necessary to monitor their performance as factors that determine whether small enterprises will grow into global ones. Labor hypothesis reads H0: There is a significant correlation between the number of small enterprises and the total GDP of the EU-28. Alternative Hypothesis H1: There is a significant correlation between the number of medium-sized enterprises and GDP in EU countries. The time period of the analysis is from 2009 - 2019.

2. PREVIOUS RESEARCH

The concept and definition of small and medium-sized companies differs from one country to another due to the culture of that country, economic opportunities, the availability of labor in the market and other factors. There are many scientific publications concerning SMEs. Most SMEs are defined or categorized based on the number of employees, the total annual income of the company or the capital invested in the manufacturing sector (Singh, 2010). When it comes to the global framework, it is a widely used term that includes exports / imports, branches, joint ventures, cooperation, subsidiaries (Anderson, 2007). Micro, small and medium-sized companies that exist in the EU-28 countries have a positive impact on overall GDP. EU programs support the development of small and medium-sized enterprises in Europe, which is proof of the importance of SMEs for many economies. there is a growing awareness of their role in the development of a global, regional economy. Numerous authors have published their research on this issue, for example empirical research has confirmed that SMEs, especially those that invest in research and development, tend to have higher productivity and growth intensities than large companies. Several mechanisms explain the impact and importance of why micro, small and medium-sized enterprises play a key role in economic development in EU countries. Especially because these companies in cooperation with large companies can be carriers of innovation and ultimate economic growth. These mechanisms are: knowledge transfer, decentralization, experimentation, competition (Petković, 2013). In developed countries, small businesses have good potential, they often cooperate with larger corporations and industries and strive for greater endeavors, where SMEs are identified as companies characterized by their willingness to boldly innovate, and to take significant risks in their production and marketing strategies. Innovations in this sense reflect the essential readiness of SMEs to move away from existing technologies or practices and to approach new ventures that go beyond the current state of development in certain areas (Sorak, 2017). This implies the willingness of SMEs to creatively initiate and support new ideas and experiments by creating new processes that can result in new quality services and products, these markets. EU countries represent small and medium-sized companies as a driver of economic and social development thanks to the results of significant and exceptional contribution of these companies in increasing GDP, especially in the field of

employment and job creation. For this reason, SMEs represent 93% of all companies in the EU-28, ie 22.3 million jobs and business activities, generating 56.4% of value added, playing a significant role in employment, attracting 2/3 of employees in the business sector. During 2019, SME value added grew to a percentage of 4.1% in 2019 and 4.2% in 2020, while employment decreased from 1.6 in 2019 to 1.4% in 2020. (European Commission, 2019). Unstable business conditions directly or indirectly affect the competitiveness of these companies. These conditions include investment problems, expensive loans, problems in debt collection, outdated technologies, high levels of corruption and bureaucracy and other political and social problems. Performance is an indispensable guide for any company that analyzes its level of success, both in the domestic and global market. Assessing their performance can follow the development path of small businesses on the path to internationalization and globalization. At the beginning of the XXI century, due to the dynamic development of technology and homogenization of consumers, national markets became narrow, so a large number of companies were forced to expand their business beyond them. The task was to find new markets that became a significant factor in their further growth and development. Competition and tighter business conditions should bring small businesses to the global market, as the only valid confirmation of their efficiency. Accelerated globalization processes, economic and political integrations, development of modern technology and new ways of communication have opened the possibility of development of small and medium enterprises (SMEs), which represent an integral sector of all economies as well as the possibility of their internationalization (Škrtić, 2009). Knowledge of how the corporate environment affects the growth and business of a company creates an opportunity for success in the markets. Therefore, the aim of the article is to assess the relationship between the components of gross domestic product (GDP) and the development of small and medium enterprises, hereinafter (SMEs). The conclusion is that the smaller the company, the stronger the connection. The national economy affects the development of SMEs. Its stability, transparency, continuity, provision of basic economic freedoms and rights are the main determinants of SME development. economic and political integrations, the development of modern technology and new ways of communication have opened the possibility of developing small and medium enterprises (SMEs), which represent an integral sector of all economies as well as the possibility of their internationalization (Škrtić, 2009). Knowledge of how the corporate environment affects the growth and business of a company creates an opportunity for success in the markets. Therefore, the aim of the article is to assess the relationship between the components of gross domestic product (GDP) and the development of small and medium enterprises, hereinafter (SMEs). The conclusion is that the smaller the company, the stronger the connection. The national economy affects the development of SMEs (Kingman, 1978). Its stability, transparency, continuity, provision of basic economic freedoms and rights are the main determinants of SME development. economic and political integrations, the development of modern technology and new ways of communication have opened the possibility of developing small and medium enterprises (SMEs), which represent an integral sector of all economies as well as the possibility of their internationalization (Škrtić, 2009). Therefore, the aim of the article is to assess the relationship between the components of gross domestic product (GDP) and the development of small and medium enterprises, hereinafter (SMEs) (Cherington, 2005). The conclusion is that the smaller the company, the stronger the connection. The national economy affects the development of SMEs. Its stability, transparency, continuity, provision of basic economic freedoms and rights are the main determinants of SME development.

3. METHODOLOGY

The survey will use secondary data downloaded from the Eurostat website. based on the downloaded data and the application of a simple regression model, a universal and original model will be presented. before presenting the model, a correlation will be made in order to present the comprehensiveness of the model. The model will be presented in the form of a function, which will have the value of parameters on the basis of which the influence of independent variables on dependent ones will be determined. The subject of this paper is the analysis of the impact of small and medium companies on GDP growth. Taking these indicators into account, they try to find a connection between small and medium-sized companies and GDP. Examining the impact and relationship between the number of SMEs, on the one hand, and economic strength, on the other, can be demonstrated using a single linear regression model. for this purpose, as a dependent variable (regressive, explained, exogenous) representing GDP, while dependent variables (regressive, explained, explanatory, endogenous) representing the number of small and medium-sized companies in the EU market. The paper will present the correlation, regression, determination, F test on the significance (significance) of the model.

$$Y_i = \beta_0 + \beta_1 * X_{1i} + \varepsilon_i^1 \quad (i=1,.n)$$

βo, β1 = regression parameters to be evaluated Ɛi = stochastic term (random deviation, error or residual) n = size, number of base sets to evaluate a single linear regression model means to find the value of the parameters βo and β1, ie to find the estimated value of the model is:

$$\hat{Y}_i = \hat{b}_0 + \hat{b}_1 X_{1i}$$

The linear dependence can be estimated on the basis of the model:

$$\hat{Y}_i = b_0 + b_1 X_{1i}, \quad i=1,...,11$$

The model takes the numbers of small and medium-sized companies as an independent variable and examines its impact on GDP trends. The result of the regression analysis shows the degree of influence of small and medium-sized enterprises on GDP growth. Regression analysis is a standard statistical procedure. This method is simple and reliable (for example, mutually excludes positive and negative errors). For the purposes and for the purpose of calculation, the average linear correlation is the best direction of presentation of the observed variables. Pearson's correlation coefficient for private consumption according to the degree of strength is 0.942, which can be characterized as a very strong correlation. It also shows that there is a linear connection and a continuous normal distribution. The result of the regression analysis shows the degree of influence of small and medium-sized enterprises on GDP growth. Regression analysis is a standard statistical procedure. This method is simple and reliable (for example, it mutually excludes positive and negative errors). For the purposes and for the purpose of calculation, the average linear correlation is the best direction of presentation of the observed variables. Pearson's correlation coefficient for private consumption according to the degree of strength is 0.942, which can be characterized as a very strong correlation. It also shows that there is a linear

[1] The single linear regression model has a deterministic and stochastic segment. the deterministic segment refers to the average influence of the independent (x) and dependent (y) variables, the parameter β0 is the free term and the β1 slope coefficient

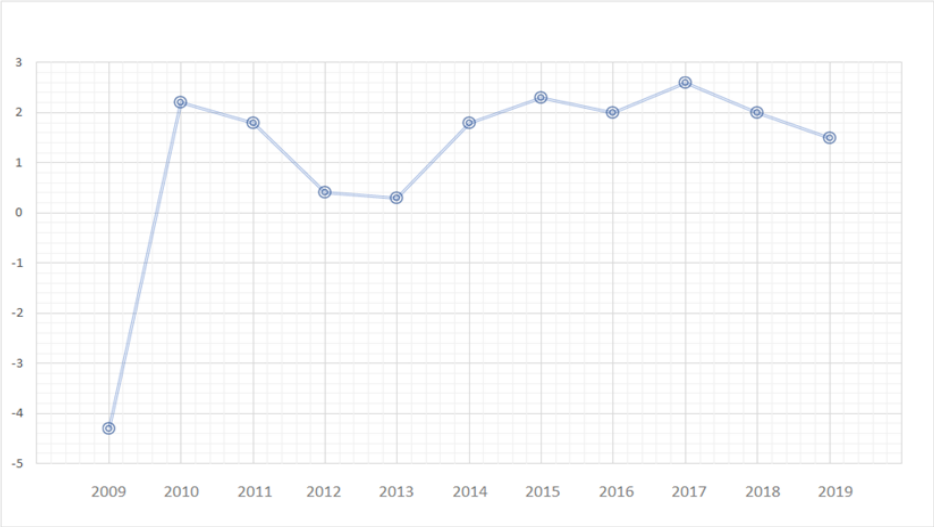
connection and a continuous normal distribution. The result of the regression analysis shows the degree of influence of small and medium-sized enterprises on GDP growth. Regression analysis is a standard statistical procedure. This method is simple and reliable (for example, it mutually excludes positive and negative errors). For the purposes and for the purpose of calculation, the average linear correlation is the best direction of presentation of the observed variables. Pearson's correlation coefficient for private consumption according to the degree of strength is 0.942, which can be characterized as a very strong correlation. It also shows that there is a linear connection and a continuous normal distribution. For the purposes and for the purpose of calculation, the average linear correlation is the best direction of presentation of the observed variables. Pearson's correlation coefficient for private consumption according to the degree of strength is 0.942, which can be characterized as a very strong correlation. It also shows that there is a linear connection and a continuous normal distribution. For the purposes and for the purpose of calculation, the average linear correlation is the best direction of presentation of the observed variables. Pearson's correlation coefficient for private consumption according to the degree of strength is 0.942, which can be characterized as a very strong correlation. It also shows that there is a linear connection and a continuous normal distribution.

4. SMALL AND MEDIUM ENTERPRISES AND TOTAL GDP OF EU-28 COUNTRIES: STATISTICAL ANALYSIS

4.1 Trend analysis GDP

Gross domestic product (GDP) is most often used as a measure of the total size of the economy, while derived indicators, such as GDP per capita (per capita) - for example, in euros. Furthermore, useful information can be obtained from the development of certain components of GDP and related indicators, such as indicators of economic product, imports and exports, domestic (private and public) consumption or investment, as well as data on the distribution of income and savings. on the main drivers of economic activity, which can be used to develop, monitor and evaluate specific EU policies.

Figure 1: Real GDP growth for EU countries 2009-2019.



Source: Eurostat

The aftermath of the global economic crisis in 2009 recorded and left an impact on EU countries and GDP. Apart from the fall in GDP and the low growth rate, the tendency of the GDP structure is also unfavorable. The graph that follows shows that the GDP of EU countries in percentage changes from a decline of -4.3% in 2009 under the influence of the global economic crisis to the highest growth of 2.6% in 2017. The negative trend of the amplitude of GDP continued in 2012 and 2013. After which it reaches a growth of 2.3 in 2015 and a significant 2.6% in 2017. 6% in 2017. The negative trend of the amplitude of GDP continued in 2012 and 2013. After which it reaches a growth of 2.3 in 2015 and a significant 2.6% in 2017. 6% in 2017. The negative trend in the amplitude of GDP continued in 2012 and 2013. After which it reaches a growth of 2.3 in 2015 and a significant 2.6% in 2017.

4.2 Analysis of EU small and medium enterprises

According to previous research, there is a link between the number of small and medium-sized enterprises and GDP. Small and medium-sized companies have a significant impact on the business economy. The number of small and medium-sized companies is presented in Table 1. More precisely, the overview of micro, small and medium-sized companies in the EU is presented. Micro-companies represent more than a third of all companies and businesses operating in the EU market. Small and medium-sized companies represent more than 50% of the total number of companies. (World Bank Finance, 2020).

Table 1: Number of small and medium enterprises and GDP in the period from 2009 to 2019 in the EU-28 countries

YEARS	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	SUMARY
SMALL ENTERPRISE	19.1	19.2	20.1	19.6	19.8	21.3	22.7	22.3	22.8	23.3	24	28.1	262.3
MEDIUM ENTERPRISE	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.8	1.9	17.7
BDP	10	10	11	11	11	11	12	12	12	13	13	13	139

Source: Eurostat

4.3 Regression analysis of GDP and SMEs

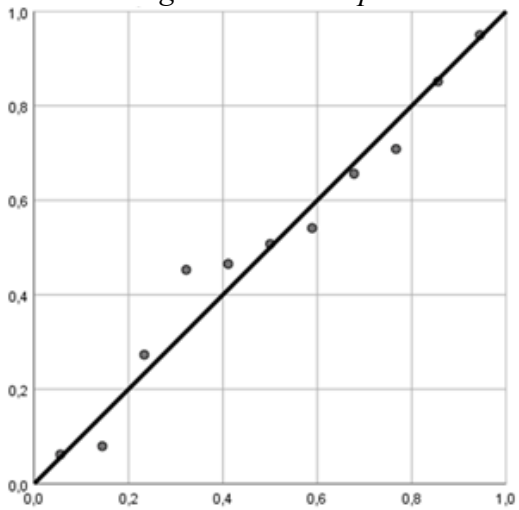
In this part of the paper, we will present the connection and connection between SMEs and GDP. From the analysis of the regression model, we obtained that b0 = 5.154; b1 = -0.566 b2 = 5.187 and therefore the regression equation reads: $\hat{Y}$ = 5.154-0.566X1 + 5.187X2 From the estimated single linear regression model we conclude the following: Relationship between the number of small and medium enterprises and GDP If the number of micro and small enterprises increases by only one a new company (employing 2 to 49 workers) this will lead to a fall in GDP per capita of 0.566 billion euros. If the number of medium-sized companies increases for only one new company (which employs from 50 to 249 workers), that will lead to an increase in GDP per capita by 5.187 billion euros. Assuming there are no small and medium-sized enterprises in the EU, that is, if the rate were equal to 0, GDP would amount to 5.154 billion euros (note: only the impact and relationship between the number of small and medium-sized enterprises and EU GDP are taken into account here). Thus, the impact of small and medium-sized enterprises on EU GDP and EU economic policy is clearly visible. With this linear regression line, the hypothesis is confirmed in an economic-mathematical way.

Table 2: Results of the single regression analysis - small and medium enterprises and EU

Variables	Coefficient	Std. error
b_o	5,154	0,42209
b_1	-0,566	
b_2	5,187	
R^2	0,876	
$\bar{R}^2$	0,848	
F^2	31,751	
F’	4,26	
Durbin-Watson	1,358	
Pearson	0,942	

Source: Author's calculation

Figure 2: Scatterplot



Source: Author's calculation

Ho: β1 = 0
H1: β2 ≠ 0
t = | (b1-β1) / Sb1 | = 5.184675305 t′ = 2.262
t′ <t

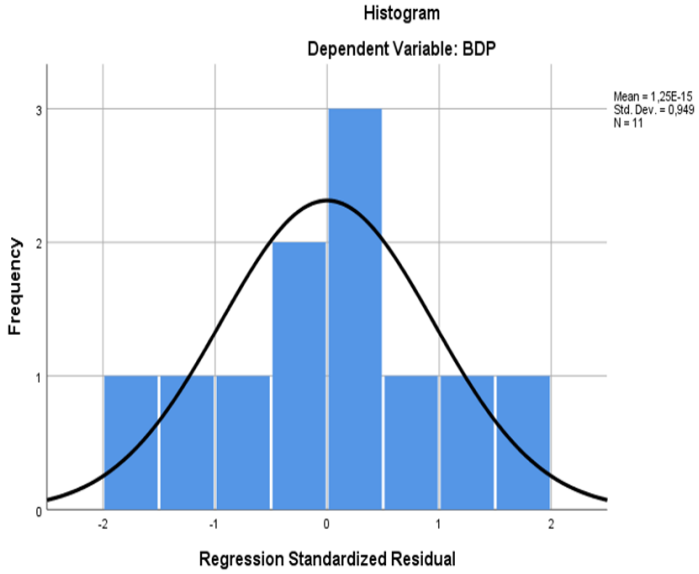
With a risk of 5% and a probability of 95%, the null hypothesis Ho is rejected. That is, the claim that the parameter β1 is statistically significant, i.e., the claim that the number of small enterprises affects the total GDP is not accepted.

Hypothesis H1 is accepted t = | (b1-β2) / Sb2 | = 1.8595 t′ = 2.262
t′> t

With a risk of 5% and a probability of 95%, hypothesis H1 is accepted. That is, the claim that the parameter β2 is statistically significant, i.e., the claim that the number of medium-sized enterprises affects the total GDP is accepted. Confidence interval b2 = t′ + Sb2≤ β2≤b2 + t′Sb2 2.68409≤ β2≤5.60909 With a risk of 5%, we claim that the parameter β2 will range from 2.68409 to 5.60909 units. F test Using the set hypotheses and F test, we will evaluate the statistical significance of the model Ho: R2 = 0 H1: R2 ≠ 0 F2 = 31,751 With a risk of 5%, ie a probability of 95% and the degree of freedom (nk-1 = 9), using tabular values we get the value:

F′ = 4.26 Based on the parameters we calculated 4.26 <31.751, H0 hypothesis is rejected, and H1 is accepted because F′.
Based on the parameters we calculated 4.26 <31,751, H0 hypothesis is rejected, and H1 is accepted because F′<F2 and the model is statistically significant or significant, and H1 hypothesis is confirmed - There is a significant impact of the number of medium-sized companies on total EU GDP.
The F test is 31.751, while the F′ is 4.26, so we can say that the evaluated model is significant. This also means accepting the hypothesis from the paper on the statistically significant simultaneous impact of EU SME growth on GDP. The Durbin-Watson value is less than 2 and is 1.358, indicating a positive serial autocorrelation between residuals.
The coefficient of determination is R2 = 0.848 * 100 is 84.88%, which means that the variation of changes in the dependent variable, i.e. GDP, is explained by changes in independent variables, ie small and medium enterprises, and the remaining 100% is the influence of other unused variables and errors. work. That is, the dependence of GDP on the number of EU SMEs is 88.88%. The total GDP is affected by the number of small and medium enterprises 88.88%, the rest are other factors.

Figure 3: Histogram



Source: Author's calculation

From the histogram we see that the standard deviation is 0.949 and that the graph of the normal distribution or curve has the so-called bell shape. The scatter plot shows a direct positive linear relationship between EU GDP and SMEs by economic-mathematical methods of estimating the single regression model.
According to the scatterplot, there is not much dispersion (deviation) between the points. The points are concentrated around the theoretical trend line, which means that the empirical data show the property of a linear trend. Total GDP and the number of SMEs in EU countries are in a direct correlation, increasing the number of SMEs leads to an increase in total GDP and from this it can be concluded that the correlation coefficient is positive.

5. CONCLUSION

Small and medium enterprises are becoming the main carrier of economic development of any economy. The business environment is developing in accordance with the needs of small and medium enterprises. When adopting economic policy measures, the creators observe how these measures will affect small and medium enterprises. Observing the micro, small and medium enterprises of the EU countries, the number of newly established enterprises is constantly growing. The main goal of the paper is a two - sided prism of usefulness of this research: scientific and pragmatic. The results of the research confirm the theoretical significance and role of small and medium enterprises, as well as the need for their internalization and growth into global market leaders. Theoretical aspects of performance measurement, comparison, classification and monitoring of small and medium enterprises belong to a significant domain of business economics, which is econometrically confirmed in the paper. The practical contribution of this research is in the importance of encouraging SMEs in EU countries through internalization and globalization of business, given that changes in the environment have a much greater impact on small and medium-sized enterprises than large ones. The purpose of this research is to test the hypothesis of the correlation of macroeconomic GDP indicators on SMEs. The share of SMEs and their contribution to the total EU GDP of the EU-28 in the period from 2009 to 2019 is analyzed. When presenting the analysis, we must take into account that the initial year of the analysis was 2009 and the consequences of the economic crisis were also felt in the EU countries, which means that it also had a significant impact on macroeconomic indicators.

Summarizing the empirical results of correlation and regression analysis, we can confirm the main hypothesis that macroeconomic indicators are statistically significant and have a strong correlation with SMEs. Pearson's correlation coefficient for private consumption according to the degree of strength 0.94, which can be characterized as a very strong correlation. It also shows that there is a linear connection and a continuous normal distribution. The histogram shows that the standard deviation is 0.949 and that the graph of the normal distribution or curve has the so-called. bell shape. The scatter diagram shows a direct positive linear relationship between total GDP and EU SMEs. The contribution of SMEs is up to 40% of national income in EU economies. These numbers are much higher and are increasing every year. The World Bank estimates that by 2030, 600 million jobs will be needed to absorb the growing global workforce and needs, making SME development a high priority for many governments around the world, which were concluded in 2019 before the new situation caused by COVID-19. Almost 10 million small and medium-sized companies produce 23% of GDP, which represents 80% of all jobs in the industrial sector and 25% of the total labor force, and thus SMEs play a key role in the total GDP of EU countries. Many developed and developing economies have realized the value of small companies. This is because small companies are characterized by dynamism, innovation, efficiency, and their small size enables a faster decision-making process.

REFERENCES

Anderson, D. (2007), *Statistics for Business and Economics*, 10th Edition, London, Thomas Rennie. p. 34.

Cherington, J. O., Hubbard, E. D., Luthy, D.H. (2005.) Cost Accounting: A Managerial Approach, West Group, Chicago, str. 26.

Djordjevic, D. (2016). Development Growth as a Strategic Goal Horizons series A, Social Sciences and Humanities, vol. 20. Ohrid: Faculty of Tourism and Hospitality, p. 236.

European Commission (2019). Annual Report on European SMEs 2018/2019, SMEs start hiring again
Petkovic, S. and Berberovic, S. (2013). Economics and management of small and medium enterprises - principles and policies, Banja Luka: Faculty of Economics, University of Banja Luka.
Hagan, J. F. C. Kingman (1978). *Curve Fitting and Optimal Design for Prediction", Journal of the Royal Statistical Society*. Series B (Methodological),
Osborne, M. (2010). Bayesian Gaussian Processes for Sequential Prediction, Optimisation and Quadrature, University of Oxford
Singh, G. (2010). Issues faced by SMEs in the Internationalization process. International Journal of Emerging Markets, Vol. 5, No. 2, pp.153-181
Škrtić, M. and Mikić, M. (2009). Internationalization of small and medium enterprises, Scientific journal. Economic review. p. 290-311
Sorak, M. (2017). Effects of establishing entrepreneurial orientation on the performance of small and medium enterprises., Faculty of Economics, Banja Luka.
World Development Indicators & Global Development Finance. World Bank. Avaiable at http://databank.worldbank.org/ddp/home.do accessed 08.03.2020.
https://ec.europa.eu/eurostat/statistics accessed 11.02.2020.
https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_gdp accessed 18.03.2020.

APPENDIX

Table 1: Worksheet required to determine the estimated multiple linear regression model

	X_1	X_2	Y	Y^2	X_1^2	X_1X_2	X_2^2	X_1Y	X_2Y
2009	19.1	1.2	10	100	364.81	22.92	1.44	191	12
2010	19.2	1.2	10	100	368.64	23.04	1.44	192	12
2011	20.1	1.3	11	121	404.01	26.13	1.69	221.1	14.3
2012	19.6	1.3	11	121	384.16	25.48	1.69	215.6	14.3
2013	19.8	1.4	11	121	392.04	27.72	1.96	217.8	15.4
2014	21.3	1.4	11	121	453.69	29.82	1.96	234.3	15.4
2015	22.7	1.5	12	144	515.29	34.05	2.25	272.4	18
2016	22.3	1.5	12	144	497.29	33.45	2.25	267.6	18
2017	22.8	1.6	12	144	519.84	36.48	2.56	273.6	19.2
2018	23.3	1.6	13	169	542.89	37.28	2.56	302.9	20.8
2019	24	1.8	13	169	576	43.2	3.24	312	23.4
2020	28.1	1.9	13	169	789.61	53.39	3.61	365.3	24.7
SUMARY	262.3	17.7	139	1623	5808.27	392.96		3065.6	207.5

Source: Author's calculation

THE FUTURE OF BUSINESS IN SOCIAL ECONOMY OF THE WESTERN BALKAN COUNTRIES

Gentiana Gega
University "Haxhi Zeka" Peja, Kosovo
Ss. Cyril and Methodius University in Skopje
gentiana.gega@unhz.eu

ABSTRACT
The most important innovation for Western Balkan countries is combining social, labor and economic development policies, together with sustainable development focus on increasing and sustaining the welfare and wellbeing of the people in this countries. The purposes of this study is to investigate current social economy in the Western Balkans countries (Albania, Kosovo, North Macedonia, Serbia, Montenegro and Bosnia and Herzegovina). To give an answer to the research question whether the socio-economic situation in Western Balkan countries is improving, we have firstly revise the literature to find out what different authors have found in recent researches concerning this area and the methods, models used in collecting, processing and analyzing data. The processing of the data of the above-mentioned has been done by the STATA software program, specifically using Linear Regression, Fixed Effect, Random Effect, Hausman Taylor Regression and Correlation & Covariance. Based on the empirical results of this study, we conclude that the R Square designation coefficient indicating a higher relationship between dependent variable (Social Development) and independent variables (economic growth, education, climate change, environment, health, poverty, social protection and labor). Economic growth, education, climate change, social protection and labor, environment, health and poverty force explain and have an impact on increase/decrease the social development of the Western Balkan countries during for the period 2009-2019. This research paper highlights an empirical analysis based on real data, statistical reports of the World Bank of the Western Balkan Countries. Given that these results are evident, economic situation in Western Balkan countries have to improve with establishing social economy exactly in key area for the rapid grow of this countries.

Keywords: *Social economy, Business, Economic Growth.*

JEL classification: *B55, M2, O4*

1. INTRODUCTION

This paper is focused on the future of business in social economy of the Western Balkan Countries. The purposes of this study is to investigate current social economy in the Western Balkans countries (Albania, Kosovo, North Macedonia, Serbia, Montenegro and Bosnia and Herzegovina). Special emphasis in this paper is placed on the social economy in the countries of the Western Balkans. All Balkan countries face the same problems: insufficient growth, unemployment, low standard of living, lack of various social services, etc., so the Balkans also need social economy to reach its citizens, to identify their needs and to improve their well-being. This paper is important for all those who want to learn more about social economics especially in the contribution that that she brings to: contribution to achieving rapid growth, the contribution to better social services, the contribution to better governance, the contribution to exclusion social, contribution to the goal of employment, contribution to social inclusion and poverty alleviation, contribution to the goals of education, contribution to environmental goals,

http://hdl.handle.net/20.500.12188/15926
http://doi.org/10.47063/EBTSF.2021.0013

etc., the last four are also Europe's targets for 2020. The following factors will be investigated during this research: social development, economic growth, education, climate change, environment, health, poverty, social protection and labor.

Social Economy is both the agent and the instrument of inclusive and responsible growth in the UfM Region at varying degrees of progress that correspond to the heterogeneity of the Euro-Mediterranean region in terms of enabling environments and business cultures. The potential for job creation through Social Economy in the MENA Region and the Balkans remains to be largely unexplored in comparison to other regions, which presents an opportunity and poses question marks about the optimal path ahead in order to unleash the potential of a significant private sector player with more than 3.2 million enterprises and 15 million jobs (Social Economy Europe, 2019). The countries of the Western Balkans are currently facing unfavorable social situations, inadequate education, and poor health outcomes, including a number of micro efficiency issues in the context of low investment in the social sector (Matković, 2019). As far as the environment is concerned, the worst results of environmental performances among Western Balkan group are recorded in the case of Bosnia and Herzegovina. This country has seven indicators in the first priority level, one indicator in the second priority level, and no one indicator in the third priority level. In other words, it lags behind the Western Balkan group in even seven indicators, while exceeds the results of other countries in this group in only one indicator. That all Western Balkan countries and especially Bosnia and Herzegovina need to make a lot of efforts in a future development of its environmental performances (Radivojević *et al.,* 2018).

Although a very popular topic in developed European countries and beyond, there is a lack of research for developing countries such as the Western Balkans. Due to the lack of research regarding this topic we have encountered many difficulties during the preparation of this paper. The results of this paper will contribute to the strengthening of knowledge, data and information in the field of social economy. Furthermore, this study provides additional evidence regarding the social economy in the Balkans. The results of this study are important for social economy enterprises and organizations as they help them to priority people and communities over profit, to have inclusive and democratic governance, to reinvest most profits to pursue sustainable development goals, to create quality jobs for all, the provision of socially innovative service, to engage in recycling, reuse and repair of goods, to use the democratic decision-making process and the priority of people and labor on capital in the distribution of income, to guarantee opportunities equal, with a special focus on marginalized communities and minorities (providing services and training as well as creating employment opportunities for migrants, the homeless, Roma, people with disabilities, etc.), improving the care system health (child care, assistance for the elderly and people with disabilities, and not only).

The results of this research will support the idea of fostering the social economy in developing countries as a better opportunity to achieve a sustainable welfare for its citizens since in these countries, citizens even in the twenty-first century due to unemployment and poverty are being forced to leave their homeland to ensure a better welfare for themselves and their family. Also this study is important for the integration of the economies of the candidate countries as there will be an of the possibility on for establishing and fostering the social economy in Western Balkan countries, as a better way for the convergence of the EU standard.

In addition, the results of the study will help future researchers in the field of socio-economics and economic growth.

2. IMPORTANCE OF SOCIAL ECONOMY

Socio economic investigation is very important after that the European Union, Western Balkan and the rest of the world are experiencing disruptive technological, social and economic

changes. The emergence and progress of digitalization, blockchain and big data, or the global rise of inequalities and job insecurity, are trends quickly changing our world, bringing new opportunities but also new challenges, and urging us to debate about the future that we want to build collectively. Western Balkans needs to develop social economy to improve the well-being of its citizens and to be closer to the European Union. Europe needs the social economy to reach out to its citizens, detect their real needs and make them part of creating solutions to a number of challenges, such as unemployment or precarious work, social exclusion, discrimination and racism, climate change or the lack of social cohesion (Social Economy Europe, 2021). The common values of the social economy, such as the primacy of people and the social objective over capital, democratic and/or participatory governance, reinvestment of most of the benefits to ensure the long-term sustainability of the enterprise and the provision of services to their members and local communities, actively contribute to social cohesion and hence to an innovative, smart, sustainable and inclusive growth, in addition to the creation of quality employment in Europe (European Union, 2017).

Figure 1: Social Economy as a new model for the future of Western Balkan, Europe and the World.

(Source: Social Economy Europe)

2.1. The opportunity that the social economy brings as an indicator that promotes the implementation of Agenda 2030 and 17 the implementation goals

"There are new opportunities for social economy to use platforms based on cooperative economy. We need to give social economy resources – not only technology but also skills", said Nicolas Schmit, Commissioner for Jobs and Social Rights. There are many opportunities to this issue. Most importantly is awareness of and legislation protection of the health of people from pollution and other harmful activities of business and other organizations (Adams, 2006). In North America, Europe and the rest of the developed world, there are strong checks and programs of legislation in place to ensure that people's health and wellness is strongly protected. It is also about maintaining access to basic resources without compromising the quality of life. The biggest hot topic for many people right now is sustainable housing and how we can better build the homes we live in from sustainable material. The final element is education - encouraging people to participate in environmental sustainability and teaching them about the effects of environmental protection as well as warning of the dangers if we cannot achieve our goals.

The Sustainable Development Goals are a call for action by all countries – poor, rich and middle-income – to promote prosperity while protecting the planet. They recognize that ending poverty must go hand-in-hand with strategies that build economic growth and address a range

of social needs including education, health, social protection, and job opportunities, while tackling climate change and environmental protection (United Nations, 2019). The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (1. No poverty, 2. Zero Hunger, 3. Good health and well-being, 4. Quality education, 5. Gender Equality, 6. Clean water and sanitation, 7. Affordable and clean energy, 8. Decent work and economic growth, 9. Industry, innovation and infrastructure, 10. Reduced inequalities, 11. Make cities and human settlements inclusive, safe, resilient and sustainable, 12. Responsible consumption and production, 13. Climate action, 14. Life below water, 15. Life on land, 16. Peace, justice and strong institutions, 17. Partnerships for the goals), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests (United Nations, 2015).

The social economy emerges as an entrepreneurial and enterprise model for the future of Western Balkan, Europe and the World, a necessary alternative and a new opportunity for humanity. The social economy revolves around the values of primacy of people and the social objective over capital, democratic governance, solidarity and reinvestment of most of the profits/surplices to carry out sustainable development objectives (Gonzales, 2021).

2.2. Description of indicators for all variables

Social Development: Social development is the promotion of a sustainable society that is worthy of human dignity by empowering marginalized groups, women and men, to undertake their own development, to improve their social and economic position and to acquire their rightful place in society (Bilance, 1997). Social development is equality of social opportunities (Sen, 1995). Social development is the prioritization of human needs in a society.

Economic Growth: Economic growth is an increase in the production of economic goods and services, compared from one period of time to another. It can be measured in nominal or real (adjusted for inflation) terms. Traditionally, aggregate economic growth is measured in terms of gross national product (GNP) or gross domestic product (GDP), although alternative metrics are sometimes used. (Potters, 2021).

Education: Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, morals, beliefs, and habits. Education is both the act of teaching knowledge to others and the act of receiving knowledge from someone else. Education also refers to the knowledge received through schooling or instruction and to the institution of teaching as a whole. Education has a few other senses as a noun. Education can be thought of as the transmission of the values and accumulated knowledge of a society. In this sense, it is equivalent to what social scientists term socialization or enculturation (Thomas, 2021).

Climate Change: Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, such as through variations in the solar cycle. But since the 1800s, human activities have been the main driver of climate change, primarily due to burning fossil fuels like coal, oil and gas. Burning fossil fuels generates greenhouse gas emissions that act like a blanket wrapped around the Earth, trapping the sun's heat and raising temperatures. Examples of greenhouse gas emissions that are causing climate change include carbon dioxide and methane. These come from using gasoline for driving a car or coal for heating a building, for example. Clearing land and forests can also release carbon dioxide. Landfills for garbage are a major source of methane emissions. Energy, industry, transport, buildings, agriculture and land use are among the main emitters. (United Nations, 2021).

Environment: The environment is the totality of all the external conditions affecting the life, development and survival of an organism (UN, 1997). Environment includes the living and nonliving things that an organism interacts with, or has an effect on it. Living elements that an organism interacts with are known as biotic elements: animals, plants, etc., abiotic elements are non-living things which include air, water, sunlight etc. (OECD, 2021).
Healthy: The WHO defines health as a state of "complete physical, mental and social well-being and not merely the absence of disease or infirmity." The Centers for Disease Control and Prevention, along with a range of WHO partners, endorses this definition. Being healthy, in their view, excludes having any disease (WHO, 2019)
Poverty: Poverty is a state or condition in which a person or community lacks the financial resources and essentials for a minimum standard of living. Poverty means that the income level from employment is so low that basic human needs can't be met (James Chen, 2020).
Social Protection & Labor: Social protection & Labor help individuals and families, especially the poor and vulnerable, cope with crises and shocks, find jobs, improve productivity, invest in the health and education of their children, and protect the aging population. Social protection systems that are well-designed and implemented can powerfully shape countries, enhance human capital and productivity, reduce inequalities, build resilience and end inter-generational cycle of poverty (World Bank, 2021).

3. RESEARCH METHODOLOGY

For the realization of this paper is studied, researched and reflected mainly domestic and foreign literature, publications and data from public institutions and international organizations. The methodology used in the paper will be a combination of qualitative and quantitative method, using different socio-economic data for Western Balkan countries, as for countries of the European Union. The methods used in this paper are: Theoretical review method; Statistical Method (Qualitative and Quantitative); Comparative Method and Analysis of Collected Data.
To realize this research, the methodology consists in collection secondary data. The paper has been prepared using the analysis of secondary data, which are collected from the World Bank, and the variables being used include period of time 2009- 2019. As far as the econometric model is concerned, the main methods used for analysis are: Descriptive analysis, Correlation & Covariance, Linear Regression Random – Effects GLS Regression, Fixed – Effects Regression, Hausman – Taylor Regression, which are calculated through the STATA program. The main variables that are used are: social development (as a dependent variable) and economic growth, education, climate change, environment, health, poverty, social protection & labor (as independent variable).

4. EMPIRICAL ANALYSIS OF THE HYPOTHESIS AND STUDY FINDINGS

In this chapter we will present all the results of the research which have been carried out for the verification and the hypothesis presented. The purposes of this study is to investigate current social economy in the Western Balkans countries (Albania, Kosovo, North Macedonia, Montenegro and Bosnia and Herzegovina).

4.1. Econometric evaluation and hypothesis testing

The hypothesis of this study is:
Wakened social-economic situation in Western Balkan countries have to improve with establishing social economy exactly in key area for the rapid grow of this countries.
For the verification of this hypothesis is apply quantitative method, based on the secondary data of the World Bank reports for the period 2009-2019. The data in these econometric models are

data reported on an annual basis. The data are processed in the STATA program and for the verification of this hypothesis we have applied the following statistical tests: linear regression, fixed effect model and random effect and Hausman-Taylor regression. The variables used are: dependent variable (Social Development) and independent variables (economic growth, education, climate change, environment, health, poverty, social protection and labor). The reason for choosing the variables is as these are the main indicators of the social economy.

4.1.1. Correlation analysis for the econometric model

In table 3 shows the values of the correlation coefficient between SD and other independent variables: EG, ED, CCH, EN, HE, POV, SPL.

Table 1. Correlation analysis

Variables	SD	EG	ED	CCH	EN	HE	POV	SPL
SD	1.0000	1.0000						
EG	0.6750	-0.5753						
ED	-0.7836	-0.5063	1.0000					
CCH	-0.6762	0.6408	0.2951	1.0000				
EN	0.8205	-0.2014	-0.8884	-0.2058	1.0000			
HE	-0.3371	0.0166	0.7192	-0.4028	-0.7683	1.0000		
POV	0.3618	0.6795	-0.6640	0.3304	0.7188	-0.8939	1.0000	
SPL	0.9037	1.0000	-0.5574	-0.7761	0.5760	-0.0325	0.0714	1.0000

(Source: Author calculations in the STATA program)

In this table is presented the correlation with shows the level of correlation between dependent variable and independent variables. Based on the correlation results, the highest positive correlation has been shown by economic growth with (0.67), environment with (0.82), and social protection & labor with (0.90), education has shown negative correlation with (-0.78) healthy (-0.33) and climate change (-0.67) on social development. Based on this result, we can see that this econometric made is statistically stable as the value of the error term is at a low level and does not impair the overall accuracy of this model. While the correlation to poverty (0.36), it is not negative but are found in the interval 0.00-0.49, we can conclude that the term error is high.

4.1.2. Linear regression analysis

Table 2. Results of linear regression analysis

SD	Coef.	Std. Error	t	P>t	95% Conf. Interval	95% Conf. Interval
EG	-0.1672722	0.0882021	- 1.90	0.100	-0.3758371	0.0412926
ED	-0.0266025	0.0986201	-0.27	0.795	-0.2598019	0.2065968
CCH	-0.0505532	0.0448818	-1.13	0.297	-0.1566819	0.0555755
EN	0.4602378	0.1678484	2.74	0.029	0.0633393	0.8571363
HE	-0.0280574	0.7761842	-0.04	0.972	-1.863441	1.807327
POV	-0.154729	0.1770602	-0.87	0.411	-.5734099	0.2639519
SPL	0.8685869	0.1947685	4.46	0.003	.4080327	1.329141
_cons.	8.555298	56.78918	0.15	0.885	-125.7298	142.8404

(Source: Author calculations in the STATA program)

According to the results in Table 2, we can see that all variables are within the 90% -95% confidence interval, except for the variables (education and health). The value of the parameter β_0 is at the standard level of significance (p-value = 0.000 <0.05).
The coefficient of determination (R Square) in this case is 96% which shows a very high relationship between the dependent variable and the independent variables. This coefficient shows that for the value 96%, economic growth, education, climate change, environment, health, poverty, social protection and labor in Western Balkan Countries for the period 2009-2019. If the other factors remain constant then the SD value will be 8.55.
However, if we assume that we have an in Economic growth of 1% while keeping the other factors constant, this will affect the reduction of SD for 0.16%. If we increase poverty by 1%, keeping the other variables constant, then this will reduce SD by 0.15%. If we have climate change growth of 1%, keeping the other variables constant, then this will reduce SD by 0.05 %. These assertions are correct even at the level of 95% reliability (p-value = 0.000 <0.05). If we increase the environment by 1%, keeping the other variables constant, then this will reduce SD by 0.46%. If we have an increase of social protection and labor by 1%, keeping the other variables constant, then this will affect the increase of SD by 0.86%. These assertions are correct even at the level of 95% reliability (p-value = 0.000 <0.05).
It is worth noting that according to regression analysis, the greatest effects on social development are of environment and social protection & labor. The main effects on social development is social protection & labor, positive impact can come as a result of the work of non-governmental organizations which in recent years are working hard to reduce poverty and vulnerability by promoting efficient labor markets, reducing people's exposure to risk and increasing capacity to manage economic and social risks, such as unemployment, exclusion, disease, disability and old age.

4.1.3. Random – Effects GLS Regression

The specification of the dynamic panel model (Random-Effects) to test the impact of social development on the economic growth, education, climate change, environment, healthy, poverty and social protection & labor is as follows:

$$LnSD_{it=}\beta_0 + \beta_1 LnEG_{it} + \beta_2 LnED_{it} + \beta_3 LnCCH_{it} + \beta_4 LnEN_{it} + \beta_5 LnHE_{it} + \beta_6 LnPOV_{it} + \beta_7 LnSPL_{it} + y_{it}$$

Given that all the symbols presented in the above econometric model are the same as in the regression analysis, except for the symbol i, which represents the code, through which the data were coded on an annual basis divided into 11 groups and the symbol t, representing the period 2009-2019, included in this empirical analysis. In table 3 will present the results of the regression analysis using the random effect.

Table 3. Model results Random – Effect GLS Regression

SD	Coef.	Std. Error	Z	P>z	95% Conf. Interval	95% Conf. Interval
EG	-0.1672722	0.0882021	-1.90	0.058	-0.3401452	0.0056008
ED	-0.0266025	0.0986201	-0.27	0.787	-0.2198943	0.1666892
CCH	-0.0505532	0.0448818	-1.13	0.260	-0.13852	0.0374136
EN	0.4602378	0.1678484	2.74	0.006	0.1312609	0.7892147
HE	-0.0280574	0.7761842	-0.04	0.971	-1.54935	1.493236
POV	-0.154729	0.1770602	-0.87	0.382	-0.5017607	0.1923026
SPL	0.8685869	0.1947685	4.46	0.000	0.4868477	1.250326
_cons.	8.555298	56.78918d	0.15	0.880	-102.7495	119.86

(Source: Author calculations in the STATA program)

Based on the values presented in the random effect results, the econometric model equation takes the following form: $LnSD_{it=}8.555298 + 0.1672722\ _{it} + 0.0266025\ _{it} + 0.0505532\ _{it} + 0.4602378\ _{it} + 0.0280574\ _{it} + 0.154729\ _{it} + 0.8685869\ _{it} + 0.11$
According to the results in Table 3, we can see that all variables are within the 90% -95% confidence interval, except for the variable (health with 0.02). The value of the parameter β_0 is at the standard level of significance (p-value = 0.000 <0.05).
The value of the definition coefficient is 74%, which means that for this value the independent variables explain the dependent variable (SD). Assuming that other factors affecting the social economy are constant, then the value of SD will be 8.55. If we have economic growth of 1% while keeping the other variables constant, this will increase SD by 0.16% given that this is acceptable as it is within the 95% confidence interval.
If we have economic growth of 1%, keeping the other variables constant, this will reduce SD by 0.16. If education increases by 1%, keeping the other variables constant, this will reduce SD by 0.02%. If climate change increases by 1%, keeping the other variables constant, this will reduce SD by 0.05%. If the Environment grows by 1%, keeping the other variables constant, this will increase SD by 0.46%. If poverty increases by 1%, keeping economic growth, education, climate change, environment, health, social protection and labor constant, this will reduce SD by 0.15%. If Social protection & labor increases by 1%, keeping the other variables constant, this will increase SD by 0.86%. The results of this model support the hypothesis validation.

4.1.4. Fixed – Effects Regression

One of the most important tests that has a very wide application in statistics for dynamic panel data is the fixed effects model. The main purpose of using this model is because the data are not relevant and in this analysis the fixed effects estimator is used referring to the internal regression coefficient estimator. The following table presents the results of the econometric model through fixed effects:

Table 4. Model results Fixed– Effect Regression

SD	Coef.	Std. Error	Z	P>z	95% Conf. Interval	95% Conf. Interval
EG	-0.005961	0.0777631	-0.08	0.942	-0.2058573	0.1939354
ED	0.1661107	0.088379	1.88	0.119	-0.0610747	0.3932961
CCH	0.1475101	0.0649014	2.27	0.072	-0.0193242	0.3143444
EN	-0.8698557	2.521948	-0.34	0.744	-7.35273	5.613019
HE	-1.332557	0.6328631	-2.11	0.089	-2.959383	0.2942696
POV	0.1074323	0.1367023	0.79	0.468	-0.243972	0.4588367
SPL	0.8497147	0.1272147	6.68	0.001	0.5226989	1.17673
_cons.	129.7071	94.42844	1.37	0.228	-113.0289	372.4431

(Source: Author calculations in the STATA program)

All independent variables are significate at the level of 95% reliability and all parameters are statistically measurable, except for the variable (economic growth with 0.005). The value of the parameter β_0 is at the standard level of significance (p-value = 0.000 <0.05).
The results of this model are in favor of interpreting the hypothesis, resulting in a positive relationship between education, climate change, poverty and social protection & labor in Wester Balkan Countries. If education increases by 1%, keeping to other factors, this will have the

effect of increasing SD by 0.16%. The standard error value for the parameter β_2 is 0.08379, which means that this parameter has no standard error value and this comes as a result of positive correlation with SD. Estimator variation of parameter is $\beta_2 = 0.08379^2 = 0.08379$.
If Climate change increases by 1% keeping the other variables constant, this will have the effect of increasing the value of SD by 0.14%. The standard error value for the parameter β_3 is 0.07776 which means that this parameter has no standard error value and this comes as a result of positive correlation with SD. Estimation variation of the parameter β_3=0.07776^2=0.00604 and this parameter has statistical significance because the actual value of the Test (t_f=2.27) is a value greater than the critical value of this model (t_{kr}=1.984).
Environment negatively affects the growth of the social economy, where 1% increase in the environment causes a decrease of SD by 1.33%. The value of the standard error for the parameter β_4 is 2.5219 which is a value much larger than the standard error of the other parameters included in this econometric model. Estimation variation of the parameter β_4=2.5219^2=6.35997. Healthy negatively affects the growth of the social economy, where 1% increase in healthy causes a decrease of SD by 0.86%. . The standard error value for the parameter β_5 is 0.6328 which means that this parameter has no standard error value and this comes as a result of positive correlation with SD. Estimation variation of the parameter β_5=0.6328^2=0.40043. If poverty increases by 1% keeping economic growth, education, environment, climate change, healthy and social protection & labor constant this will have the effect of increasing the value of SD by 0.10%. The value of the standard error for the parameter β_6 is 0.1367 which means that this parameter has no standard error value and this comes as a result of positive correlation with SD. Estimation variation of the parameter β_6=0.1367^2=0.0186.
The results of regression through the method of fixed effects turn out to be very important in the relationship between social protection & labor and social development for the period 2009-2019. If social protection & labor increases by 1% keeping constant economic growth, education, environment, climate change, healthy and powerful this will have the effect of increasing the value of SD by 0.84%. The standard error value for the parameter β_7 is 0.1272 which means that this parameter has no standard error value and this comes as a result of positive correlation with SD. Estimation variation of the parameter β_7=0.1272^2=0.0161 and this parameter has statistical significance because the actual value of the T test (t_f=6.68) is a value greater than the critical value of this model (t_{kr}=1.984). It is worth noting that against independent variables, social protection & labor has the greatest impact on the growth of the social economy. All this as a result of improving the well-being of citizens, helping individuals and families, especially the poor, better education for children, as a priority can be taken the young age of the population.

4.1.5. Hausman – Taylor Regression

Statistical data will also be tested through this model, in order to make comparisons with other statistical tests.

Table 5. Model results Hausman – Taylor Regression

SD	Coef.	Std. Error	Z	P>z	95% Conf. Interval	95% Conf. Interval
EG	-0.0297322	0.0709523	-0.42	0.675	-0.168796	0.1093317
ED	0.1686635	0.0863121	1.95	0.051	-0.0005052	0.3378321
CCH	0.1410035	0.0629813	2.24	0.025	0.0175625	0.2644446
EN	0.5570069	1.845848	0.30	0.763	-3.060788	4.174802
HE	-1.307093	0.6177296	-2.12	0.034	-2.517821	-0.0963652

POV	0.093898	0.1326808	0.71	0.479	-0.1661517	0.3539476
SPL	0.8630772	0.1233667	7.00	0.000	0.6212829	1.104871
_cons.	84.707	60.26144	1.41	0.160	-33.40326	202.8173

(Source: Author calculations in the STATA program)

According to the results in Table 5, we can see that all variables are within the 90% -95% confidence interval, except for the variable (economic growth with 0.02). The value of the parameter β_0 is at the standard level of significance (p-value = 0.000 <0.05).

Education positively affects a social economy. According to the data presented in the table above we can see that when education increases by 1% keeping the other variables constant, the effect will be in increase SD by 0.16. The standard error value for the parameter $\beta_2 = 0.0863$, while the estimator variation for the parameter $\beta_2 = 0.0863$ ^{2}=0.0863. The actual value of the T test for this parameter is 1.95 which is approximately the same as the critical value of the T test (1.984).

Also Climate Change has a positive effect on the growth of the social economy. Assuming an increase of 1% in this index, affects the increase of SD by 0.14. The standard error value for the parameter $\beta_3 = 0.0629$, while the estimator variation for the parameter $\beta_3 = 0.0629$ ^{2}=0.00395. The actual value of the T test for this parameter is 2.24 which is a value greater than the critical value of the T test (1.984).

When the Environment grows by 1% keeping the other variables constant, the effect will be to increase the SD by 0.55%. The standard error value for the parameter $\beta_4 = 1.8458$, while the estimator variation for the parameter $\beta_4 = 1.8458$ ^{2}=3.4069. The actual value of the T test for this parameter is 0.30 which is a value less than the critical value of the T test (1.984).

When healthy grows by 1% while keeping the other variables constant, the effect will be to reduce SD by 1.30. Standard error for parameter β_5 = 0.6177. The estimator variation of the parameter $\beta_5 = 0.6177$ ^{2}=0.3815 and the actual value is -2.12.

Poverty positively affects the growth of the social economy. Assuming a 1% increase in this index, it affects the increase of SD by 0.09. The standard error value for the parameter $\beta_6 = 0.1326$, while the estimator variation for the parameter $\beta_6 = 0.1326$ ^{2}=0.1758. The actual value of the T test for this parameter is 0.71 which is a value less than the critical value of the T test (1.984).

The results of the Hausman-Taylor Regression model on the impact of social protection & labor on the growth of the social economy are the same as the previous models. When social protection & labor increases by 1% keeping constant economic growth, education, climate change, environment, healthy and poverty, the effect will be to increase SD by 0.86%. The standard error value for the parameter $\beta_7 = 0.1233$, while the estimator variation for the parameter $\beta_7 = 0.1233^2$=0.152. The actual value of the T test for this parameter is 7.00 which is a value much higher than the critical value of the T test (1.984).

5. CONCLUSION

In this research we investigated the social economy in the Western Balkans Countries (Albania, Kosovo, North Macedonia, Serbia, Montenegro and Bosnia and Herzegovina). Social economy has to do with the economic factors of society. Some of the social-economic factors include: employment, education, and income. These factors relate to and influence one another. For example, our education will affect our employment, while employment will affect our income. The primary focus of this study is to present regional, national, and international perspectives on the production of data about the social economy. Considering that economics and social behavior, as two main pillars of the welfare of society, have an interrelationship between them, as well as given the fact that socioeconomics is the social science that studies how economic

activity affects and how it is shaped by social processes. In general, it analyzes how modern societies progress, stagnate, or regress because of their local, regional economy, or the global economy.

Western Balkans Countries should be more far-sighted, follow in the footsteps of developed European countries, pay more attention to investing in the social economy. The countries of the Western Balkans, in addition to the criteria they must meet for EU membership, must focus more on the social economy, especially on improving the well-being of their citizens. It is known that the future of the state depends to a large extent on the youth, fortunately these countries have a young population, but day by day they are forced to leave their homeland in order to secure a better life for themselves and their family. Statistics show that many cities, especially rural areas, are being abandoned by young people. The countries of the Western Balkans need to think, engage and invest more in this issue as one day it will be too late.

As for the countries of the Western Balkans, countries that aspire to membership in the European Union, this sector is not so well known or better to say these countries are not making enough efforts in terms of recognition / development of social economy in the countries of their although recently it has been said that the social economy can contribute to achieving Europe 2020 goals (such as contributions to the employment, contributions to the social inclusion and poverty, contributions to the education and contributions to the environmental).

The data in this research are presented on an annual basis and are collected from the annual report of the World Bank. Based on the empirical analysis through econometric models, the results have shown that there are important relationships between the study variables and it turns out that this empirical analysis is possible. Based on the empirical results through econometric models we can conclude that according to the econometric model Linear regression analysis and Random - Effects GLS Regression, economic growth, education, climate change, heathy and poverty have a negative impact on the growth of the social economy while the environment and social protection & labor have a positive impact on the growth of the social economy. Regarding the other two econometric models Fixed - Effects Regression and Hausman - Taylor Regression, education, climate change, environment, poverty, social protection & labor have a positive effect on the growth of the social economy while economic growth and healthy result in a negative impact. Environment and social protection & labor, in all economic models have resulted in positive impact on the growth of the social economy, in terms of the positive impact on the environment may be because these countries thanks to nature enjoy this environmental level, while in terms of social protection & labor this positive impact may be as a result of meeting one of the main criteria required by the EU for membership. According to the results, the situation of the social economy in Western Balkan Countries is improving, although at a much slower pace compared to developed European countries such as Spain, France, Sweden, etc., which are hotbeds/ flourishes of social economy.

REFERENCES

Adams, W.M. (2006) "The Future of Sustainability: Re-thinking Environment and Development in the Twenty-first Century", available at: http://cmsdata.iucn.org/downloads/iucn_future_of_sustanability.pdf (accessed 28 July 2021).

Ash, A. (2009) *The Social Economy: International Perspectives on Economic Solidarity,* Zed Books Ltd; First Edition, US.

Chen, J. (2020). "What is poverty?" Available at: https://www.investopedia.com/terms/p/poverty.asp (accessed 15 October 2021).

European Forum on Social Entrepreneurship (2019) available at: http://efse-bulgaria.eu/en/efse-subject- social-economy . (accessed 13 August 2021).

European Parliament, Think Tank (2020) "What future for the social economy"?, available at: https://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI(2020)659336 (accessed 06 August 2021).
Gonzales, P. (2021) "Social economy is a new model for the future of Europe and the World", available at: https://www.socialeconomy.eu.org/2021/04/13/social-economy-as-a-new-model-for-the-future-of-europe-and-the-world/ (accessed 15 June 2021).
Hall, P., Smith, J., Kay, A., Downing, R., MacPherson, I. and McKitrick, A. (2011) "Introduction: Learning from the Social Economy Community-University Research Partnerships", in Hall, P.V. and MacPherson, I. (Eds) *Community-university research partnerships: reflections on the Canadian social economy experience,* University of Victoria, Canada. pp. 1-26.
Matković, G. (2019) "The welfare state in Western Balkan countries: challenges and options", available at: http://idn.org.rs/ojs3/stanovnistvo/index.php/STNV/article/download/344/326 (accessed 10 October 2021).
Morley, J. (2016) "Elite networks and the rise of social impact reporting in the UK social sector", available at http://dx.doi.org/10.2139/ssrn.2736167 (accessed 31 July 2021).
OECD (2021) "Environment", available at: https://www.oecd.org/environment/ (accessed 15 October 2021).
OECD/EU (2017) "The Missing Entrepreneurs 2017: Policies for Inclusive Entrepreneurship", available at: https://doi.org/10.1787/9789264283602-en (accessed 02 August 2021).
Radivojević, V., Krstić, B. and Stanišić, T. (2018) "Environmental sustainability: implications and limitations in WESTERN Balkan countries", available at: http://www.ekonomika.org.rs/esd/PDF/ekonomika/2018/clanci18-1/3.pdf (accessed 13 October 2021).
Sengupta, U. (2016) "The Future of Social Economy Leadership and Organizational Composition in Canada: Demand from Demographics, and Difference through Diversity*", Revue Interventions économiques, Papers in Political Economy,* Vol. 54.
Social Economy Europe (2019) *Annual Report Together we stand for the economic and social recovery of Europe*, available at https://www.socialeconomy.eu.org/wp-content/uploads/2020/06/SEE_ANNUAL_REPORT_2019_DIGITAL.pdf (accessed 12 October 2021).
Thomas, R.M. (2021) "Education", available at: https://www.britannica.com/topic/education/Indian-influences-on-Asia (accessed 12 October 2021).
United Nations (1997) *Glossary of Environment Statistics*, Studies in Methods, Series F, No. 67, United Nations, New York.
United Nations (2019) *Economic and Social Council Report of the Secretary-General, Special edition: progress towards the Sustainable Development Goals*, available at: https://undocs.org/E/2019/68 (accessed 12 July 2021).
United Nations (2021) "What is climate change", available at: https://www.un.org/en/climatechange/what-is-climate-change (accessed 15 October 2021).
World Bank (2021) "The World Bank in Social Protection", available at: https://www.worldbank.org/en/topic/socialprotection/overview#1 (accessed 15 October 2021)
World Bank database (2021), available at: https://data.worldbank.org/indicator.

IDENTIFICATION OF PROBLEMS IN SMALL ENTERPRISES IN THE REPUBLIC OF KOSOVO IN THE CONDITIONS OF THE COVID-19 PANDEMIC

Tringë Krasniqi
tringa.kras2@gmail.com

Aleksandra Janeska-Iliev
Faculty of Economics- Skopje, Ss. Cyril and Methodius University in Skopje
Aleksandra.Janeska-Iliev@eccf.ukim.edu.mk

ABSTRACT
As in the rest of the world, the economy of the Republic of Kosovo has been hit hard by the COVID-19 pandemic. The situation created as a result of the pandemic has mostly affected micro-enterprises and small enterprises. For this reason, this paper has targeted small enterprises, to get a closer look at the impact of the Covid-19 pandemic, the problems it has caused in the economy and in small enterprises in particular. The main purpose of this paper is to identify the problems of small businesses in two periods: ***Quarantine period March-May 2020****, when almost everything was paralyzed and only a few businesses were allowed to operate and* ***The period after the removal of most of the restrictive measures*** *imposed by the Government of Republic of Kosovo, namely the removal of quarantine. The results of this paper are derived from the research work, respectively the empirical analysis (questionnaire) conducted with 60 small businesses of the Republic of Kosovo. Data analysis was done with SPSS statistical program. From the 21 Trade businesses surveyed, most were closed in the two-month quarantine period. The largest percentage of Manufacturing businesses have operated with limited capacity. Trade businesses (21)that participated in the survey, 26.7% are facing a reduction in the number of customers. Manufacturing businesses as a more pronounced problem have presented reduced productivity and lack of liquidity.*

Keywords: Covid-19 pandemic, small enterprises, quarantine period, economy.

JEL classification: *M1*

1. INTRODUCTION

It has been more than a year since the world was facing the COVID-19 virus. Despite taking restrictive measures to prevent its further spread however the spread of the virus has spread to all countries of the world causing an increase in the number of infected persons. Along with the increase in the number of infected and has taken too many lives, COVID-19 had a significant negative impact on the economic aspect that led to the economic decline of businesses.

The spread of the virus in the social aspect caused social distancing between people, which as a result caused the closure of various businesses that were considered high risk, the cancellation of various activities. In Kosovo, food processing & retail, pharmacies, and certain businesses were allowed to work part-time. The whole situation created the paralysis of the economy in general around the world. Considering that no one was informed how long this situation could last, how it would be fought and how long it would take, all this created an unsafe environment for businesses by limiting new investments.

As in Kosovo and most countries of the world at the beginning of Covid-19 as the only way to prevent the spread of the COVID-19 virus was to stop almost all economic and social

http://hdl.handle.net/20.500.12188/15927
http://doi.org/10.47063/EBTSF.2021.0014

activities and to make social distancing between people. Some of these measures in Kosovo were taken before the first cases affected by COVID-19 were reported, but they were reported in neighboring countries. Most business activities such as airlines, hotels, swimming pools, gastronomy were closed for a period of to 2 months. At the beginning of June 2020, the application of mitigation measures began for some sectors, where part-time work and limited capacity were allowed.

Restrictive measures imposed by the Government of Kosovo continue to be in force, where, depending on the pandemic situation, measures or exemptions of measures are made for businesses and citizens. As a result of this situation, many businesses risk bankruptcy and many employees lose their jobs. The Government of Kosovo has tried to help businesses in Kosovo by approving an emergency package.

To understand the problems that small businesses are now facing, we surveyed with a considerable number of small businesses.The research has managed to identify the main problems that small businesses in Kosovo face in the conditions of the pandemic. The complete study of the problem has defined the structuring of this paper which includes: Literature Review, Research methodology, Definition of small Businesses, The impact of Covid-19 on the Economy, Data analysis and interpretation, Conclusions and, Recommendations.

2. LITERATURE REVIEW

Entrepreneurship is not a modern concept and the term is said to have originated with the 18th- century economist Richard Cantillon who used it to describe someone who bore risk made plans, organized and owned factors of production–land, labor, and capital (Coulter, 2001; Lee-Ross and Lashley, 2009). While (Karayiannis, 2003; Landstrom, H, 2005) argue that Entrepreneurial activities in society are mentioned by the ancient Greeks, and it was the philosopher Xenophon (approx. 430-354 B.C) who recognized the adventurous and opportunity-seeking activities of overseas merchants.

Entrepreneurs are the creators, the innovators, and the leaders who give back to society, as philanthropists, directors, and trustees, and who, more than any others, change the way people live, work, learn, play, and lead. Entrepreneurs create new technologies, products, processes, and services that become the next wave of new industries. Entrepreneurs create value with high potential, high growth companies which are the job-creation engines of the US economy (Timmons, 1999; Burns, 2016).

There is a great link between entrepreneurship, entrepreneurs and, small business firms though the three are not related. Not all small business firm owners are entrepreneurs and not all entrepreneurs own small firms. The entrepreneurial venture can start at any level (micro, small, medium, or large).

The role of small business plays a big role in job creation. The role of small firms in employment creation should not be looked on part of employment policy but also as part of urban and social policy (Kibassa, 2012).

One of the biggest challenges facing any academic study of small firms is to get an accurate definition of the term ‘small business’, or ‘small to medium enterprise’ (SME) (Headd & Saade, 2008; Mazzarol &Rebound, 2020). There is no single, universally accepted definition of a small business (Storey, 1994; Tonge, 2001; Mazzarol&Rebound, 2020).

While microenterprises appear to include any company with less than ten employees, one of the biggest differentiators between small businesses and microenterprise is revenues, along with lack of access to funding. For example, a typical loan for a microenterprise is less than fifty thousand dollars and is provided by creditors beyond banks through microcredit lending or microloans which are set up with higher interest rates (Hoy, et.al, 2012; Anastasia, 2015).

2.1 The impact of covid-19 on the economy

The outbreak of the coronavirus, named COVID-19 (also known as SARS-CoV-2) by the World Health Organization (WHO), has been declared a pandemic by11.03.2020. The rapid 'globalization' of the COVID-19 pandemic is something that the world perhaps has never encountered before. The infection of the COVID-19 virus was first reported in December of 2019 in Wuhan – the seventh largest city of China pneumonia and severe acute respiratory syndrome, heart failure, and subsequent death.

The economics of COVID-19: As the evidence of economic impacts keeps emerging, research think tanks and media outlets are in a race to publish commentaries, editorials, and analytical pieces. Among the first organized efforts, Baldwin and di Mauro (eds.) (2020) compile an eBook containing 14 briefs of different authors discussing the impacts of general macroeconomy and policy, trade, supply chain, finance, banking, travel, and regional sensitivities. While few of the works rely on simulation-based modeling, most are based on experience, real-time data, and intuitive and policy perspectives (Baruna, 2020).

The economic pain became severe as people were asked to stay at home, and the severity was felt in various sectors of the economy with travel bans affecting the aviation industry, sporting event cancellations affecting the sports industry, the prohibition of mass gatherings affecting the events and entertainment industries (Horowit, 2020; Elliot, 2020; Ozili &Arun, 2020).

We can't impact the organic properties of the infection; however, we can change the measure of contact we have with one another by maintaining social distancing. The need for social distancing gave rise to the concept of "working from home concept (WFH)" for corporate for keeping alive the working spirit of the employees. Work from home (WFH) is where the employees can do their job from home through the massive use of digital platforms. After this pandemic, business trends have completely changed and a majority of business activities are performed through mobile or other digital platforms. Artificial Intelligence, analytics all have changed the way companies used to run and function of business (Kaushik & Guleria, 2020).

Research on the economic impact of previous pandemics has shown that countries, industries, and companies suffer significantly from the consequences of a global pandemic. This is due to a simultaneous demand and supply shock. Demand declines because consumers reduce their purchases of non-essential goods and services such as entertainment and travel. And layoffs reduce society's overall spending capacity (Cahyanto et al., 2016; McKercher & Chon, 2004; Sadique et al., 2007; Kraus et.al, 2020).

2.2 The impact of COVID-19 on the economy of Kosovo

Kosovo, as well as other countries of the world, are trying to fight the invisible enemy which, in addition to causing the death of about 649 people from the beginning of the pandemic until 13.10.2020, has also affected the economic aspect. Given that Kosovo has long faced many problems in the field of economy, the period of the pandemic has only deepened the economic problem that has been accompanied by the closure of many businesses causing job losses and even greater growth of unemployment in the country. In order to prevent further economic damage caused by COVID-19, the Government of Kosovo, respectively the Ministry of Finance and Transfers in cooperation with other ministries have developed an emergency plan called emergency packages to stop the further economic decline and the viability of economic enterprises in the country.

During the first phase of the closing and restricting movement for the citizens of Kosovo, except for the food industry, the pharmaceutical industry, and the food sales sector, almost all other activities were paralyzed. This made the first effects of the economic shock immediately felt. As a result of the contraction of aggregate demand, almost all sectors were affected, even a part of those sectors which were allowed to operate at all times. The

emergency package and the measures envisaged in this package were viewed with skepticism by the private sector in Kosovo. According to them, the measures were more social in nature and as such could not address the acute problems caused by the temporary closure of the vast majority of the economy.
The Government of Kosovo in March 2020 approved the emergency fiscal package with 15 measures in response to mitigating the consequences caused by the pandemic. The total value of this package was 180 million euros or about 2.5% of Kosovo's GDP (Emergency Fiscal Package Implementation Implications and Challenges, RIINVEST INSTITUTE, June 2020).
The government program approved in June this year and related to the budget review envisages an intervention of 1.2 billion euros during 2020 and 2021. This program has 2 basic components - urgent measures to support businesses to prevent exit from the market and economic recovery. This document is operationalized with the activities of their bearer and indications related to financial resources. In the next step, the time planning of activities should be done (Living with Covid-19: three pillars of recovery, Riinvest Institute, July 2020).
The Covid-19 pandemic presented in early 2020 was an unknown virus in the world. There was no scientific work related to it in this field of study. The paper is realized in the period September-October 2020, and in this period of time-related to this field of study, there were few papers published in the world. Considering that the largest number of businesses in the Republic of Kosovo are small businesses and in the conditions of the pandemic were the most affected ones, it is necessary to conduct a study on a topic that touches on some of the main problems of these businesses.

3. RESEARCH METHODOLOGY

In the first part of this paper is the analysis of scientific literature used by various authors as well as the analysis of some scientific papers which examine the topic of COVID-19 in general and its impact on the economy in particular. This literature is currently scarce as this type of virus is not yet well known. The material for the definition of small businesses and the change that has had over the years has also been reviewed.
In the second part of the research, we used the quantitative method, which is used to process the data which will be presented in the form of statistics. The primary source is the survey method where for the basic instrument we used the questionnaire.

3.1. Sample

As a sample, 60 small businesses in the Republic of Kosovo are taken in three municipalities of Kosovo (Pristina, Gjilan, FusheKosova).
The empirical analysis conducted with 60 respondents in the small businesses in the Republic of Kosovo shows that the largest percentage of respondents 38.3% are in the group 31-40 years old and 20% belong to the group18-30 years old, a relatively young age of owners and managers who lead small businesses. Also, businesses that have participated in the research 71.7% of them are male and 28.3% are female. From the result achieved we see that men dominate in a higher percentage in decision-making positions compared to women. About 61.7% of businesses are individual businesses and 38.3% are co-partnership. The businesses that have participated in this research are businesses that in terms of the number of employees vary from 10 employees minimum to businesses with 47 employees maximum, mean of employees is 19.38.

Table1. Sample statistics

Variables	Mean	Std. Deviation
Number of employees	19.38	10.236
Age		
Variables	Nr. of businesses	% from total number of businesses included in the sample (N=60)
Type of activity		
Trade	21	35.0
Service business	24	40.0
Manufacturing	11	18.3
Construction	4	6.7

Source: Survey from author, 2020

3.2 Questionnaire

The primary source is the survey method where for the instrument we used the questionnaire. The questionnaire contains 21 questions. Closed questions are18 and 3 questions are open while two questions are dedicated to the personal data of the respondents. The questionnaire was conducted in small businesses in the Republic of Kosovo (in the municipalities: Pristina, Gjilan, Fushe Kosova). The survey was conducted in the period 7-19 September 2020.The answers to the Questionnaire from these businesses were realized by survey face to face and through the online form. SPSS (Statistical Package for Social Science) program was used to process the results achieve through the questionnaire.

4. DATA ANALYSIS AND INTERPRETATION

The elaborations below are the concrete analysis and interpretation of the data we obtained through the questionnaire, which was completed by 60 businesses in the Republic of Kosovo. Data analysis and interpretation will be accompanied by numerous charts and graphical representations (with SPSS) that we believe will convey reliable, valuable information related to the analysis of the impact of covid-19 on small businesses in Kosovo.

From the analyzed businesses, 35% answered that their business activity is Trade, 40% answered that their business activity is Service business, and we have the smallest percentage of businesses represented in the field of construction and manufacturing. More than half of respondents, 63.3% are businesses run by the owner/ co-owner. Most respondents, 91.7% consider that the Covid-19 has had a negative impact and 36.7% consider that pandemic has reduced revenue from 5% to 20%.

Most respondents 96.7%have stated that they did not increase the prices of products/services during the pandemic period. However, this does not match the complaints of the citizens of Kosovo about the price increase.

Only 13.3% of them have accepted that they already have laid off in the first 6 months of the pandemic and most of them 65% not predict the layoffs of workers. The maximum number of employees that a business has laid off is five (5) employees.

Businesses that have been declared to have laid off workers 6.7% of them had returned workers who had been laid off during the pandemic. More than half of the surveyed

businesses 60% are expressed that work is not going on with the same intensity as before the pandemic, which means that the pandemic period has left and continues to have consequences in the economy. Almost half of businesses 46.7% consider that the main problem their business is facing now is the reduction in the number of customers. Only 13.3% of businesses are satisfied with the emergency measures taken by the Government, 48.3% of businesses are somewhat satisfied. About 63.3% think that the measure Covering expenditures for the monthly wages in the amount of 170 € has had a positive effect in their enterprise and 25% consider that Rent subsidy up to 50% of the rent value for small and medium enterprises for the month of April and May has had a positive effect.
About 80% of surveyed businesses equipped employees with an employment contract and 20% equipped only certain of them. More than half of the surveyed businesses, 66.7% of them completed the amount up to their full wage and only 30% of them paid the employees the full wage as before the pandemic even though they received 170 euros from the Government.
Trade businesses (21 businesses that participated in the survey), 26.7% most of them are facing a reduction in the number of customers. Manufacturing businesses (6.7%) as a more pronounced problem have presented reduced productivity and lack of liquidity. From 4 types of businesses, we see that construction businesses have paid their employees the full wage in addition to 170 euros received from the Government of Kosovo. However, this type of business is the least represented in the research (only 4 businesses that have participated in the research). Trade, Service, and Manufacturing businesses have only completed the amount up to their full wage.
In table no. 2 we have presented crosstabulation of types of business activities and business reaction after government measures to prevent the distribution of the Covid-19. The largest percentage of trade businesses (13.3%) were closed in the period of almost two months of quarantine. Most manufacturing businesses in this period have worked with limited capacity. Most service businesses (18.3%) were totally closed or operated at limited capacity (like Delivery Service). Construction businesses in this period have been totally closed.

Table 2. Cross-tabulation of the type of activity of the researched businesses and the reaction of the businesses after taking measures to prevent the distribution of the Covid-19 pandemic.

Type of activity * How did your business react after the government took actions to prevent the spread the Covid-19 pandemic? Crosstabulation

			How did your business react after the government took actions to prevent the spread the Covid-19 pandemic?					Total
			The business was completely closed	We worked part time	We worked with limited capacity	The pandemic has not had any impact	We performed some of the activities from home	
Type of activity	Trade	Count	8	6	2	3	2	21
		% of Total	13.3%	10.0%	3.3%	5.0%	3.3%	35.0%
	Manufacturing	Count	2	2	5	2	0	11
		% of Total	3.3%	3.3%	8.3%	3.3%	0.0%	18.3%
	Service business	Count	11	5	7	1	0	24
		% of Total	18.3%	8.3%	11.7%	1.7%	0.0%	40.0%
	Construction	Count	3	0	1	0	0	4
		% of Total	5.0%	0.0%	1.7%	0.0%	0.0%	6.7%
Total		Count	24	13	15	6	2	60
		% of Total	40.0%	21.7%	25.0%	10.0%	3.3%	100.0%

Source: Survey from author, 2020

In table no.3 we have made a crosstabulation of the type of business activities and the main problems that businesses are currently facing in this period of the pandemic that has not been faced before. Trade businesses (21 businesses that participated in the survey), 26.7% most of them are facing a reduction in the number of customers. Manufacturing businesses (6.7%) as a more pronounced problem have presented reduced productivity and lack of liquidity.

Also,16.7% of service businesses as the main problem have presented the reduction of the number of customers and the difficulty with paying wages to workers. Construction businesses have presented as a problem the reduction of the number of customers and lack of raw material.

Table 3. Cross-tabulations between the type of business activities and the main problems that businesses are currently facing in this period of pandemic

Type of activity * What is the main problem your business is currently facing at the time of the pandemic that was not present before? Crosstabulation

			What is the main problem your business is currently facing at the time of the pandemic that was not present before?								
			Reducing the number of customers	Lack of liquidity	Reduction of productivity	Inability to pay all tax obligations	Difficulty with paying wages to workers	Problems with work organization	Lack of raw material	Unfair competition	Total
Type of activity	Trade	Count	16	1	0	0	2	1	0	1	21
		% of Total	26.7%	1.7%	0.0%	0.0%	3.3%	1.7%	0.0%	1.7%	35.0%
	Manufacturing	Count	0	3	4	2	0	0	1	1	11
		% of Total	0.0%	5.0%	6.7%	3.3%	0.0%	0.0%	1.7%	1.7%	18.3%
	Service business	Count	10	1	0	5	7	0	0	1	24
		% of Total	16.7%	1.7%	0.0%	8.3%	11.7%	0.0%	0.0%	1.7%	40.0%
	Construction	Count	2	0	0	0	1	0	1	0	4
		% of Total	3.3%	0.0%	0.0%	0.0%	1.7%	0.0%	1.7%	0.0%	6.7%
Total		Count	28	5	4	7	10	1	2	3	60
		% of Total	46.7%	8.3%	6.7%	11.7%	16.7%	1.7%	3.3%	5.0%	100.0%

Source: Survey from author, 2020

In table no. 4 we have presented the crosstabulation of two tables regarding the type of business activity that participated in the research and the satisfaction of businesses with the measures taken by the Government of Kosovo to support businesses. From the table presented we can see that of the four types of businesses that have been part of the research, trade businesses (21.7%) are more satisfied with the measures taken by the Government of Kosovo. Manufacturing businesses (8.3%) are somewhat satisfied with the mentioned measures. Service businesses (15%) are dissatisfied with the measures taken by the government. Construction businesses should take into account that they are businesses with low representation in research (5%) are somewhat satisfied with these emergency package measures.

Table 4. Cross-tabulations between types of business activities and business satisfaction with emergency measures taken by the Government of Kosovo to support businesses

Type of activity * Are you satisfied with the measures taken by the Government of Kosovo to support businesses through the emergency package? Crosstabulation

			Are you satisfied with the measures taken by the Government of Kosovo to support businesses through the emergency package?				
			Not at all satisfied	Unsatisfied	Somewhat satisfied	Satisfied	Total
Type of activity	Trade	Count	2	2	13	4	21
		% of Total	3.3%	3.3%	21.7%	6.7%	35.0%
	Manufacturing	Count	2	2	5	2	11
		% of Total	3.3%	3.3%	8.3%	3.3%	18.3%
	Service business	Count	5	9	8	2	24
		% of Total	8.3%	15.0%	13.3%	3.3%	40.0%
	Construction	Count	1	0	3	0	4
		% of Total	1.7%	0.0%	5.0%	0.0%	6.7%
Total		Count	10	13	29	8	60
		% of Total	16.7%	21.7%	48.3%	13.3%	100.0%

Source: Survey from author, 2020

In table no. 5 we can analyze the crosstabulation between the type of business activities and analyze which of these businesses has paid the full wage to the workers in addition to the government participation with 170 euros for the employees.

From 4 types of businesses, we see that construction businesses have paid their employees the full wage in addition to 170 euros received from the Government of Kosovo. However, this type of business is the least represented in the research (only 4 businesses that have participated in the research). Trade, Service, and Manufacturing businesses have only completed the amount up to their full wage.

Table 5. Cross-tabulation between the type of business activity and business operations after the participation of the government with 170 Euros for employees for the period April and May 2020

Type of activity * After the participation by the Government with 170 € for employees for April and May, you as an enterprise: Crosstabulation

			After the participation by the Government with 170 € for employees for April and May, you as an enterprise:			Total
			You paid the employees the full wage as before the pandemic even though they received 170 euros from the Government	You have completed the amount up to their full wage	You did not pay the employees at all	
Type of activity	Trade	Count	5	16	0	21
		% of Total	8.3%	26.7%	0.0%	35.0%
	Manufacturing	Count	4	6	1	11
		% of Total	6.7%	10.0%	1.7%	18.3%
	Service business	Count	6	17	1	24
		% of Total	10.0%	28.3%	1.7%	40.0%
	Construction	Count	3	1	0	4
		% of Total	5.0%	1.7%	0.0%	6.7%
Total		Count	18	40	2	60
		% of Total	30.0%	66.7%	3.3%	100.0%

Source: Survey from author, 2020

5. CONCLUSIONS

From the main findings of this paper we can conclude as follows:

Trade businesses have mainly expressed the reduction of the number of consumers as the main problem, manufacturing businesses consider reduced productivity and lack of liquidity, service enterprises as the main problem have presented the reduction of the number of consumers and the difficulty with paying wages to workers, while, construction businesses have presented as a problem the reduction of the number of consumers and lack of raw material.

Of these four types of businesses divided according to their business activity taken for review, trade businesses have expressed their satisfaction with the measures taken by the

Government of Kosovo with the emergency package, while the least satisfied are the service businesses.

Regarding the measures taken by the Government of Kosovo through the emergency package, a large percentage of businesses are somewhat satisfied. From this package is considered as the most favorable with positive effects, the partial payment of 170 euros for workers with employment contracts.

The results from this paper are derived from the analysis of a structured sample of 60 small businesses in three municipalities of Kosovo (Pristina, Gjilan, Fushe Kosova). We would recommend that a survey be conducted with a larger representation of small businesses in the research, with wider distribution in the main centers of Kosovo so that the results of the research are more reliable and more credible.

We recommend that the research be extended to other categories of businesses such as micro-businesses, medium and large businesses, and also to a greater regional extent. I also recommend reviewing the research results in these businesses and makeing a comparative analysis between them.

The above research has found the main indicators that have caused the stagnation of small businesses in Kosovo. For this reason, I recommend that this analysis be extended to the definition of the main indicators for the stagnation of businesses of other types. As well as comparing these indicators by type of business.

REFERENCES

Anastasia, Ch. (2015). "Exploring Definitions of Small Business and Why it is so Difficult", *Journal of Management Policy and Practice,* 16(4).

Ardic, O. P., Mylenk, N., and Saltane.V. (2011). "Small and Medium Enterprises A Cross-Country Analysis with a New Data Set", *Policy Research Working Paper Series 5538, The World Bank*. DOI: 10.1596/1813-9450-5538

Baruna, S. (2020). "Understanding Coronanomics: The economic implications of the coronavirus (COVID-19) pandemic", Available at SSRN: https://ssrn.com/abstract=3566477 or http://dx.doi.org/10.2139/ssrn.3566477

Berisha, G., & Shiroka-Pula, J. (2015). "Defining Small and Medium Enterprises: A critical review", *Academic Journal of Business, Administration, Law and Social Sciences*, *IIPCCL Publishing*, Tirana-Albania, 1(1):17-28.

Bridge, S., O'Neill, K., & Cromie, S. (1998). *Understanding enterprise, entrepreneurship, and small business*. Basingstoke: Macmillan Business Publishing.

Burns, P. (2016). *Entrepreneurship and Small business*. Palgrave: Macmillan education.

Gunaseelan, S., and Kesavan, N. (2020). "Business and economic recessions in India during the Covid-19 – A review". *Journal of Xi'an University of Architecture & Technology*, 12(4): 356-366.

Hadi, S., and Supardi, S. (2020). "Revitalization Strategy for Small and Medium Enterprises after Corona Virus Disease Pandemic (Covid-19) in Yogyakarta". *Journal of Xi'an University of Architecture & Technology*, 12(4): 4068-4076.

Kaushik, M., and Guleria, N. (2020). "The Impact of Pandemic COVID-19 in Workplace", *European Journal of Business and Management, 12(15).* www.iiste.org ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online)

Kibassa, F. M.(2012). "Small Business Research: Upon Finding Definitions of Entrepreneurship, Entrepreneur and Small Firms", *European Journal of Business and Management,* 4(15).

Kraus, S., Clauss, T., Breier, M., Gast, J., Zardini, A., and Tiberius, V. (2020). "The economics of COVID-19: initial empirical evidence on how family firms in five European

countries cope with the corona crisis", *International Journal of Entrepreneurial Behavior & Research,* 26(5): 1067-1092
Landstrom, H. (2005). *Pioneers in entrepreneurship and small business research*, USA: Springer Science and Business.
Lee-Ross, D., and Lashley, C. (2009). *Entrepreneurship and Small Business Management in the Hospitality Industry.* Hospitality, Leisure and Tourism Series, 15. Oxford, UK: Butterworth Heinemann.
Mazzarol, T., & Rebound, S. (2020). *Small Business Management Theory and Practice Fourth Edition*, Springer Nature Singapore Pte Ltd.
Osotimehin, K.O., Jegede, Charles.A., Akinlabi, Babatunde. H., and Olajide, O.T. (2012). "An Evaluation of the Challenges and Prospects of Micro and Small Scale Enterprises Development in Nigeria", *American International Journal of Contemporary Research*, 2(4).
Ozili, P., and Arun, Th. (2020). Spillover of COVID-19: Impact on the Global Economy, *SSRN Electronic Journal.* DOI: 10.2139/ssrn.3562570
Emergency Fiscal Package Implementation Implications and Challenges, RIINVEST INSTITUTE, Kosovo, June, 2020. Accessed date(August 21, 2020) https://www.riinvestinstitute.org/uploads/files/2020/June/30/Pakoja_Fiskale_Emergjente1593500151.pdf
Living with covid-19: Three pillars of recovery, Riinvest institute, Kosovo, July, 2020. Accessed date (September 5, 2020). https://www.riinvestinstitute.org/uploads/files/2020/August/04/Bashkejetesa_me_COVID_-19_Tri_shtyllat_e_rimekembjes1596539010.pdf
Kosovo Agency of Statistics, Kosovo, July, 2020.Accessed date (September 5, 2021). https://ask.rks-gov.net/media/5524/repertori-statistikor-mbi-nd%C3%ABrmarrjet-ekonomike-n%C3%AB-kosov%C3%AB-tm2-2020.pdf
Operational plan for emergency fiscal package, Kosovo, March, 2020.Aceessed date (27 August 27, 2021). https://mf.rks-gov.net/desk/inc/media/9A0918C9-62D0-495A-8D11-4E26A814421A.pdf

BUSINESS ENGLISH AS THE LINGUA FRANCA IN THE MACEDONIAN COMPANIES – A STRATEGY FOR THE FUTURE

Nikola Dimeski
Faculty of Economics - Prilep
nikola.dimeski@uklo.edu.mk

ABSTRACT
The progress of society, in all areas, largely depends on the quality and the advancement of the companies in one country. Since the economy of a country is the primary drive for progress, the corporate world must evolve and advance in order to keep up with the trends and the constant changes in the business environment and thus continue the progress of societies. This paper aims to provide an understanding of the importance of business English as a lingua franca in advancing Macedonian businesses. Although the primary purpose for developing business English has been business interaction among English-speaking and non-English speaking companies, with time, the companies have dragged in native languages turning business English into a lingua franca in the corporate world. Therefore, not only has business English progressed into the backbone of international trade, which is crucial for the economic development of the countries, but it also became essential for the companies' internal communication, which is vital for their operation and performance. That being said, the main implication of this paper is to enlighten Macedonian society on the significance of introducing business English as the lingua franca in Macedonian companies. By discussing and analysing specific areas on how business English can improve the competitiveness of the Macedonian companies and workforce, the researcher proposes a strategy for the future based on; introduction of a Business English course in the Macedonian educational system, training of employees, employment of staff conversant with English, use of simple vocabulary and repetition of statements, and embracing language diversity.

Keywords: *business English, business English as a lingua franca, BELF, English as a lingua franca*

JEL classification*: Z13*

1. INTRODUCTION

Communication between individuals with different languages has increased in every feature of life, including in the corporate environment. According to Gerritsen and Nickerson (2009), this is experienced by business organisations with a diverse workforce and international business communication where speakers and stakeholders come from countries that speak different languages. Gerritsen and Nickerson (2009) explain such a commonplace situation in international business using person A and B. The authors state that four options are available whenever person A uses language A to speak to person B, who uses language B. The first and second option is that these two people can decide to use either language A or language B. The third option is that both speakers can decide to use their first language. The last option is that both speakers can opt for a

http://hdl.handle.net/20.500.12188/15928
http://doi.org/10.47063/EBTSF.2021.0015

third language known as language C. Language C is a neutral language that both speakers, in this case, person A and person B, can speak and understand each other. In most cases, this language C is the one known as a lingua franca. An example of a lingua franca can be business English.
Over the last two decades, most organisations have opted to use English as a dominant language in international businesses. According to Martins (2017), the English language is used by almost 91% of employers in international companies worldwide. It is clear that English is the most common and widely used language in business and international relations. English language in Macedonia is reflected in most business organisations that use English as their cooperate language. All these companies choose to report all their documents in English and communicate between different departments in English.
Since the early 1990s, Dimeski (2016) explains that companies in Macedonia have experienced massive economic and technological transitions. These changes and developments have brought the need to expand the languages used in Macedonian companies for an extensive and better form of communication. Although most people are studying the language, business English puts pressure on employees, particularly those involved in international business. Also, many organisations have failed in diversifying their operations to other nations due to the essential language issue. An OECD Research on Innovating Education in 2016 analyses that some multinationals only focus on markets with a common language, which is a huge limitation for many developing countries, not only for the companies. In order to improve communication and satisfy the desires of the consumers, Macedonian companies should feel the need to implement business English as a lingua franca as they interact with the rest of the world. This paper focuses on the benefits and importance of introducing business English as the lingua franca in Macedonian companies as a strategy for the success of Macedonian society in the future.

1.1. Definition of key terms

Sharma (2020) defines business English (BE) as the "nucleus of business"; thus, an organisation incorporating business English in its culture has business leverage.
Business English as a lingua franca (BELF) is defined as a neutral language of communication between business people whose English is not their first language.
Lingua franca is a tool of communication used by people from diverse native languages.

2. LITERATURE REVIEW

The literature review section discusses the concept of business English, business English as a lingua franca, the importance of introducing business English as a lingua franca in companies, and how the introduction of business English in learning institutions can promote business English as a lingua franca in companies.

2.1. Business English

Business English (BE) is the language used in the business industries, and thus, every individual in the corporate world should learn it (Nickerson and Planken, 2015, p.24). Although it is sometimes perceived that business English is the same as the general English language, this is not the case because someone may be fluent in general English but have difficulties understanding and using business English. There is a wide range of definitions regarding the BE, which shows that the term is understood differently. Most of the time, the way BE is defined depends on

personal characteristics and needs. For example, Dimeski (2016) says that people looking for jobs understand business English as something they should know to acquire a job. On the other hand, business English represents a specific field of the international English language for people with English as their common language. Therefore, the definition of business English depends on the individual perception and the goal aimed to be achieved in the end. Mainly, people from non-English speaking nations are the ones who learn to use it when doing business with people from English-speaking countries.

Business English is also known as the corporate language. Corporate language refers to the language used in the corporate world for performing business transactions among business entities. So, for an organisation to be recognisable and acquire better reviews in the corporate world, it should first master the corporate language. Dimeski (2016) found out that companies in Macedonia have not acquired knowledge of BE in communication, international trade, and interaction with people from different cultures. People working in the companies do not show BE skills when communicating since English is not their native language. Lack of intercultural awareness and skills may lead to misunderstanding and confusion that can harm business relationships and international trading (Winardi, 2015). Most of the time, traders major their communication in general English, which is insufficient for effective business. Although traders developed business English primarily for business reasons among English-speaking and non-English speaking trades, traders in Macedonia have dragged in native languages with time. Hence, Macedonian companies are not fully equipped with people that can make a difference in the country when they participate in the business.

Therefore, based on Dimeski's (2016) arguments, if companies in Macedonia adopt business English, it will advance their economy and help to improve intercultural skills. Besides, it can help solve the rampant issue of cultural diversity in the community and promote professionalism. Furthermore, those with BE knowledge will also understand the business world better and improve communication skills. These different roles and the importance of introducing Business English as a lingua franca in Macedonian companies are explained below.

2.2. Business English as a Lingua Franca

In the past decade, many scholars and researchers such as Nickerson (2015), Seidlhofer et al. (2012); Jenkins et al. (2011); Mauranen and Ranta (2009) have discussed the use of English as a lingua franca, or a common language for communication globally. Jenkins (2011) states that the term lingua franca was first used by the Italians between the 15th and 19th centuries. The term lingua franca signified a conglomeration of Italians and had a smattering of different languages, including French, Greek, and Spanish. At first, lingua franca was used as a language among business people who at no time shared a native language. Referring to Haberland (2011), lingua franca is in two approaches - micro and macro-sociolinguistic approaches. The first one explains that it is used by speakers of different languages as a communication tool. The second approach states that lingua franca is a language of religion. Jenkins et al. (2011) concluded that lingua franca is a tool of communication used by people from diverse native languages. This means that even native speakers are included. Jenkins et al. (2011) explain that Business English as a lingua franca is different from English as a native language, including native English individuals.

Currently, BE has become a lingua franca all over the world. Business English as a lingua franca (BELF) has been getting more and more attention in Macedonia as well, especially since many foreign companies are trying to implement it at an administrative level. BELF is defined by Seidhofer (2009) as a neutral language of communication between business people whose

English is not their first language. Seidlhofer found out that the main focus of BELF in today's world is to achieve effective communication grounded on common understanding in a diverse context. According to Wu (2013), BELF substitutes BE because BELF covers teaching and researching concepts. Its main purpose is to facilitate business communication between native English speakers and non-native English speakers. However, Crystal (2003) found out that this is only applicable in a small amount of BELF interactions since most Native English speakers contribute to up to 25% of the total global English users. According to Louhiala-Salminen et al. (2005), no one can claim BELF as their mother tongue. It is used to conduct business within the global business community.

2.3. Importance of introducing BEFL in Macedonian companies

2.3.1. Solving the issue of cultural diversity

Apart from specialisation in business, Gajšt (2014) found out that for international businesses to be successful, people involved must be aware of each other's culture. Like in any other place, companies in Macedonia engage in business with people of different cultural diversities, which refers to the existence of different cultural groups in one society. In the modern world, where telecommunication advancements exist, cultural diversity has become a significant bottleneck in pursuing societal progress. This obstacle is mainly encountered in multicultural societies such as the Macedonian. Due to different cultures in the community, the various individuals use different languages; hence, communication cannot flow smoothly. Therefore, Gajšt (2014) says that there is a need to communicate effectively with people from diverse cultures and understand how ideas are expressed in international business. This can only be solved if people embrace Business English as a lingua franca (BELF).

Tannen (1984), on his side, found out that communication aspects are different in cultures. If other cultural groups do not understand communication aspects, it may lead to poor communication and misunderstanding, especially when people engage in business. Poor communication is a significant concern and can lead to stunted growth in society. Often, individuals have great ideas that can only be actualised while working with others and understanding each other. In that regard, the Innovating Education and Educating for Innovation Research by OECD in 2016 presents a survey where writing and speaking a foreign language is listed as a critical skill for the most innovative jobs. In the research, a neutral language is regarded as the best way to understand other cultures.

Moreover, poor communication can negatively affect business transactions, as the individuals transacting have to be using the same language. This idea is shared by Lewis (2006), who majorly explains more about culture and their communication patterns, especially in the business environment. In his book, Lewis says that people from different countries use language differently, bringing different thinking and behaviour patterns. Since people understand things differently, cultural diversity may lead to many unresolved conflicts and misunderstandings in society. The unresolved disputes, mainly in companies and international businesses, lead to work inefficiency among employees, which later translates to low profits, layoffs, and other serious consequences for the businesses. To avoid cultural collisions, Lewis concludes that business people must be aware of the potential misunderstanding in communication and find ways of solving them. This can only be achieved if a neutral language is used, which in this case is BELF.

Also, cultural diversity can lead to increased social tension, which has been the case in Macedonian society for years. Over the years, minority cultural groups have been facing, or feel that they are facing, much social pressure from the majority cultural groups. For instance, in areas where Christians are the dominant religion, the other religions present, such as the Muslims, may feel that they have been neglected and discriminated in various occasions, and vice versa, for that matter. Additionally, during political events such as elections, individuals from different cultural groups often are not represented in political life, so they always blame each other when their favourite candidates are not elected. This feeling of inequality sometimes even leads to a civil war, which is a significant blow to societal advancement.

Suppose the society in Macedonia will embrace BELF; individuals from different cultures, especially those engaging in business, will learn the same language, thus having some related cultural values. Winardi (2015) explains that the relativity of cultural beliefs resolves the issues caused by cultural diversity. In their study, Winardi (2015) and Chan (2020, p.47) found that society can solve poor communication problems if they use the same language since speakers can communicate effectively. Further, on unresolved conflicts, individuals and employees working in Macedonian companies can feel closer to each other; thus, they can resolve any differences among them in a much more peaceful way. Also, concerning social tension caused by cultural diversity, business English as a lingua franca helps ease such uncertainty, as the language unites the different cultures. Hence, with the resolved problems of cultural diversity, the community and Macedonian companies can advance the country's economy and create a society that integrates all cultures and peoples.

Furthermore, Business English as a lingua franca will enable companies in Macedonia to understand the corporate world better. This idea is emphasised by Gak (2019), who says that a better understanding of the corporate world is essential for each organisation as it gives them a competitive advantage. In this case, it shall give the business entities in Macedonia a competitive advantage over their rivals in the global industry since they understand the industry better. Therefore, individuals and organisations' improved understanding of the business world in Macedonia will ultimately lead to an advanced economy and business.

2.3.2. Facilitation of international trade

Communication in business situations aims to achieve business objectives, which, according to Gajšt (2014), aims at reaching agreements and making deals. Gajšt (2014) further says that, apart from being used in written communications, business English when it is a lingua franca it can also be used in spoken interaction with stakeholders. The spoken interaction can be in socialisation, negotiations, and meeting with people from an international context. In international trade, language is vital. People have to understand each other using the same language to transact on business matters effectively. BELF, when used by business parties in an international context, can help them communicate in the same language, thus understanding and successfully cooperating (Jenkins et al., 2011).

BELF has various benefits to international trade, as explained by Gerritsen and Nickerson (2009), Sing (2017), and Martins (2017). Referring to a study done by Gerritsen and Nickerson (2009), BELF has played a dominant role in international business transactions in the last two decades. The study found that BELF is necessary for speakers from different countries and whose English is not their first language. With BELF, these international speakers have been able to share ideas and engage in trade. Another study by Martins (2017) on "perspectives on business English as a lingua franca in business communication" showed that if companies focus on the use of BELF, they can easily share ideas necessary for any international business. According to Peng and Wang

(2020), the global status of the English language has raised the need for business English. As many organisations are trying to go global, they consider business English as essential as it is the language used in carrying out business in different countries. Another study by Sing (2017) realised that BELF acts as an "umbilical cord of cultural diffusion," which means that all first languages are diffused. As a result, speakers end up speaking one lingua franca. In the end, it increases the volume of international trade. This has helped international traders to enhance their communication practices in their international business transactions. In addition, implementing BELF in the companies can play a crucial role in achieving this progress. The enhancement of global trade enhances society's growth. The advancements include economic growth in the community, initiated by increased exports. Finally, there is technological improvement in society as countries can quickly transfer technology from better-developed business partners.

Therefore, if companies in Macedonia understand the importance of BELF, they will be able to view their international business parties as belonging to the same cultural group due to the shared language. Moreover, this relativity in language will improve harmony among the business parties as individuals form solid bonds amongst the business parties. Also, business parties can more easily formulate laws and principles governing international trade and enforce them when both parties use the same language compared to when they use different languages. Thus, the benefits of international trade manifest societal progress.

2.3.3. Communication skills and professionalism

In the corporate world, just like in the everyday world, communication is critical. Communication is a critical factor in the business, or as Lovlyn, in her research in 2017, concludes, "…transfer of understanding from one person to another is viewed essential for the continued growth, survival and existence of an organisation". Furthermore, since the companies rely on individuals, the individuals must have business English skills to transfer the information clearly and successfully. Therefore, every member in the corporate world should have the requisite tools and skills for efficient and effective communication. Hence, the knowledge of business English will greatly enhance business communication skills, explicitly required in the business environment.

By studying and using BELF, Dimova (2005) says that society and especially people working in the companies are prepared and equipped with the required skills for effective and efficient communication in the corporate world. Dimova (2005) further says that communication skills can also be evident in how information is presented in televisions/radio broadcasting and print media. Usually, an individual who is fluent in business English has the upper hand in the corporate world. Due to their communication skills, they can easily understand clients, explain and present their business ideas or products, and effectively and efficiently bargain with the client.

There have also been cases where companies decline to employ people who do not have business English communication skills. This is proved by a study done by Martins (2017). The study found out that 89% of employers in international companies prefer to employ people who speak the English language up to a certain level since these are the people with improved communication skills. By employing staff that has BELF knowledge, companies reduce the expenses of training and reach international audiences. Also, employees easily achieve technical skills and experience through training and development programs; thus, it is cheaper and time-saving. Therefore, if Macedonian companies understand a neutral language, which is BELF, they will also be able to target international audiences using perfect business English.

Additionally, BELF skills give employees an added advantage over their peers, as they are more confident in expressing themselves due to their eloquence in business English. A study by Chan (2020) showed that BELF improves the level of confidence among employees. Confidence is critical, especially at an individual level. It determines how a person expresses themselves to others during presentations or interviews; candidates eloquent in business English are confident about themselves. Such individuals are also knowledgeable and aware of all the terms and vocabularies used during the interview. In another study on "business English lingua franca in intercultural (business) communication," Kankaanranta (2008) realised that communication skills are crucial if companies want to achieve their goal and prosper in business. Additionally, employing BELF equips business staff with skills that lead to improved communication skills in the corporate world, which ultimately translates into profitable corporations.

Even though learning general English is an advantage for business English students, Gak (2019) found out that making it a lingua franca would help society gain knowledge and understanding of complex business terms and vocabularies. These terms and vocabularies could not have been learned in just studying the general English language. Furthermore, if business English as a lingua franca is adopted by Macedonian companies, the staff and stakeholders involved will be more eloquent in the corporate language. As a result, their companies will be considered professional by the different entities in the corporate world. Just like wearing official suits by managers is deemed proficient, mastering the corporate language by the managers is also regarded as professional. Professionalism in the organisation comes with certain benefits such as; increased faith in the customers concerning the organisation; customers always believe that professionals produce high-quality services; thus, they will prefer to transact with a professional organisation instead of unprofessional ones.

2.3.4. Facilitates cooperation, teamwork and organisation goodwill

The basic foundation of cooperation and teamwork is the sharing of the same vision and goals. Sharing the vision and goals in society at large or at an organisational level is affected by sharing cultural aspects such as language. For example, a study by Sharma (2020) concluded that societal members, including coworkers, clients, business partners, could harmoniously work together because of the shared language. In addition, the organisation can easily enforce the various policies and guidelines formulated, as all the members of an organisation understand the language used. Cooperation and teamwork in the company come with numerous benefits, such as strong interpersonal skills. As employees cooperate in dealing with the assigned tasks, Sharma continues to explain that they can learn from each other, thus improving their technical skills and knowledge. The improved abilities later lead to a well-skilled and equipped workforce, therefore, increased productivity.Additionally, employees can handle complex tasks with ease as different employees have unique skills and experience. When they are teamed up, they form a strong workforce that can handle any job. Sharma (2020) also found out that teamwork helps in uprooting hidden employee skills and abilities, such as leadership skills. That being said, business English as a lingua franca in Macedonian companies will encourage teamwork. Due to BELF, businesses and society can enjoy the benefits of cooperation and teamwork among employees in organisations and individuals in the community and international context.

Business English as a lingua franca can also help in raising organisational goodwill. Goodwill raises the value of the organisation. According to Kralova and Dolezelova (2020), investors and financiers majorly focus on the firm's worth when choosing the firms to invest into or to finance. Therefore, investors can only invest in companies that have improved goodwill rather than those

with lowered goodwill. Additionally, improved goodwill sets the organisation apart from the competition for the most skilled and experienced employees in a particular industry (Tan, 2007). Usually, in certain professions and especially in the knowledge industry, an individual is always perceived as more quality in terms of skills and knowledge. Since most organisations compete for the individual's services, the qualified employee is more likely to choose the organisation with a good public reputation because they are the best; thus, they would like to be associated with the best organisation in the industry. As argued in the paper, among the various required qualities by the business organisations, the knowledge of business English is considered essential in the business world. Hence, when an organisation's staff is fluent in business English, the organisation's goodwill tends to improve as many people consider business English a professional language. Therefore, every company in Macedonia has to work on its public image and its corporate reputation.

According to Lassar et al. (1995), when a company incorporates BELF into its culture, the public perceives it as a well-established organisation, thus improving goodwill or corporate reputation. The higher goodwill comes along with many benefits for the company, including increased brand loyalty among customers. Loyalty will enable Macedonian companies to maintain and control a particular market share, thus prosperity. Therefore, Macedonian companies should encourage students to accept business English as a lingua franca and learn it in secondary and at the university level. The educational institutions incorporating business English in the syllabus help students grow their careers and increase their chances of being employed in the cooperate world. For example, suppose business English is made a lingua franca in the Macedonian corporate world. In that case, students and company staff will be equipped with the knowledge necessary to be employed anywhere since they have learned specific communication skills.

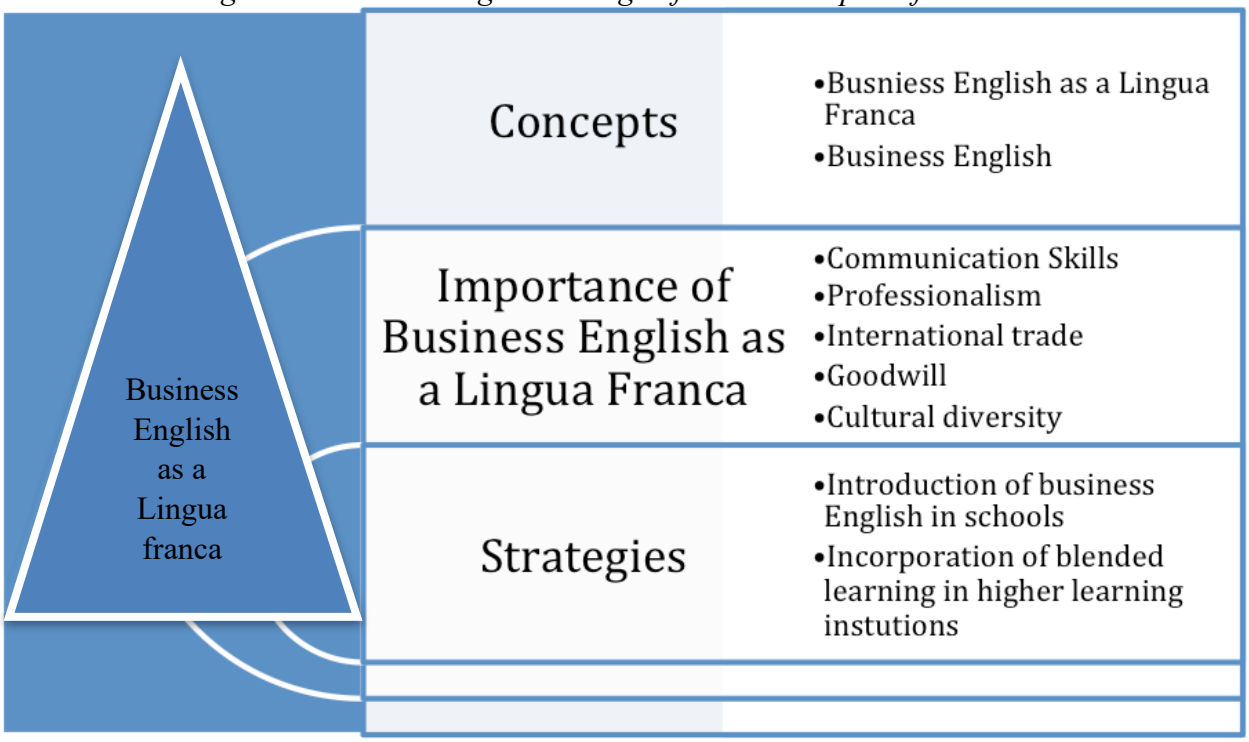
Finally, goodwill encourages forgiveness from both the public and the authorities. When an organisation has always been going the extra mile to serve its customers with quality goods and services, when inefficiencies occur sometimes, the customers will likely understand the situation. Moreover, when an organisation has been adhering to the set policies, it can be easily pardoned in case of noncompliance. All these benefits of improved goodwill will accrue to Macedonian companies if they incorporate business English into their culture.

2.3.5. Strategies discussed by other researchers

Introduction of business English in learning institutions can significantly increase business English's chances of becoming a lingua franca in Macedonian companies. Nickerson and Planken (2015, p.20) say that companies like those in Macedonia can work together with higher learning institutions to promote transparency and accountability. The transparency leads to increased credibility of the results. Improving credibility boosts employers' confidence in the graduates; hence they can be easily absorbed in the job market. Therefore, educational institutions in Macedonia have to advance their current courses and programs and assess their effectiveness to bridge the gap between what is provided by them and what is required by the business community (Andrade 2020). Furthermore, they can enhance the learning of business English through the implementation of blended learning, which incorporates physical and online-based learning in higher educational institutions. Such incorporation can lead to easier access for working adults and a broad scope of students; thus, the higher learning institutions can admit many students and potentially work with higher quality and more skilful students. Suppose business English is introduced in the curriculum; they will help galvanise the business

environment in the country, which will lead to advancing the Macedonian society and improving the standard and quality of living.

Figure 1: Business English as lingua franca conceptual framework



3. METHODOLOGY

The knowledge of business English as a lingua franca (BELF) in Macedonian companies was based on insights drawn from three different research methodologies. First, knowledge was obtained from research carried using surveys such as structured interviews and survey questionnaires. Second, the researcher also discussed activities that involved experimental research and, finally, two case studies have been analysed. Under discussion, the researcher discusses how the three types of research contribute to the knowledge of business English as a lingua franca in different companies and corporations. On the other hand, since not many studies are conducted on BEFL particularly for Macedonian companies, the researcher extends the discussion to other studies conducted in China and Germany.

For survey research in Macedonia, the researcher analysed an unpublished study conducted in 2017 and presented at a conference in 2018 in Plovdiv, Bulgaria by Dimeski who argues that teaching business English should be learned as a core competency for the students. Dimeski (2017) discusses "the need to understand that business English is among the core skills required by the companies for their employees." The study analyses responses from managers from twelve Macedonian companies, ten university professors teaching Business English and seventy-five Business and Economics students regarding the importance of business English proficiency, in order to create a student-centred curriculum that will include students' wants and needs, however the recommendations from the companies as well. The survey revealed that not only Macedonian companies prefer graduates with a high level of English proficiency but also rate the importance

of English proficiency in the workplace as essential. In addition, business representatives responded that they expect the graduates to be fluent in English. Furthermore, Dimeski (2017) found that Macedonian companies require changes in the educational system regarding the Business English course. Thus, they believe that higher education institutions in the country have to make Business English a compulsory and core course for the students so that they are proficient and competent in communicating in English.

In addition, the survey research of Sonja Vandermeeren's in 1998 and 1999 has been analysed. Vandermeeren's work is discussed by Gerritsen and Nickerson in 2009. According to Gerritsen and Nickerson, Vandermeeren conducted a study involving several companies from different countries for three key reasons; to evaluate the language patterns from each corporation, whether there existed a link between them, and why certain patterns existed. The data was collected on a large scale through the use of questionnaires. It involved countries such as Germany, France, Hungary, Portugal and Netherland. The survey conducted in 1993 and 1994 in the five countries aforementioned for car companies and electrical industries resulted in 415 responses from corporations. The overall results indicate that many corporations used English as their business language. However, other languages were also considered important and relevant and were sometimes used instead of English. For example, around 42% of the companies located in France used German-language when transacting business with German corporations. The researcher also found out that approximately 30% of the German companies used English, and 25% reported to have used French when transacting business with the French companies. Vandermeeren revealed that English did not dominate as a lingua franca across the corporations. Instead, the study showed that English was used together with other native languages. In fact, in 1993 and 1994, German-French corporations did not use Business English as a lingua franca. Instead, several corporations preferred to use the first language of their business partners. Charles and Marschan-Piekkari (2002) conducted similar survey research on Kone Elevators. Their study used extensive surveys and interviews to investigate the middle management of Kone elevators in Finland. The survey was meant to investigate the company’s language policy, which involved adopting English as a corporate lingua franca. It involved 110 staff who were interviewed on the use of English and the challenges they encountered. English had been in use in the company for over 30 years, yet the employees interviewed claimed that there were still problems in communication. The difficulties in communication were caused by the diversity of different Englishes. Business English as a Foreign Language (BEFL) and Business English as a Second Language (B)ESL speakers had less difficulty in communicating and understanding their colleagues in BEFL and (B)ESL than they did with the colleagues who were Native speakers of English (NSE). The researcher recommended raising awareness of integration and use of BEFL and (B)ESL among the colleagues who spoke NSE.

English as a business lingua franca in a German multinational corporation is a study conducted by Sussane Ehrenreich from Ludwig-Maximilian's University Munchen Germany. The data for this study was obtained between 2006 and 2007 on the language and communication perceptions among employees at TechComp company. Specifically, there were 24 interviews conducted, observations of meetings comprising 16 events on board members and engineers from the TechComp. Some of the interviewees were from Germany, while others had Italian, British and American nationalities. Business English is not the official corporate language in TechComp, but its efficacy is a must for managers and top management down to other regular workers. The findings show that English use in corporations is a must for a general understanding of all the staff at all levels. In fact, Ehrenreich (2010) proposes that all staff need to develop English language skills to enhance their performance and role within the company. Also, it is not

necessary to learn English as a native language but as a way of communicating effectively within the company setting. Therefore, apart from the strategy of learning business English in the context of enhancing communication, it is also essential to ensure that the native languages are not eradicated but used as strategic resources that complement business English.

Further, the researcher also discusses the experimental research that focused on English accents previously carried in Radboud University Nijmegen by Nejjari, Gerritsen, Van der Haagen and Korzilius in 2012. Nejjari et al. claim that the British Native speakers of English (NSEs) could comprehend well the sentences uttered by their colleagues with a Dutch accent. However, this depends on the first language of the English as a Foreign Language (EFL) speaker. Those that closely resemble English were found easy to understand. The use of experimental methods in such a field is faced with several limitations, such as texts which can easily be manipulated, and responses may respond differently under real-life situations and when in an experimental setting. In that regard, data collected using experimental studies require complementation with real-life observations. For experimental studies among the BELF and EFL, more research is needed to understand the use of English as a lingua franca.

The researcher also focused on a case study conducted by Manachai Inkaew from the Rattan Bundit University, Bangkok, Thailand. Manachai performed a case study to understand how English is used as a Lingua Franca among the non-native speakers for mutual understanding in international Golf Tournament Operations in Thailand. The case study analysis by Manachai on English as a lingua franca during an international golf tournament in Thailand is a landmark in which case study analysis is the primary methodology. He evaluates how successfully English is used as a lingua franca among non-native speakers with different language backgrounds. Data in this study was obtained through interviews conducted on ten personnel selected from the international golf tournament. Five personnel were from the Thai working team, and the others were from the organiser team. Participants from the organiser team were from different countries. The study aimed to explain how people with varying language backgrounds can achieve mutual understanding in a golf tournament and execute their work effectively. The language barrier issue is unavoidable in any setting where diversity of race and language is upheld. However, the issue of a language barrier cannot be an obstacle in executing the mandate and mission of the industry. Manachai established that the people who participated in the research perceived English positively though they lacked confidence. However, the participants argued that some terminology used in the field, accents, and limited words, disrupted their communication. In his study, Manachai discusses several strategies that can help to achieve mutual intelligibility for all parties. Some methods that effectively enhance mutual understanding where language diversity is embraced within an industry are using simple English words and choices, body language, and repeating words and sentences.

3.1. Findings

Most of the workers in Macedonia rarely use business English as a primary language of communication at their place of work. The gradual shift of most tech companies worldwide from using their native languages to business English as lingua franca is overwhelming and poses a challenge to countries such as Macedonia, who still, to some extent, embrace their native languages. Of course, we do not suggest replacing and eradicating the native languages used by companies in Macedonia. Instead, with the speedy diversity across the business world, it is perhaps the right time for Macedonia to incorporate and embrace business English in their corporations. This is not necessarily saying that people should only communicate in English; in

extensive studies, business English as lingua franca fits well in a diverse corporation society that still values its nativity.

Understanding business English is vital for successful interactions and efficient running of activities at the workplace. It also starts with what Gajšt (2014) refers to as comprehension of ideas. If ideas cannot flow effectively from one person to another, accomplishing the mission and reaching a company's goals is obstructed. Poor communication has devastating outcomes such as stunted company growth, unresolved conflicts, misunderstanding (Lewis 2006), and poor actualisation of the right plans and ideas. All these setbacks translate to low profits and more severe disadvantages for the businesses.

Business English as a lingua franca plays a vital role in the facilitation of international trade. It creates a fairground of communication where people from different backgrounds can interact and share information without anyone feeling compromised or excluded. Gajšt (2014) shows how powerful it is to have strategies that advocate for BELF in businesses. Gajšt and other researchers like Gerritsen and Nickerson (2009), as well as Sing (2017) and Martins (2017), say that proper communication in business interactions is not limited to making deals and agreements, but still is effective in negotiations and interactions that involve international trades. The importance of incorporating BELF for companies in Macedonia creates a better avenue for these companies to grow and operate internationally. For example, a scenario is given of a TechComp company that operates in different parts of the world. In such a corporation, the use of business English as a primary mode of communication is mandatory; to enhance understanding. To achieve mutual understanding, all the stakeholders need to work together towards attaining a similar goal. The research carried by Manachai showed that to achieve similar goals all the personnel need to have a shared way of communication. Even though some challenges such as lack of confidence can interfere with communication efficiency, it gradually fades as everyone becomes eloquent. In that regard, Macedonian companies, especially the leaders, have a role to play. They need to introduce business English as means of communication within their companies. Change is inevitable, and with proper strategies, business English will be a culture embraced by all people with different language backgrounds.

3.2. Proposed strategies

Based on the aforementioned research and findings, several strategies can be implemented to ensure business English becomes a lingua franca in Macedonian companies. The strategies concern the companies and the educational institutions and they both have to play its role in the implementation of BELF.

3.2.1. Employment of staff with English skills and training of employees

Macedonian companies should be considerate when hiring new employees. Since diversity is encouraged across several major corporate sectors, there is a need to ensure that employees with proficient English skills are part of the stakeholders. Having employees who can eloquently speak English, especially business English, is a significant step in bringing change. Such employees are more likely to educate others during their interactive sessions. Also, when employees realise that a company aims at having workers who can communicate in business English, all the individuals shall strive to acquire the skills to maintain their positions and remain competitive among the other workers. Therefore, companies need to train their employees and

other stakeholders on business English to ensure uniformity in communication skills across all the employees.

3.2.2. Introduction of business English in secondary and tertiary institutions

General English knowledge is insufficient, and the need to comprehend and communicate business English effectively is paramount. In order to ensure there is advancement in economy and business, there is an urgency to have an education system that supports business and economy. As students graduate, they need to have business English skills to be productive in corporations and offer quality services. This plan could work even more effectively if the institutions implement blended learning and increase levels of transparency and credibility. The learning process should entail what Ehrenreich (2010) proposes; learning English as a communication strategy and not necessarily as a native language. This diversification of business organisation is advantageous to the graduates as they can easily get their dream job from the available variety of opportunities globally due to the appropriate knowledge, skills, and abilities they have obtained in an appropriate learning environment (Andrade, 2020). Brindha, in their research published in 2017 entitled "Why business English," explains in detail the benefits of gaining knowledge in business English and argues that business English makes entrepreneurs more confident and increases their chance of achieving success. Similar benefits of having business English taught in school are expressed by Sharma (2020). Sharma states that "students having wonderful skills in Business English and communication would always be in demand." then he goes further and adds that thanks to business English, "you can explore your business nationally and internationally."

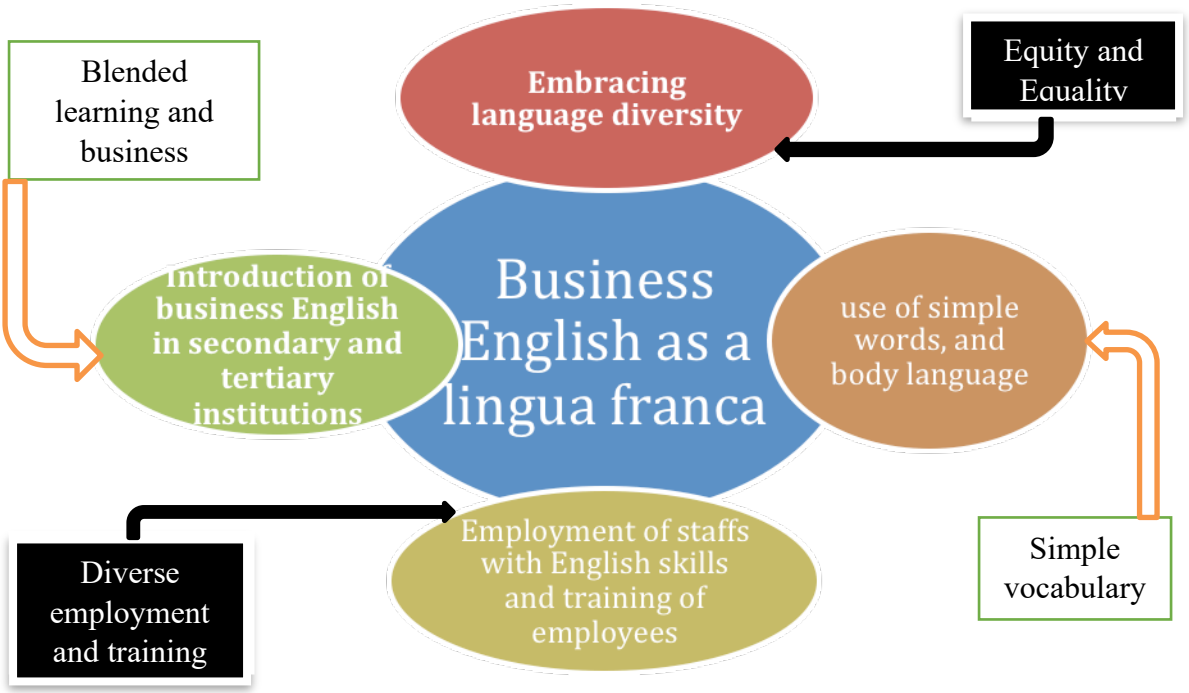
3.2.3. Embracing language diversity

Embracing language diversity is the first step of ensuring that a company values business English as a Lingua Franca. When the key stakeholders embrace language diversity and ensure that all the stakeholders are satisfied in the workplace despite their differences, it is easy for them to appreciate the usefulness of having a common business language. Therefore, it is important for stakeholders, especially the leaders, to ensure equity and equality across all the departments. This approach will make all the stakeholders comfortable and feel that they are part of the change.

3.2.4. Use of simple wordings and body language

English, like other languages, has complex words that are challenging even to native speakers. The use of complex wordings when communicating limits the participation rate and prevents understanding one another quickly. In that regard, business English as a lingua franca in Macedonian companies should first involve using simple vocabulary that is easy to understand. It is also essential that the communication is founded on the repetition of words and statements to avoid misunderstanding and misinterpretation. In addition, communication should involve body language. Integration of body language, simple words, and repeating statements makes it easy for members to understand each other and execute plans having similar objectives. Implementing the proposed strategies can be significant in bringing change to Macedonian companies and ensuring that business English becomes a lingua franca.

Figure 2: A proposed strategy for BELF in Macedonian companies



3.3. Limitations

The study had two main limitations; little is discussed on business English as a lingua franca in Macedonia. Secondly, the research relied on research carried by others and not data drawn from the Macedonian companies. There is little literature discussing English as a lingua franca for companies and corporations in Macedonia. Therefore, this study relied on outside studies rather than those conducted in Macedonia to develop a future strategy. This implies that it based its arguments, discussion, and conclusion on studies conducted by other researchers. The findings of these researchers probably could not be generalised to all the countries across the world. However, most businesses worldwide operate their communication using a lingua franca that is understood by a significant portion of stakeholders. Among the commonly used lingua franca is business English which many companies across the world currently embrace.

3.4. Recommendations

There is a need to develop a curriculum that encourages students to learn business English while in school. Teaching students on different varieties of English, students become conversant with the English used in the business world. Therefore, schools in Macedonia should include English used in the business world, ranging from English as a Second Language (ESL), native speakers

of English (NSE), and English as a foreign language (EFL) as part of the curriculum. Therefore, to advance the economy and business, the educational system has to be advanced so that when students graduate, they are highly qualified and skilful for the available job opportunities both n and globally.

It is also recommended that the Macedonian companies ensure that the stakeholders are aware of the impacts of culture. Culture is conservative and aggressive and, erosive changes are strongly resisted. Some employees have strong beliefs about their cultures, such that if what they think is wrong as per their culture is considered correct in the organisation, they are ready to quit. Also, some employees are unable to work peacefully with other employees from different cultural groups. This difference leads to many employees resigning, which is costly to the organisation, as it will use more money to recruit new employees. Therefore, Macedonian companies have to personally train and develop recruits who are graduates and well equipped for the job. Proper selection and training will help Macedonian companies reduce the high turnover rate caused by a lack of BELF knowledge.

4. CONCLUSION

There are numerous benefits of business English as a lingua franca; therefore, the researcher aimed at proposing a strategy that could be used in implementing business English as a lingua franca in Macedonian companies. The importance of the introduction of business English as a lingua franca is to improve communication and satisfy the target audience's needs for companies in Macedonia. There is no better and more stable way of advancing society than educating the people since the human resources of any country are the backbone of the development and the future of that country. That is why this paper proposes a strategy for the future of the Macedonian societal development based on advancing the Macedonian educational system. Incorporating business English as the lingua franca in the business organisations in the country, as argued in this paper, shall significantly improve the business environment as well as the Macedonian economy. Although there are various ways of promoting education, incorporating business English in the syllabus is one of the main ideas proposed in this paper.

Business English is the international business language as it is applicable in international business transactions. However, business English is different from general English. General English focuses on day-to-day conversations; hence, it does not incorporate complex vocabularies, business and economics concepts, and phrases, nor does it prepare the learner with the essential business communication skills. On the other hand, business English focuses on the unique phrases and terms used in the corporate world. Therefore, being fluent in general English is not sufficient for a person to be able to perform business transactions in the corporate world. Consequently, individuals, especially if their career path is business-related, have to study business English in secondary and tertiary education, and after they acquire the knowledge of general English. Therefore, introducing Business English courses into the Macedonian educational system, both at the secondary and tertiary level of education, is key to preparing and developing a skilled workforce and knowledgeable university graduates ready to apply their competence in the business world.

The changes in the educational system are essential in promoting the proposed strategy in this paper for advancing the Macedonian companies. However, companies should not wait until those changes are implemented into the Macedonian educational system but work with society and the authorities to present and explain the benefits of the changes. In other words, the business entities should gradually start to implement business English as the lingua franca into their business organisations at different levels in their organisational structure. In addition, companies have to

start with training the current workforce to be able to function in the new environment. Thus, by proper recruitment and training of the recruits, Macedonian companies shall have an adequate number of quality workers. Corporations should also consider promoting equity and equality across all departments. This makes all the diverse groups working in the companies feel wanted and valued. It becomes more of a once society though comprising people of different backgrounds. With diversity being embraced, the stakeholders can easily develop the need to have a common language of communication. It is also important for the companies in Macedonia to promote the use of business English as a lingua franca by first encouraging the use of simple English words and body language. This can be a good beginning to build a cohesive and comprehensive language where all stakeholders are comfortable with language policy. The use of complex words can result in some stakeholders dragging behind and perhaps giving up.

However, for the community to see the benefits of this strategy, business English must be incorporated both into the business organisations as well as into the syllabus of the Macedonian education institutions; thus, they can create graduates and workforce with employability and work-related skills, ready for the real business world. The benefits of this strategy for the Macedonian corporations include; improving an organisation's goodwill, solving the rampant issue of cultural diversity in the community, business leverage, students' career growth, more understanding of the business world, enabling graduates to get the job they want, increasing professionalism among individuals, improving communication skills among individuals and facilitating cooperation and teamwork both in the organisation and the society at large.

REFERENCES

Andrade, M. (2020), "Innovations in Higher Education - Cases on Transforming and Advancing Practice" Parrish, D. & Joyce-McCoach, J. (ed.), *A Responsive Higher Education Curriculum: Change and Disruptive Innovation*, IntechOpen.

Brindha, S. (2017), "Why business English," *IUP Journal of English Studies*, 12. pp. 64-69.

Chan, M. (2020), *English for Business Communication* (1st ed.). London: Routledge. https://www.taylorfrancis.com/books/mono/10.4324/9781351060035/english-business-communication-mable-chan

Crystal, D. (2003). *English as a global language*. Ernst Klett Sprachen. http://culturaldiplomacy.org/academy/pdf/research/books/nation_branding/English_As_A_Global_Language_-_David_Crystal.pdf

Dimeski, N. (2016). Effective Business English Teaching at University Level in Macedonia–Needs Analysis. *Cataloging-In-Publication Data*, pp50-59. http://ibaness.org/bnejss/2017_03_01/07_Dimeski.pdf

Dimeski, N. (2018). "Teaching and Learning Business English as a Core Competency–A Strategy for Enhancing the Skills of the Business and Economics University Students.", paper presented at International Balkan and Near Eastern Social Sciences Congress Series VII. IBANESS Congress Series, April 21-22, 2018 Plovdiv, BULGARIA, pp. 661. http://www.ibaness.org/conferences/plovdiv_2/ibaness_plovdiv_proceedings_draft_10.pdf

Dimova, S. (2005). "English in Macedonia.", *World Englishes*, *24*(2), pp. 187-202. https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1467-971X.2005.00403.x

Ehrenreich, S. (2010). "English as a business lingua franca in a German multinational corporation: Meeting the challenge.", *The Journal of Business Communication (1973)*, *47*(4), 408-431.

Gajšt, N. (2014). "Business English as a lingua franca–a cross-cultural perspective of teaching English for business purposes.", in *ELOPE English Language Overseas Perspectives and Enquiries*, *11*(2), pp. 77-87. https://revije.ff.uni-lj.si/elope/article/view/3171/2879
Gak, D. (2019), "Business English or Survival English?" in *10th International Language Conference on The Importance of Learning Professional Foreign Languages for Communication between Cultures, 20/21 Sept. 2018, Celje, Slovenia*, pp. 121-128.
Gerritsen, M., & Nickerson, C. (2009). "BELF: Business English as a lingua franca.", in Francesca Bargiela-Chiappini (ed.), The handbook of business discourse, pp. 180-192. https://www.researchgate.net/publication/289557702_BELF_Business_English_as_a_Lingua_Franca
Goudswaard, G., Henderson, D. & Streitwieser, V. (2018), *Business English*, München: Haufe Lexware Verlag.
Haberland, H. (2011). "Ownership and maintenance of a language in transnational use: Should we leave our lingua franca alone?", in *Journal of Pragmatics*, *43*(4), pp. 937-949. https://www.academia.edu/698341/Ownership_and_maintenance_of_a_language_in_transnational_use_Should_we_leave_our_lingua_franca_alone
Inkaew, M. (2018). "An Exploration of English as a Lingua Franca Communication: A Case Study of How English is Used as a Lingua Franca among Non-native Speakers for Mutual Understanding in an International Golf Tournament Operation in Thailand.", in *REFLections*, *25*(2), pp. 42-58.
Jenkins, J., Cogo, A., & Dewey, M. (2011). "Review of developments in research into English as a lingua franca.", *Language teaching*, *44*(3), pp. 281-315. https://eprints.soton.ac.uk/186181/1/LT_article.pdf
Kankaanranta, A. (2008). "Business English Lingua Franca in intercultural (business) communication.", in *Language at Work-Bridging Theory and Practice*, *3*(4). https://tidsskrift.dk/law/article/view/6193/5381
Kralova, Z. & Dolezelova, E. (2020), "The importance of English in business education in the Czech Republic." in *Journal of Education for Business*, 96(2), pp. 111–119.
Lassar, W., Mittal, B. and Sharma, A. (1995) "Measuring Customer-Based Brand Equity," in *Journal of Consumer Marketing*, 12, pp. 11-19.
Lewis, R. D. (1999). *Cross-cultural communication: A visual approach*. Transcreen Publications. 2006. When Cultures Collide: Leading Across Cultures. London: Nicholas Brealey Publishing
Louhiala-Salminen, L., Charles, M., & Kankaanranta, A. (2005). "English as a lingua franca in Nordic corporate mergers: Two case companies.", in *English for Specific purposes*, *24*(4), pp. 401-421. https://www.sciencedirect.com/science/article/abs/pii/S0889490605000086
Lovlyn, K. (2017), "The Role of Effective Communication in Strategic Management of Organizations," in *International Journal of Humanities and Social Science,* 6. pp. 93-99.
Martins, H. F. (2017). "Perspectives on Business English as a Lingua Franca in Business Communication.", in *Teacher Education and Curriculum Studies*, *2*(5), 61. http://www.sciencepublishinggroup.com/journal/paperinfo?journalid=240&doi=10.11648/j.tecs.20170205.11
Nickerson, C., & Planken, B. (2015). Introducing Business English (1st ed.). London: Routledge.
OECD (2016), Innovating Education and Educating for Innovation: The Power of Digital Technologies and Skills, OECD Publishing, Paris.
Peng, L. & Wang, X., (2020), "Analysis of negotiation skills of Business English in international trade." *2020 International Conference on Educational Science (ICES2020)*, pp. 760-763.

Rao, Parupalli. (2019), "The Role of English as a Global Language." in *Research Journal Of English (RJOE),* Vol-4, Issue-1, 2019, pp. 65-79.
Seidlhofer, B. (2005). "English as a lingua franca.", in *ELT Journal Volume 59/4,* October 2005. Oxford University Press, http://eltj.oxfordjournals.org/content/59/4/339.full.pdf+html
Seidlhofer, B. (2009). "Common ground and different realities: World Englishes and English as a lingua franca.", *World Englishes*, *28*(2), pp. 236-245. https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1467-971X.2009.01592.
Sharma, G. (2020), "Ideology Of Business English.", in *Topical Issues of Linguistics and Teaching Methods in Business and Professional Communication Conference*, pp. 100-107.
Sing, C. S. (2017). "English as a lingua franca in international business contexts: Pedagogical implications for the teaching of English for Specific Business Purposes.", in *Handbook of Business Communication,* pp. 319-356.
Tan, H. (2007). "Does the reputation matter? Corporate reputation and earnings quality." Working paper, China SouthwesternUniversity of Finance and Economics.
Tannen, D. (1984). "The Pragmatics of Cross-Cultural Communication 1.", *Applied linguistics*, *5*(3), pp. 189-195.
Winardi A. (2015), "The Importance of Developing Intercultural Awareness in the Business English Classroom.", in *Sino-US English Teaching*, December 2015, Vol.12 No.12, pp. 964-968.
Wu, Y. (2013). "Business English as a Lingua Franca (BELF).", in *International Education Studies*, *6*(10), pp. 130 138. https://files.eric.ed.gov/fulltext/EJ1068643.pdf

COVID 19 PANDEMIC AND HEALTHCARE SECTOR IN NORTH MACEDONIA: WHAT HAS CHANGED FOR THE HUMAN RESOURCE MANAGEMENT

Ljupco Eftimov
Faculty of Economics – Skopje, Ss Cyril and Methodius University
eftimov@eccf.ukim.edu.mk

Tihona Bozhinovska
Faculty of Economics – Skopje, Ss Cyril and Methodius University
tihonabozhinovska@gmail.com

ABSTRACT
The way the employees in the health care sector were managed during the period 2020-2021 was crucial for the management of the overall social and economic crisis. The most important areas from strategic human resource management that needed urgent attention during COVID 19 pandemic were: appropriate communication of the requirements of the new normal and identification of the most skillful employees for adapting to the changes and forecasting the forthcoming trends. Therefore, investigating the key activities for increasing the healthcare providers satisfaction of human resource management process during Covid 19 is an important issue and can offer significant insights for HR professionals and for the healthcare organizations. The purpose of the paper is to shed some light on the most important human resource practices during the COVID 19 pandemic and to understand how healthcare organizations had to rethink their approaches in order to maintain the motivation and commitment of the healthcare providers. The capability and willingness of the healthcare staff to stay focused and to cooperated in a dynamically changing internal and external environment was crucial for the overall healthcare sector during the pandemic. Hence, this study is trying to contribute by: identifying the key human resource (HR) issues/challenges in healthcare organizations during the pandemic, creating a theoretical model of strategic human resource management during Covid 19 in healthcare organizations and understanding which human resource (HR) practices/activities were perceived as most important for increasing healthcare providers satisfaction of the human resource management process in their organizations during the last period of turmoil.

Key words: *human resource management, pandemic, healthcare providers satisfaction of HRM, healthcare sector, key activities.*

JEL Classification: *M12, M54*

1. INTRODUCTION

Covid 19 pandemic has created a real crisis in the healthcare sector and in the overall economy during 2020 and 2021. The most important areas from strategic human resource management that needed urgent attention during this period were: reweaving crisis plan in the parts related to possibilities for suitable replacement of absent team members, appropriate communication of the requirements of the new normal, detecting the most skillful employees for adapting to the changes and forecasting the forthcoming trends. This pandemic one more time showed the importance of implementing strategic and agile human resource (HR) management which refers

http://hdl.handle.net/20.500.12188/15929
http://doi.org/10.47063/EBTSF.2021.0016

to the organization's ability to "maintain the relationship between its HR assets and the methods, objectives, strategies, and ultimate goals of all company assets" (Ichsan et al, 2020, p. 13099).

Several studies are investigating the challenges imposed to the healthcare providers/workers by the uncertain trajectory of Covid 19. According to Sengupta at al. (2021), the key challenges faced by the healthcare personnel during the Covid 19 pandemic can be divided in two groups: 1. workplace challenges which includes: resource availability, adequacy and allocation, financial issues, perceived managerial ineffectiveness, inconsistent guidelines and perceived occupational stress; and 2. societal/community challenges which includes: dread disease, social adaptiveness and challenges related to essential services. Gordon et al. (2020) argues that challenges with personal protective equipment, long shifts, and changes in regular routines placed tremendous stress on health care workers during this period. Ness et al. (2021) have defined four themes related to Covid 19 challenges for healthcare providers: managing isolation, fear, and increased anxiety; adapting to changes in healthcare practice and policy; addressing emotional and physical needs of patients and their families; and navigating evolving workplace safety. In this circumstances retention of the key healthcare providers is one of the most important tasks of the human resource managers and the administration of the healthcare organizations. Jamebozorgi et al. (2021), have noted that "retention of human resources, especially in the health sector, is more important in disasters than in any other time, because an organization's human resources should not only work against disastrous threats such as disease outbreaks, but also have to encounter new underlying problems" (p.3). Rangachari and Woods (2021) have argued "how a stoic approach to healthcare worker support during the Covid 19 pandemic has the potential to restrict organizational resilience, and adversely impact patient safety and staff retention during and beyond the pandemic period" (p.9). Therefore, investigating the key activities for increasing healthcare providers satisfaction of HRM during Covid 19 is an important issue and can offer significant insights for HR professionals and for the organizations implementing strategic and agile HR management.

In line with this, the purpose of the paper is to shed some light on the most important human resource practices during the Covid 19 pandemic and to understand how healthcare organizations had to rethink their approaches in order to maintain the motivation and commitment of the healthcare providers. This study is trying to contribute by identifying the key human resource (HR) issues during the pandemic, creating a theoretical model of strategic human resource management during Covid 19 in healthcare organizations and understanding which human resource (HR) practices were perceived as most important for increasing healthcare providers satisfaction of human resource management process during the period of turmoil.

2. PREVIOUS RESEARCH AND HEALTHCARE SECTOR IN NORTH MACEDONIA

2.1. Key changes for HRM in healthcare organizations during COVID 19

Carnevale and Hatak (2020), have systematized the HRM challenges and opportunities during Covid 19 which include: the erosion of "fit"- involves adjusting new and current employees to drastically altered work conditions; disproportionate work-family effects- understanding the impact the extreme family demands in conjunction with heightened levels of work autonomy and thereby self-responsibility can have on employees' productivity and well-being, and which practices can alleviate such new avenues of family to work conflict, will be important; and disproportionate effects on alternative family structures-the grand challenge of our current health crisis is likely to illuminate vulnerabilities in an increasingly relevant, yet understudied, segment of contemporary family structure: childless and single employee.

Stuart et al. (2021), argued that Covid 19 crisis one more time showed that job retention should be a central aim and practice of human resource management (HRM). Furthermore, it is noted that "if the crisis is to generate any benefit it must create the conditions for a more collaborative HRM that delivers for workers as well as business, with job retention as a core priority" (p. 1). In regard to the researches of employee retention in the pre Covid 19 era it was noted that most of them approached employee retention using a group of individual factors such as employee motivation, job satisfaction, and organizational culture (Kossivi et al., 2016).

Although the described roles and challenges of the HR management are important for every industry/sector, the healthcare sector was on the front line during this pandemic. Consequently, in the following part we are going to make brief overview of the studies focused on human resource management roles in healthcare organizations during the pandemic.

Rangachari and Woods (2020), have given two recommendations for the healthcare organizations leaders in order to "preserve resilience, patient safety, and staff retention during and beyond the Covid 19 pandemic: 1. create an environment of trust, psychological safety, and empowerment to enable individual workers to communicate patient safety concerns to managers; 2. develop communication structures to enable the organization to learn from the problem-solving strategies and communications of individual healthcare workers" (p. 10).

Sengupta et al. (2021), conducted individual in-depth interviews on 20 healthcare providers and classified the challenges of healthcare staff during Covid 19 into workplace and societal/community challenges. "Workplace challenges included resource availability, adequacy and allocation, financial issues, perceived managerial ineffectiveness, inconsistent guidelines and perceived occupational stress, while societal/community challenges included dread disease, social adaptiveness and challenges related to essential services" (p. 339).

Abdullah et al. (2021) conducted a study on 250 nurses of different private hospitals and found that "nurses' job satisfaction in hospitals could be ensured through social and psychological rewards while considering work demand and work-family conflict as an independent variable while considering the Covid 19 pandemic situation as a huge influencer" (p. 9).

Brugha (2021) has noted that "young doctors especially are pulled towards the opportunities of life experiences and comparatively better training in other countries; and pushed by negative experiences while working and training in their country of graduation". Furthermore, this author gives a deepening analysis of Irich doctors' emigration and notes that reasons for leaving of young doctors include: unsatisfactory working conditions, lack of supervision and mentoring, and their comparatively poor training experiences. Additionally, the study of Humphries et al. (2021) done with qualitative interviews on a sample of 31 hospital doctors in Ireland has shown that the pandemic intensified and reinforced, rather than radically altered, the dynamics of doctor emigration from Ireland. They also argue that "persistent emigration is usually the symptom, not the cause, of an underlying problem and is the result of a range of interacting factors which each exacerbate the other" (p. 7).

Elsafty and Ragheb (2020) have conducted research on employees in healthcare industry, more specifically from the medical supplies sector, and found that health related and quality of life and access to information and updates on the Pandemic with financial benefits are the most important variables to the retention of employees (p.57).

Furthermore, Jamebozorgi et al. (2021) conducted a systematic review of 23 articles related to coronavirus impact on health workers retention and synthetized the effects of Covid19 on hospital staff and the retention strategies used by the HR managers and senior management. According to Jamebozorgi et al. (2021) the most significant effects of Covid 19 on hospital staff include: violence and stigma against the staff, burnout and stress and increased employee workloads, while the retention strategies include: acquiring communication skills, attention to employees mental and physical health, attention to employee's safety, mobilizing the staff to

assist the current forces, expanding cyberspace infrastructures and motivational-health incentives.

According to the analyzed literature, the key challenges for human resource management in healthcare organizations during the Covid 19 pandemic can be systematized as presented in Table 1.

Table 1 Challenges for Human Resource Management during the pandemic

Challenges for Human Resource Management during the pandemic	***Author/Authors***	***Description***
The erosion of "fit"	Carnevale and Hatak (2020);	Involves adjusting current and new employees to drastically altered work conditions.
Work overloads	Jamebozorgi et al. (2021);	Healthcare providers face work overloads even in non-pandemic times. However, the speed in which the number of infected patients increased in some periods during the crisis intensified the occurrence of work overloads.
Inconsistent guidelines	Sengupta et al. (2021);	During the pandemic the information regarding the dieses/virus have been changing rapidly and therefore the preparation of formal, step-by-step guideline on time was challenging. This also referees to the absence of standardized testing kits, protocols and resource materials, training of staff.
Health related and quality of life issues (work-family balance)	Carnevale and Hatak (2020); Abdullah et al. (2021); Jamebozorgi et al. (2021); Sengupta et al. (2021);	Attention to healthcare providers safety, preparedness towards infection control, attending the need of the healthcare providers infected with the virus, understanding the effect of possible work-family conflict imposed by the new circumstances. Additionally, in these circumstances healthcare providers are more prone to occupational stress and during the pandemic the pressure and the occurrence of burnout increases.
Retention of staff	Jamebozorgi et al. (2021); Rangachari and Woods (2020); Brugha (2021); Humphries et al. (2021); Stuart et al. (2021).	Humphries et al. (2021) have noted that "the pandemic intensified and reinforced, rather than radically altered, the dynamics of doctor emigration from Ireland", while Jamebozorgi et al. (2021) and Rangachari and Woods (2020) are more focused on strategies and recommendations for staff retention. Nevertheless, this crisis showed that the retention of the most skillful staff should be a central aim of every organization, especially in the healthcare sector. However, this requires continuous effort from the organizations' management.

Source: Authors' construction

2.2. COVID 19 pandemic and healthcare sector in North Macedonia

The healthcare sector in Republic of North Macedonia has faced significant number of challenges from the beginning of the Covid 19 pandemic. The pressure created by the pandemic uncovered the weakness in the management of healthcare organizations, whether public or private.

According to the data available it can be noted that total number of coronavirus infected individuals had a peak in med-December 2020 and afterwards it started to drop (OECD, 2021). It is expected new increase in the number of infected individuals to occur by the end the year,

since vaccine coverage (the percent of individuals that received at least one dose of a vaccine) is around 39%[1].
In order to respond suitably to the new conditions, the management of the healthcare organizations attempted to ensure sufficient physical infrastructure and to increase the workforce capacity. The process of increasing the workforce capacity in a condition when the medical staff is facing unprecedented levels of work overloads and the young doctors were transferred from the hospital in which they were on education/tanning into the organizations that needed more medical staff (Covid 19 centers, which means that their educational activities had to be paused on a limited period, several months), from the perspective of the strategic human resource management has been challenging. It can be noted that the management of the healthcare organizations in Republic of North Macedonia has faced the same challenged as described in the other countries, summarized as follows: the erosion of "fit", work overloads, inconsistent guidelines, health related and quality of life issues and retention of medical staff. Additionally, the management of the healthcare organizations had to acknowledge the abrupt changes in the workplace features, their influence of the healthcare providers roles in the organizations and to understand theirs job-related attitudes, in order to increase their capacity to adequately respond to the new and incremented requirements. Therefore, in the following part this paper offers and overview of the key steps of the strategic human resource management in the healthcare organizations during the pandemic and explains the theoretical background for researching the antecedents of the job-related attitudes, in order to be able to examine the healthcare providers satisfaction of human resource management in the Macedonian context.

3. THEORETICAL BACKGROUND

3.1. Proposed model of strategic human resource management in healthcare organizations during the pandemic

Since the early 1990s human resource management has expand to developing paths career for employees, ensuring employees safety and health, managing employee's diversity and managing human capital issues which emphasized the importance of HRM for organizational performance and the link with organizational strategy (Fottler et al. (ed), 2010). During the pandemic the strength of this links has been tested. Namely, the period of crisis uncovers that the weaknesses in the links between the human resource management and organizational strategies can have undesired effects on the organizational performances. Organizations implementing strategic human resource management support proactive behaviors and have well established communication channels, which enables the gap between the current situation and the vision of the future to be timely and adequately addressed. Collings et al. (2021) have identified three substantive implications for strategic HRM research during the pandemic: 1. the pandemic highlights a need to expand understanding about how work context influences employee behaviors and actions; 2. it exposes tensions among stakeholders, highlighting the need to consider inter alia employees, customers, and communities along with shareholders; and 3. tensions between the strategic and operational roles of HR are exposed (p. 5).
The main characteristics of the healthcare organizations are that they are service-orientated and knowledge-based institutions (Khatri et al., 2015). The key features of healthcare organizations include:

- They provide a complex service for the patients (Thompson at al., 2012),
- The employees in the healthcare organizations have greater discretion in meeting the needs of the patients (Khatri et al., 2015),

[1] Data available at: https://covid19.healthdata.org/north-macedonia?view=vaccinations&tab=trend

- Significant part of the organizational knowledge is housed exclusively in the minds of the employees (Khatri et al., 2015),
- Coordination and team work between highly specialized disciplines is crucial for executing complex tasks for meeting patients' needs (Thompson at al., 2012), and
- The patients' satisfaction is mediated by employees' satisfaction (Khatri et al., 2015).

Human resource management plays strategic role in delivering high quality and affordable health care Fottler et al. (ed) (2010) and sequentially it is a fundamental, rather than supportive function in the health care, crucial for enhancing healthcare organization performances (Khatri et al., 2015). Fottler (2011) has systematized the most effective HRM practices for healthcare organizations into five (5) categories:

1. HR planning/Job Analysis – encourage employee involvement so there is strong "buy-in" of HR practices and managerial initiatives; encourage teamwork; provide employment security; include self-managed teams; develop strategies to enhance employee work/life balance;
2. Staffing - proactiveness in identifying and attracting talent; in selecting new employees, use additional criteria beyond basic skills;
3. Training/ Organizational Development - invest in training; provide employees with future career opportunities; include customer service in new employee onboarding and skill development; provide opportunities for employee growth;
4. Performance Management and Compensation - recognize employees by providing monetary and nonmonetary rewards; offer high compensation contingent on organizational performance; reduce status distinction and barriers;
5. Employee Right - communicate effectively with employees to keep them informed concerning major issues and initiatives; share financial, salary, and performance information to develop a high-trust organization; provide employment security for employees who perform well so they are not downsized because of economic downturns or strategic errors by senior management.

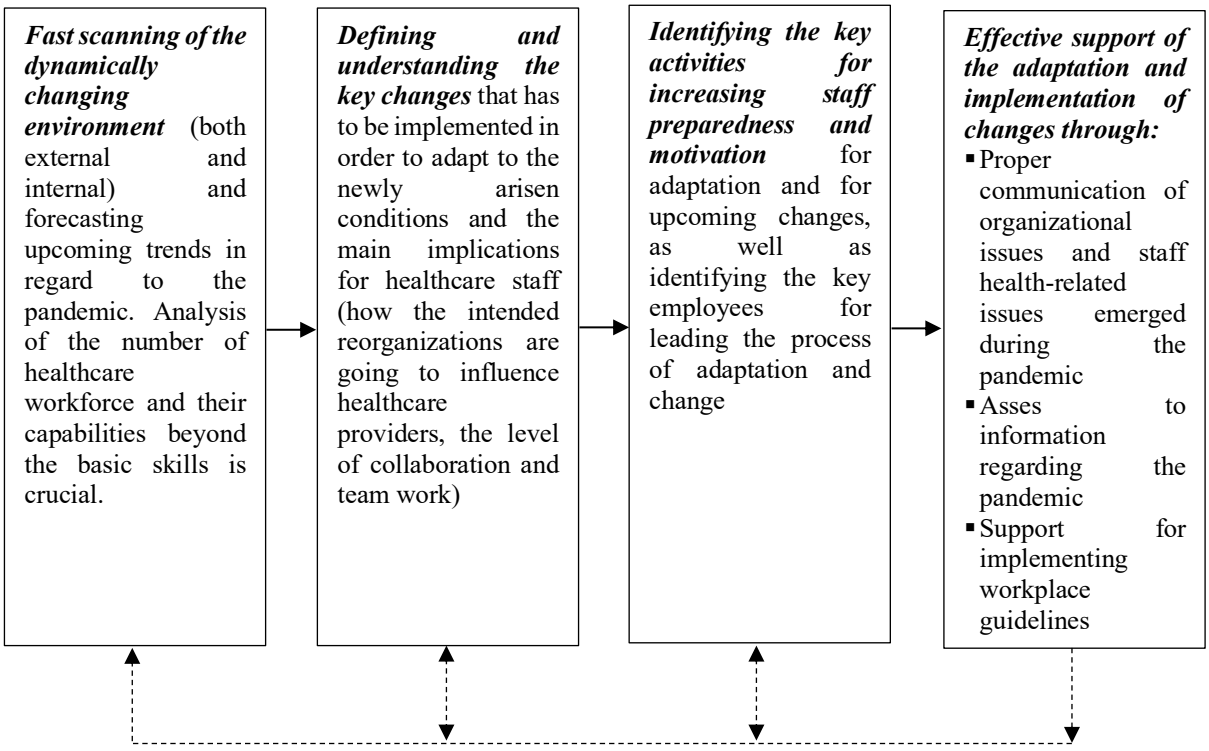
Regardless of the importance of human resource for achieving high quality patient care, there is a general conclusion that they are not particularly well managed in healthcare organizations (Khatri et al., 2015). Furthermore, Khatri et al., 2015) argue that HRM should be involved in organizational change efforts to foster and grow interprofessional collaboration and teamwork, which was extremely important during the pandemic when doctors from different specialistic areas had to care and facilitate healing of patients with Covid 19. Therefore, in the Figure below this paper offers an overview of the key steps that should/have been undertaken by healthcare organizations implementing strategic human resource management during the Covid 19 pandemic. The pandemic imposed the need for rapid adaptation to the newly arisen circumstances and undertaking steps for proactive behavior by the healthcare providers in order to implement the required changes as soon as possible and maintain the desired level of service quality. The process of strategic human resource management in the healthcare organizations during the Covid 19 pandemic included the steps described in Figure 1.

This model explains the strategic role of human resource management in healthcare organizations during the pandemic. Namely, the process of strategic management of human resource in healthcare organization during the pandemic includes:

1. ***Scanning the environment*** - in this step the most important issues were related to analysis of the development of the pandemic (the expected number of newly infected cases, their expected clinical manifestations and the need for hospitalizations), as well as analysis of the number of healthcare workforce (number of specialists, number of general doctors, number of nurses and other medical and non-medical staff) and their capabilities beyond the basic skills (such as capacity for collaboration, adaptation, proactive behavior).

2. ***Defining and understanding the key changes that had to be implemented in order to adapt to the newly arisen conditions and the main implications for healthcare staff*** – this step involves defining needed reorganizations (transforming the hospitals/clinics fully or partially into Covid 19 centers, transferring doctors from different specialties to work on providing healthcare for Covid 19 patients, asking young doctors to pause their educational process/trainings for several months), as well as the expected changes in the behaviors of the healthcare staff during this pandemic period and how the intended changes are expected to impact individual, team and overall organizational performances.

Figure 1 Strategic human resource management activities during Covid 19 in healthcare organizations



Source: Authors' construction

3. ***Identifying the key activities for increasing staff preparedness and motivation for adaptation*** and for upcoming changes, as well as ***identifying the key employees for leading the process*** of adaptation and change is also an important step. In order to properly manage the human resources available, the healthcare organizations had to identify the activities that are going to increase the level of commitment, the loyalty and the motivation of the staff in order to achieve the organizational goals and help them in the process of adaptation to the drastically altered work conditions. In this step the identification of the key employees for leading the process of change and adaptation is also important.
4. The last step is ***effective support of the adaptation and implementation of the required changes through proper communication of organizational issues, asses to information regarding the pandemic and support for implementing workplace guidelines***. In this study we evaluate that these activities are important for the effective support of the processes of adaptation and change:
   - **proper communication of organizational and staff health-related issues emerged during the pandemic**, such as: resource availability, adequacy and allocation,

perceived ineffectiveness, unbalanced workload in a team, occupational stress, stigma against the staff etc. Additionally, healthcare organizations had to be more alert to their staff health and increase their preparedness towards infection control, which can be challenging from organizational aspect. Therefore, proper communication of staff health related issues that can have organizational implications is also important.

- **asses to information regarding the pandemic –** healthcare organizations are knowledge based and as such they have to find mechanisms for dissemination of crucial information regarding the pandemic to the employees and accumulating knowledge gained through practice.
- **support for implementing workplace guidelines –** one of the key challenges for human resource management during the pandemic was the existence of inconsistent guidelines (Sengupta et al., 2021). Since there has been an absence of standardized protocols and training of staff, the individuals responsible for strategic human resource management during Covid 19 pandemic must be open for any kind of support and explanation regarding the implementation of the existent guidelines. This is important for achieving desired levels of individual and organizational effectiveness.

This model offers a dynamic approach to strategic HRM during the pandemic (since the information accumulated in each of the phases should be transferred and adequately used in the other phases/steps), and explains how the roles of human resource management in healthcare organizations have evolved in the context. The model intends only to describe the activities that had to be undertaken in order to link the human resource management to the process of implementing the imposed adaptation and changes that were necessary for achieving the ultimate goal of the healthcare organizations - delivering healthcare services to the patients. Additionally, in the process of the strategic human resource management during the pandemic, in both public and private healthcare organizations, the management structures on every level should be included, and not just the HR professionals or HR unit/department. This process in a specific working condition imposed by the pandemic, must be understood by all the management structures. The model presents author's interpretation of the steps in the strategic HRM in the specific context created in the healthcare organizations during the pandemic.

Considering the fact that healthcare organizations are service-orientated, the satisfaction of the healthcare providers is crucial for healthcare delivery process and has significant impact on the patient's satisfaction level. Furthermore, Collings et al. (2021) have suggested that the pandemic highlights a need to expand the understanding about how work context influences employee behaviors and actions. The model describes the activities of human resource management that had to be undertaken in order to facilitate the process of adaptation of the healthcare providers to the drastically altered working conditions and the process of implementing the imposed changes during the pandemic period. In the following part, the study is trying to identify how the activities that are part from the strategic HRM process are perceived by the healthcare providers and do they have an impact to the healthcare staff job-satisfaction, which is related to healthcare providers' behavior and retention.

3.2. Antecedents of job attitudes/job satisfaction

Several theoretical approaches have discussed the antecedents of job-attitudes, as well the antecedents of job-satisfaction. The research of the factors affecting the formation of job-attitudes, which also includes job-satisfaction, is important because from a psychological point of view attitudes are related to specific behaviors (Ajzen, 1991; Judge et al, 2012). Judge at al. (2012) have concluded that the studies investigating the relations between job-satisfaction and specific behaviors have generated a set of generally positive results. In order to support this

statement Judge at al. (2012) have cited several empirical studies that examine the relation between job-satisfaction and specific job-behaviors, such as: "*attendance at work* (Smith, 1977; Scott & Taylor, 1985); *turnover decisions* (Carsten & Spector, 1987; Hom, Katerberg & Hulin, 1979; Hom 2001; Hulin, 1966; 1968; Mobley, Horner, & Hollingsworth, 1978; Miller, Katerberg, & Hulin, 1979); *decisions to retire* (Hanisch & Hulin, 1990, 1991; Schmitt & McCune, 1981); *psychological withdrawal behaviors* (Roznowski, Miller, & Rosse, 1992); *pro-social and organizational citizenship behaviors* (Bateman & Organ, 1983; Farrell, 1983; Roznowski, Miller, & Rosse, 1992), *union representation votes* (Getman, Goldberg, & Herman, 1976; Schriesheim, 1978; Zalesny, 1985); *hostile or punitive behaviors directed towards coworkers or supervisors* (Hershcovis, Turner, Barling, Arnold, Dupré, Inness, LeBlanc, & Sivanathan, 2007); *customers' perceptions of the service provided by employees* (Snipes, Oswald, LaTour, and Armenakis, 2005)" (p. 6-7).

In regard to the antecedents of job-satisfaction, as an important attitude that drives the employees' behavior in every organization, Fritzshe and Parrish (2005) have given an in-depth overview. Namely, Fritzshe and Parrish (2005) have systematized the antecedents of job-satisfaction in 6 (six) categories and their analysis is presented in Table 2. From the Table it can be noted that different theoretical approaches give different explanation about the process of forming job-related attitudes by the employees. Some authors acknowledge the importance of the situational factors such as: social context (Salancik and Pfeffer, 1978), job characteristics (Hackman and Oldham, 1976), job stressors (Fairbrother and Warn, 2003), leadership (Fiedler, 1967) while others outline the importance of the personal characteristics, such as the personal disposition (George, 1992; Judge and Locke, 1993) for the process of forming job-related attitudes. The main conclusion from the brief overview is that the antecedents of job-related attitudes include both situational factors, as well as individual characteristics of the employees. Consequently, the principal implication for empirical research is that in the investigation of employees' attitudes different antecedents should be included.

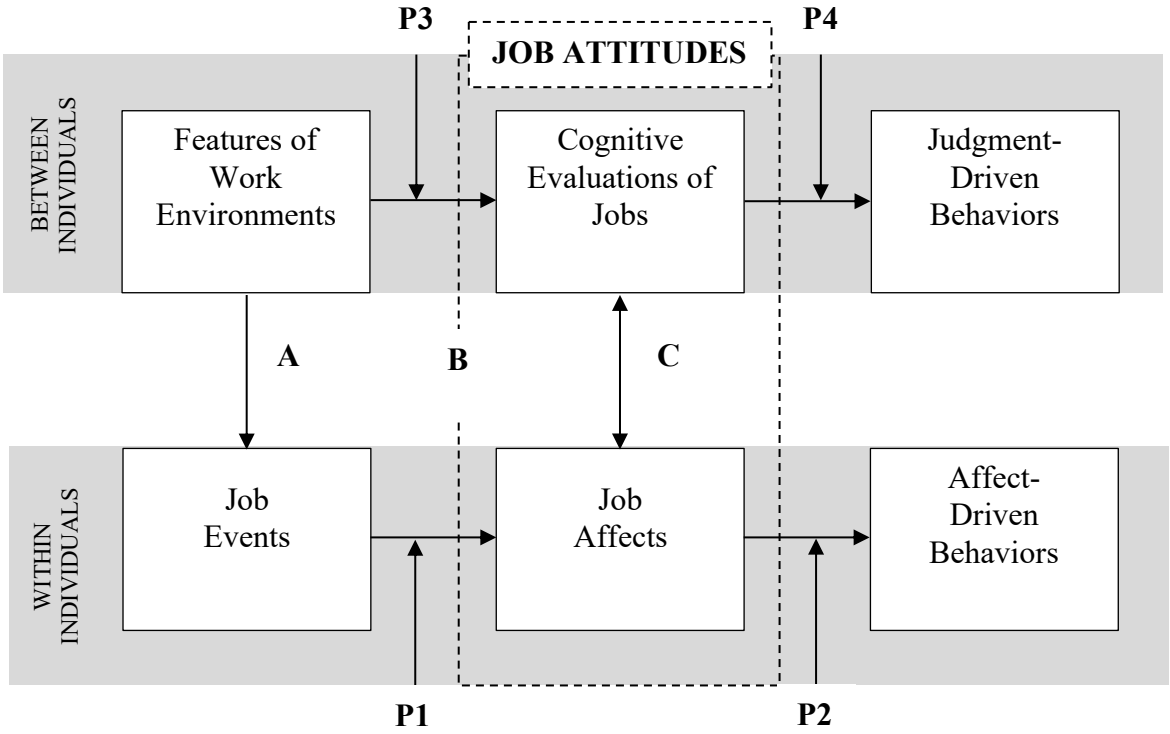
Table 2 Antecedents of job attitudes/job satisfaction

Antecedent of job satisfaction/job attitudes	***Theoretical and research approach***	***Description***
Comparison to prior job-experiences	*The Cognitive Judgement Approach*	Job-satisfaction depends on an evaluation of a difference between an individuals' expectations and what he/she actually receives. A Comparison Level (CL) is developed and used as a standard against which the satisfaction with the current role is evaluated.
The social context of work	*Social Information Processing Theory*	Social context influences job attitudes formation. There are two primary ways in which the social context influence attitudes: 1. social context help people form their attitudes; 2. social context help people focus attention on attitude relevant information.
Job characteristics	*The Job Characteristics Approach*	Aspects of the work environment impact work outcome, such as job satisfaction. This approach offers specific ways in which jobs can be redesigned to be more satisfying.
Job stressors	*Work and Role Stressors*	A number of other characteristics of the work environment, generally called *workplace and work role stressors,* have been shown to influence job satisfaction. Job stressor may be poor physical conditions, while role stressors are role ambiguity, role overload and role conflict. According to job stress models job stressors lead to short-term and long-term consequences, typically called *strains*.
Personal dispositions	*The dispositional approach*	According to this approach persons' disposing can be a significant determinant of his/her job attitudes. Some authors argued that, if individuals are consistent in their job satisfaction across both time and context, then the source of this consistency would likely be an enduring characteristic of the individual. Subsequent research

		attempted to more directly tap dispositional variables (e.g., with measures of positive affect) in efforts to predict job attitudes and performance over time. (Staw and Cohen-Carash, 2005)
Person-environment fit	*Person-environment fit approach: Theory of work adjustment and Holland's RIASEC theory*	Rather than searching for specific environmental of personality characteristics that contribute to job-satisfaction, the person-environment fit approach posits that job satisfaction is influenced by the extent to which good compatibility exists between people and their working environment. Thus, situational variables interact with personal variables to produce job satisfaction.

Source: Fritzshe and Parrish (2005) and Staw and Cohen-Carash (2005)

Additionally, Judge at al. (2012) analyze the more important models of job attitudes and discuss the recent developments. Models proposed by Judge at al. (2012) that attempt to account the antecedents and complexity of job attitudes, could be used in the research of antecedents of job-satisfaction. One of the most suitable models for understanding the nature and investigating job attitudes/job-satisfaction proposed by these authors is presented on Figure 2, which represent a model of their interpretation of the affective events theory. The Figure 2 present how Judge at al. (2012) have interpreted and modified the affective events theory, which was primary developed by Weiss and Copanzano (1996). The model basically explains that the antecedents of job attitudes include the feature of the work environment and the job events. Judge at al. (2012) note that job features and job events should be treated as fuzzy sets, and that the second ones are more transient and less predictable. Job features (e.g., HR policies/practices) are more stable and are likely to influence distributions of job events. Furthermore, Judge at al. (2012) define job satisfactions as "multidimensional psychological responses to one's job" (p.5) with two components: the cognitive (evaluative) and the affective (emotional), which are inseparable. These authors also argue that "job performance comprises many specific behaviors typically measured through a subjective supervisory evaluation" and "…that the more "discretionary" or "contextual"—rather than task-oriented—aspects of job performance are driven primarily by motivational processes, including job attitudes" (p. 14). Although the behaviors in the model are divided into judgment- and affect-driven, they should be treated as fuzzy sets, since one strict classification of the job behaviors into one or the other category it is not always applicable (p. 37). In this model personality (personality traits of the individual) is included "…as a moderator of both the cognitive, between-individual links and the affective, within-individual links" (p.43).



A: Influence on distribution of events
B: Fuzzy boundaries between events and features of work environments
C: Reciprocal relationship between cognition and affect
P: Personality variables as moderators of between- and within-individual relationships

Source: Judge at al. (2012)

Figure 2 Modified version of affective events theory

4. METHODOLOGY

Having in mind the importance of healthcare providers satisfaction during Covid 19 pandemic, this paper is trying to understand the complex relation between implemented human resource management practices and the employee's satisfaction from the human resource management in the healthcare organizations. In order to investigate the relation this study uses the methods of correlation and hierarchical linear regression. The regression method for investigating the employees' job-satisfaction in hospitals was used in several previous studies such as Lock and Crawford (2001) and Giauque (2014). The study includes the perceived importance by the healthcare providers of the following activities: support for implementing workplace guidelines, asses to information regarding the pandemic and communication for overcoming the organizational issues as independent variables, which represent features of the work environments. In the model the variables are measured on a 5-point Likert scale. Additionally, we have infused control variables (such as age, gender, position and providing financial benefits). The dependent variable is defined as employees' satisfaction of human resource management and basically represents a job-related attitude that has been formed by the employees in the healthcare organizations.

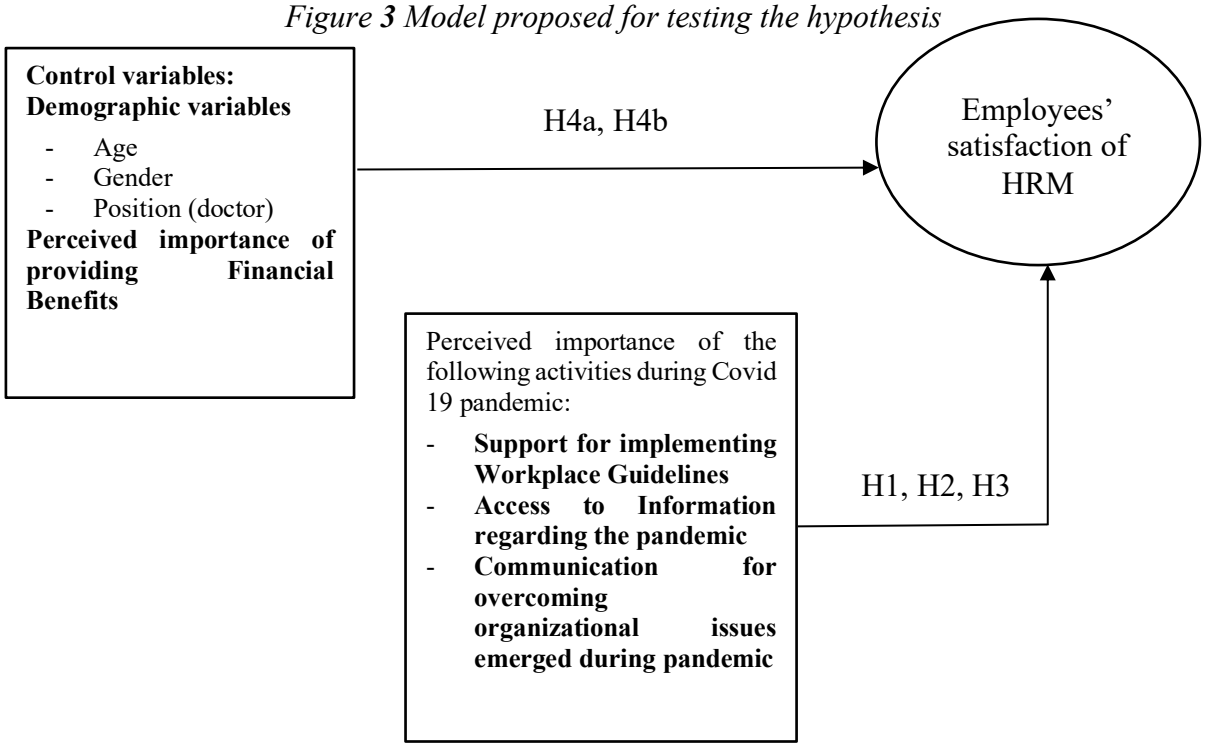
The developed research hypothesis include:

H1: Support for implementing workplace guidelines influences the employees' satisfaction of human resource management.
H2: Access to information regarding the pandemic influences the employees' satisfaction of human resource management.
H3: Communication for overcoming organizational issues emerged during the pandemic influences the employees' satisfaction of human resource management.
H4: Other factors influence the employees' satisfaction of human resource management.

H4a: Demographic characteristics influence the employees' satisfaction of human resource management.

H4b: Financial benefits influence the employees' satisfaction of human resource management.

*Figure **3** Model proposed for testing the hypothesis*



Source: Model proposed for testing the hypothesis

4.1. Research sample

The sample consists of 82 healthcare providers from public and private healthcare organizations. The total number of distributed questionnaires was 120 and the total number of completely answered questionnaires was 82, which means that the overall response rate was 68,33%.

According to the data published, the total number of healthcare workers in all healthcare organizations is 33,544, out of which 6,468 are doctors (and 3,882 of them are specialists), 1,796 are dentists, 1,057 are pharmacists, 18,438 are other medical staff and 5,785 are non-medical staff (Center for public health – Skopje, 2020, p. 7). According to the same source the total number of employees in the private healthcare organizations (including private hospitals) is 11,753 (Center for public health – Skopje, 2020, p. 7).

In regard to the structure of the sample of respondents, it can be noted that the 46 (56,09%) of the respondents were physicians, 29 (35,37%) were nurses and only 7 (8,54%) were other hospital staff.

4.2. The questionnaire and measures

The questionnaire had two parts: the first part was related to gathering demographic information for the respondents, while the second part was related to measuring employees' satisfaction of HRM, support for implementing workplace guidelines, asses to information about the pandemic, financial benefits, support in health-related and quality of life issues and communication on organizational issues emerged during the pandemic. The total number of items in the questionnaire was 16. However, in order to meet the assumption of non-existence of multicollinearity every single variable was measured directly (only with one item). The support for implementing workplace guidelines, the asses to information, financial benefits, as well as communication on pandemic issues and employees' satisfaction of HRM were measured directly, with one item through 5-point Likert scale. The dependent variable employees' satisfaction of HRM was also measured with a single item and on a 5-point Likert scale. Giauque (2014) have also used one item for measuring job-satisfaction, and also Elsafty and Ragheb (2020) measure several variables with only one item.

Additionally, we would mention that for gender, dummy variable is created and the respondents are divided in two groups: 0-male and 1-female. For the position (doctor), it was also created a dummy variable in which the respondents were divided in two groups: 0-for nurses and other staff and 1-for doctors. The data regarding the age of the respondents was performed into a ratio scale variable, where the respondents were classified in 5 categories: below or equal to 30 years, 31-40 years, 41-50 years, 51-60 years, above 60 years. The other variables were measured on a 5-point Likert scale. The descriptive statistics of the variables are presented in Table 3.

Table 3 Descriptive statistics of the variables

Variable	Mean	Std. Dev.
Employee's satisfaction of HRM	3.963	1.170
Financial Benefits	4.350	0.837
Support for implementing workplace guidelines	4.230	0.634
Access to information regarding the pandemic	4.130	0.813
Communication for overcoming organizational issues emerged during pandemic	4.290	0.778

Source: authors' analysis.

5. RESULTS

First, we tested the data for the assumptions for linear regression and afterwards a hierarchical regression analysis was performed.

The assumptions of linearity, independence of errors and homoscedasticity were met. In regard to the normality assumption, it can be noted that plots indicate that the residuals are not perfectly normally distributed, which is a common problem in social science research (Hair et al., 1995). Additionally, this problem might be a result of the sample size. In the table below we represent the values of the both measures of multicollinearity (Tolerance and VIF) in order to demonstrate that the assumption of non-existence of multicollinearity is met. As presented in the Table 5, all the tolerance values are greater than 0.5 (the lowest is 0.576). The variance inflation factor (VIF) is simply the reciprocal of tolerance and in regarding to its interpretation it can be noted that when VIF is greater than 2 is usually considered problematic (the highest value in the table below is 1.737).

Table 5 Measures of multicollinearity

Variable	Tolerance	VIF
Gender	0.911	1.098
Age	0.876	1.141
Position (doctor)	0.731	1.369
Financial Benefits	0.614	1.629
Support for implementing workplace guidelines	0.609	1.642
Access to information regarding the pandemic	0.614	1.629
Communication for overcoming organizational issues emerged during pandemic	0.576	1.737

Source: authors' analysis.

The results from the hierarchical multiple regression analysis where the dependent variable is Employees' satisfaction of HRM are presented in Table 6.

Table 6 Results from performed hierarchical multiple regression

VARIABLE	Model 1		Model 2	
	B	Sig	B	Sig
STEP 1				
Gender	0.274	0.299	0.393	0.081
Age	-0.021	0.844	-0.059	0.510
Position (doctor)	0.381	0.153	0.322	0.166
Financial Benefits	0.571	0.000	0.250	0.100
STEP 2				
Support for implementing workplace guidelines			-0.216	0.280
Access to information regarding the pandemic			0.459	0.004
Communication for overcoming organizational issues emerged during pandemic			0.607	0.000
R2	0.235		0.477	
Change in R2	0.235		0.243	
Adjusted R2	0.195		0.428	
Durbin-Watson				1.928

Source: authors' analysis.

Both models are statistically significant since the F-statistics for both models are statistically significant. Model 1 includes only the control variables which cover: age, gender and financial benefits and the explanatory power of this model is 19.5%. By adding the block of 3 additional independent variables (directly connected with activities undertaken during the pandemic) the explanatory power of the model reaches 42.8%. The Durbin-Watson statistics is 1.928 which means that there is no significant level of autocorrelation.

Model 1 indicates that providing financial benefits is positively and significantly related to employee's satisfaction of HRM ($p<0.01$) and that the other control variables do not have statistically significant relation with the dependent variable.

In Model 2 where we add additional variables, the association between providing financial benefits and employee's satisfaction from HRM becomes statistically insignificant. On the other hand, the association between communication for overcoming organizational issues emerged during the pandemic and the employee's satisfaction from HRM is positive and statistically significant ($p<0.01$). Also, the relation between access to information regarding the pandemic and employee's satisfaction of HRM is positive and statistically significant at level $p<0.05$. In Model 2 the relation between support for implementing workplace guidelines and

employee's satisfaction of HRM is not statistically significant. Furthermore, in this model the relation of gender and employee's satisfaction of HRM is statistically significant at level $p<0.1$.

6. DISCUSSION

Most of the studies regarding the human resource management in the Covid 19 period, and especially those focused on the healthcare sector, are qualitative and give insightful recommendations for further research. The literature review conducted give the foundation for identifying the key challenges of the healthcare organizations during the pandemic and the key activities from the area of human resource management that should be undertaken in order to address them. Therefore, we developed a framework in which we describe the activities from the human resource management that should be included in every step/phase of the process of adaptation to the new conditions imposed by the pandemic. Additionally, this study gives an overview of the antecedents of the job-satisfaction.

The investigation of the antecedents of the healthcare providers satisfaction is important because of the possible relationship between job-satisfaction and turnover, absence rates and employee productivity (Bechtold et al., 1980). In regard to the previous research of job-satisfaction in the healthcare organisations, it can be noted that Lock and Crawford (2001) and Giauque (2014) have used the same statistical method *regression* in investigating the antecedents of job-satisfaction in healthcare organizations (this method is also used in this study). Elsafty and Ragheb (2020) have been using correlation analysis to investigate which factors influence the retention of employees in Covid 19 pandemic in medical supplies sector and recommend that a proper communication should have been an important tool, especially in pandemic. Lock and Crawford (2001) have investigated the relation between organizational culture and subculture, and job satisfaction and commitment, and have found that managers need to focus more on organizational subcultures in generating greater commitment among employees. Moreover, Lock and Crawford (2001) have found that innovative sub-cultures have the strongest positive effect on commitment, while a bureaucratic sub-culture had a negative effect on commitment. Additionally, their findings indicate that supportive sub-culture, although positively correlated with commitment, did not have a significant independent effect on commitment after having controlled for the other independent variables in the study (p.609). Giauque (2014) has used the person-environment (P-E) fit approach for investigating antecedents of job satisfaction, organizational commitment and stress in public hospitals and found that P-E fit dimensions have differentiated effects on its dependent variables (they are considering P-E fit as a multidimensional concept with several sub-dimensions). In the empirical part, this study is trying to investigate how the identified activities for strategic human resource management in the healthcare sector influence the employees' satisfaction of HRM. The findings are indicating that communication for overcoming organizational issues emerged during the pandemic and access to information regarding the pandemic have positive and statistically significant influence on the employees' satisfaction of the human resource management in the healthcare organizations. The variable for providing financial benefits although has positive and statistically significant influence on the employees' satisfaction of HRM in the first model, did not have a significant independent effect when adding the second block of independent variables.

Overall, the paper is trying to make contribution by: identifying the key challenges for human resource management in the healthcare organizations during the pandemic, creating a framework for strategic human resource management in healthcare organizations during the pandemic and trying to empirically test how certain HR activities/practices influence the employees' satisfaction of the human resource management in the healthcare organization in North Macedonia. It is important to note that this study is trying to investigate the antecedents

of employees' satisfaction of a single process (of the human resource management and not the general job-satisfaction) in a given context (in the healthcare organization during the Covid 19 pandemic).

7. CONCLUSION

The main findings of the study regarding the process of human resource management during Covid 19 pandemic indicate that key challenges faced by the managers and HR professionals in healthcare organizations included in this process can be summarize as follows: the erosion of "fit", work overloads, inconsistent guidelines, health related and quality of life issues, retention of medical staff. The proposed framework of strategic human resource management in healthcare organizations during the pandemic implies that the key issues of human resource should be analyzed in every step of the process. The most important activities for proper management of the healthcare providers in healthcare organizations during the pandemic include: evaluating the key capabilities of the staff beyond the basic skills (such as capacity for collaboration, adaptation, proactive behavior) (in the step of scanning the environment), then defining and understanding the key changes that had to be implemented in order to adapt to the newly arisen conditions and the main implications for healthcare staff, identifying the key activities for increasing staff preparedness and motivation for adaptation and for upcoming changes, as well as identifying the key employees for leading the process and effective support of the adaptation and implementation of the required changes through proper communication of organizational issues, asses to information regarding the pandemic and support for implementing workplace guidelines. This model offers a dynamic approach to strategic HRM during the pandemic (since the information accumulated in each of the phases should be transferred and adequately used in the other phases/steps), and explains how the roles of human resource management in healthcare organizations have evolved in the context.

Significant number of theories have given explanation about the influence of the features of the work environment on the job attitudes which can be used as foundation for investigating the employees' satisfaction from a single process (such as the human resource management process). The findings of the empirical part of the study are indicating that communication for overcoming organizational issues emerged during the pandemic and access to information regarding the pandemic have positive and statistically significant influence on the employees' satisfaction of the human resource management in the healthcare organizations. The variable for providing financial benefits although has positive and statistically significant influence on the employees' satisfaction of HRM in the first model, did not have a significant independent effect when adding the second block of independent variables. This study is trying to investigate the antecedents of employees' satisfaction of a single process (of the human resource management and not the general job-satisfaction) in a given context (in the healthcare organization during the Covid 19 pandemic). The explanatory power of the Model 2 in the hierarchical regression is 42.8%, which is satisfying.

8. LIMITATIONS AND FURTHER RESEARCH

The purpose of the paper is to shed some light on the most important human resource practices during the Covid 19 pandemic and to understand how healthcare organizations had to rethink their approaches in order to maintain the motivation and commitment of the healthcare providers. However, this study has several limitations. Other factors related to strategic human resource management in the healthcare organizations, and also some specific factors related to the context in our country could be added. As for the empirical part, in the further research the approach towards designing and administering the questionnaire may be different, from mixing the order of the questions to using different scale types. Some variables may be designed as

latent variables (with several items). Additionally, the finding of the study must be seen with caution, especially when interpreting the relation between the independent variables and the dependent variable having in mind the problem with the distribution of the residuals. Furthermore, the sample size is also a limiting factor. However, this paper attempts to quantify the relations, although most of the previous studies on human resource management and strategic human resource management during the Covid 19 pandemic has been explanatory and qualitative.

REFERENCES

Abdullah, M. I., Huang, D., Sarfraz, M., Sadiq, M. W. (2021), "Service Innovation in Human Resource Management During COVID-19: A Study to Enhance Employee Loyalty Using Intrinsic", Frontiers in Psychology, Vol.12, available at: doi: 10.3389/fpsyg.2021.627659.

Ajzen I. (1991) "The theory of planned behavior*", Organizational Behavior and Human Decision Processes*, Vol.50, No.2, pp.179-211.

Brugha, R. (2021), "Doctor Retention in a COVID-World: An Opportunity to Reconfigure the Health Workforce, or "Plus ça change plus c'est la meme chose"? A Response to the Recent Commentaries", *International Journal of Health Policy and Management*, available at: 10.34172/IJHPM.2021.60.

Carnevale, J. B., Hatak, I. (2020), "Employee adjustment and well-being in the era of COVID-19: Implications for human resource management", *Journal of Business Research*, Vol. 116, pp. 183-187.

Center for public health of Republic of North Macedonia/Институт за јавно здравје на Република С. Македонија (2020), *Кадар во здравствени установи во Република С. Македонија во 2019*, Скопје, available at: http://iph.mk/wp-content/uploads/2021/01/Kadar-2019-MK.pdf.

Collings, D, G., McMackin, J., Nyberg, A.J., Wright, P. M. (2021)," Strategic Human Resource Management and COVID-19: Emerging Challenges and Research Opportunities", *Journal of Management Studies*, available at: doi: 10.1111/joms.12695 [Epub ahead of print].

Elsafty, A., Ragheb, M. (2020), "The Role of Human Resource Management Towards Employees Retention During Covid-19 Pandemic in Medical Supplies Sector – Egypt", *Business and Management Studies,* Vol. 6, No.2, pp.50-59, available at: https://doi.org/10.11114/bms.v6i2.4899.

Fairbrother, K., Warn, J. (2003), "Workplace dimensions, stress and job satisfaction", *Journal of Managerial Psychology, Vol. 18,* No.1, pp. 8–21.

Fiedler, F.E. (1967), *A theory of Leadership Effectiveness*, McGraw-Hill.

Fottler, M. D. (2011), "Strategic human resource management" in Fried, B., Fottler, M. D. (Ed.), *Fundamentals of Human Resource*, Health Administration Press, Chicago.

Fritzsche, B. A., Parrish, T. J. (2005), "Theories and Research on Job Satisfaction", in Brown, S. D., Lent, R. W. (Ed.), *Career Development and Counseling: Putting Theory and Research to Work*, John Whiley & Sons, New Jersey.

George, J. M. (1992), "The role of personality in organizational life: issues and evidence". *Journal of Management*, Vol. 18, No.2, pp.185–213.

Giauque, D., Resenterra, F, Siggen, M. (2014), "Antecedents of Job Satisfaction, Organizational Commitment and Stress in a Public Hospital: a P-E Fit Perspective", *Public Organization Review*, Vol. 14, No. 2, pp. 201-228.

Gordon, A., Lyons, C., Rao, S., Finoli, L. (2020), "Health Care Workers' Challenges in the Care of a COVID-19 Patient", Critical Care Nursing Quarterly, Vol. 43, No. 4, pp. 400–406.

Hackman, J. R., Oldham, G. R. (1976), "Motivation through the design of work: Test of a theory", *Organizational Behavior and Human Performance, Vol. 16*, No. 2, pp.250–279.

Hair, J. F., Anderson R. E., Tatham, R. L., Black, W. S. (1995), *Multivariate Data Analysis with Readings* (1st ed.). Prentice-Hall, London.
Humphries, N., Creese, J., Byrne, J. P., Connell, J. (2021), "COVID-19 and doctor emigration: the case of Ireland", *Human Resources for Health*, Vol. 19, Art. No.29, available at: https://doi.org/10.1186/s12960-021-00573-4.
Ichsan, R. N., Khaeruman, S.S., Shara, Y., Liriwati, F. Y (2020), "Investigation of Strategic Human Resource Management Practices in Business after COVID-19 Disruption", *Palarch's Journal Of Archaeology Of Egypt/Egyptology*, Vol. 17, No.7, pp. 13098-13110.
Jamebozorgi, A. H., Agoush, L., NooriHekmat, S., Shokri, A., Sadatmoosavi, A., Shirvani, M., Hasanikaboutarkhani, M., Zare, Z. (2021), "Coronavirus and Its Impacts on Health Workers Retention: A Systematic Review and Meta-Synthesis", Research Square (preprint), available at: Coronavirus and Its Impacts on Health Workers Retention: A Systematic Review and Meta-Synthesis | Research Square, DOI: 10.21203/rs.3.rs-220298/v1.
Judge, T. A., Hulin, C. L., Dalal, R. S. (2012), "Job satisfaction and job affect" in *Kozlowsk, S.W.J. (Ed.), The Oxford Handbook of Organizational Psychology,* e-publication available at:https://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199928309.001.0001/oxfordhb-9780199928309-e-15.
Judge, T. A., Locke, E. A. (1993), "Effect of dysfunctional thought processes on subjective well-being and job satisfaction", *Journal of Applied Psychology*, Vol.78, No. 3, pp. 475–490.
Khatri, N., Pasupathy, K., Hicks, L.L. (2015), "The crucial role of people and information in health care organizations" in Fottler, M. D., Khatri, N., Savage, G. T (Ed.), Strategic *Human Resource Management in Health Care*. Published online: 10 Mar 2015, pp. 195-211, available at: https://www.emerald.com/insight/publication/doi/10.1108/S1474-8231(2010)9.
Lok, P., Crawford, J. (2001), "Antecedents of organizational commitment and the mediating role of job satisfaction", *Journal of Managerial Psychology*, Vol. 16, No.8, pp. 594-613.
Ness, M.M., Saylor, J., Di Fusco, L. A., Evans, K. (2020), "Healthcare providers' challenges during the coronavirus disease (COVID-19) pandemic: A qualitative approach", *Nursing and Health sciences*, Vol. 23, No.2, pp. 389–397.
OECD (2021), *The COVID-19 crisis in North Macedonia*, available at: THE COVID-19 CRISIS IN NORTH MACEDONIA (oecd.org).
Rangachari, P., Woods, J. L. (2020), "Preserving Organizational Resilience, Patient Safety, and Staff Retention during COVID-19 Requires a Holistic Consideration of the Psychological Safety of Healthcare Workers", *International Journal of Environmental Research and Public Health*, Vol. 17, No.12, available at: doi:10.3390/ijerph17124267.
Salancik, G. Pfeffer, J. (1978), "A Social Information Processing Approach to Job Attitudes and Task Design", *Administrative Science Quarterly*, Vol. 23, No.2, pp. 224-253.
Sengupta, M., Roy, A., Ganguly, A., Baishya, K., Chakrabarti, S., Mukhopadhyay, I. (2021), "Challenges Encountered by Healthcare Providers in COVID-19 Times: An Exploratory Study", *Journal of Health Management*, Vol. 23, No.2. pp. 339 –356.
Staw, B.M, Cohen-Carash, Y. (2005), "The dispositional approach to job satisfaction: more than a mirage, but not yet an oasis", *Journal of Organizational Behavior*, Vol. 26, pp.59-78.
Stuart, M., Spencer, D. A., McLachlan, C. J., Forde, C. (2021), "COVID-19 and the uncertain future of HRM: Furlough, job retention and reform", *Human Resource management Journal*, available at: https://doi.org/10.1111/1748-8583.12395.
Thompson, J.M., Buchbinder, S. B., Shanks, N.H. (2012), "An Overview of Healthcare Management", in Buchbinder, S. B., Shanks, N.H. (Ed.), *Introduction to Healthcare Management*, Jones and Bartlett Learning, Burlington.
Weiss, H. M., Cropanzano, R. (1996), "Affective Events Theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work", *Research in Organizational Behavior*, Vol. 18, pp.1-74.

VIABLE HEALTH FUNDING IN TIME OF DEMOGRAPHIC AGEING

Marija Trpkova-Nestorovska
Faculty of Economics - Skopje, Ss Cyril and Methodius University
marija.trpkova-nestorovska@eccf.ukim.edu.mk

ABSTRACT
In the past several decades a new challenge has arisen, and it refers to the rapid demographic ageing of the population in developed and developing countries, quite opposite to the previous understanding of overpopulated planet. Increase in the older population brings its implications to different segments of the society, and the national health system and its funding is one of them. This paper tends to analyze if there is a relationship between the government health expenditure and the increase in the older population in fourteen countries from the European Union that are experiencing most intense process of demographic ageing. Also, other possible determinants of the health expenditures are included, such as government social spending, gross domestic product per capita and dummy variable to estimate the effect of the global recession onto the health expenditure.

Keywords: *Demographic ageing, Health expenditure, Panel regression model*

JEL classification: *J11, I18, C33*

http://hdl.handle.net/20.500.12188/15930
http://doi.org/10.47063/EBTSF.2021.0017

DEVELOPING AND MEASURING SOFT SKILLS AFTER ONLINE TRAININGS

Ivona Litsova
Faculty of Economics and Business Administration - Sofia University "St. Kliment Ohridski"
ihristova777@abv.bg

ABSTRACT
Working remotely has become a common approach for many companies in the past year. This raises several questions including the work-life balance and worker's effectiveness in the home-office environment. Here also comes the question of the training of employees and how to develop them in the new working set-up. Online programs become more and more popular among the employers. They can be in the form of webinars, virtual classrooms, conferences, etc. A focus of this article is to outline the ways to measure soft skills after online trainings. I did a literature review which covers books and journals on soft skills measurement topic with the purpose to clarify the methodology for evaluation of the results after online courses. The article provides additional findings from the conducted survey among the regular employees in a technical company from the IT sector in Eastern Europe. The outcomes from it confirmed that reactions are what organizations usually measure and it is done by using feedback forms during or after the course which helps to improve the future sessions. Learning objectives should be defined in advance and can be measured during the training by carefully observing the participation of the trainees. Results could be measured on a later stage after careful consideration of the productivity of the employee and analysis of his/ her feedback, behavior and changes in the working process after the course. Kirkpatrick's model will be the starting point of the discussion in the context of the following steps for evaluation – reaction, learning, behavior and results.

Keywords: *soft skills, training and development, online courses, training evaluation*

JEL classification: *O15, E24*

1. INTRODUCTION

Soft skills trainings attract the interest of the companies as a way to increase productivity and the effectiveness of the employees. These courses help to reduce the time it takes for a learner to become productive and thus reduces the Time to Competence which is a goal for many organizations (Bachvarova *et al*, 2012). Face-to-face training is considered as the traditional approach but it may be difficult or costly to access for people who live a long distance from the education venue (Malony *et al,* 2011). Web-based delivery of educational content provides flexibility of access and promotes a learner-centered approach to learning, enabling interaction with learning materials at a time that suits the consumer (Biggis, 1999).

In this paper I aim to give an overview of several existing models for evaluating soft skills trainings and present a survey on the measurement of these skills using Kirkpatrick's model as a reference. The article is organized as follows: in Section 2 I present the literature review and the structure and findings of the conducted survey. In Section 3 I show and discuss the outcomes from the survey. The last section includes the conclusion and the future research ideas.

http://hdl.handle.net/20.500.12188/15931
http://doi.org/10.47063/EBTSF.2021.0018

2. METHODOLOGY AND DATA

2.1 Literature review

This article includes the following criteria when choosing the proper literature:

- Papers published from 1994 – 2019
- Papers with the keywords “soft skills measurement” OR “soft skills training evaluation” OR “soft skills” OR “training evaluation methods” OR “Kirkpatrick’s model”

I chose only articles that can be relevant to soft skills measurement in the work environment since there are models and technics that are presented only for students at schools or universities and cannot be applicable. The review includes definitions of soft skills, most common non-technical skills, measurement technics and models.

A simple definition of Soft Skills comes from the winner of the Nobel prize 2000 for Economics James Heckman: “Soft Skills predict success in life” (Cimatti, 2016). A distinction can be made between Selforiented skills - what the person must understand and develop by himself and Interpersonal Skills - what the person can develop relating with other people. This distinction can also be made in terms of Personal and Social Skills. Personal Skills mainly correspond to cognitive Skills, such as knowledge and thinking skills while Social Skills refer to relationships with other people (Engelberg, 2015). Gallivan et al., (2004) identified the six most common non-technical skills mentioned in employment advertisements as 1) communication, 2) interpersonal, 3) leadership, 4) organization, 5) self-motivation, and 6) creativity.

Soft skills are most often measured using survey questions that ask respondents to self-assess their personality characteristics (Deming, 2014). The Big 5 personality inventory is a psychological model that divides human personality into five factors — extraversion, conscientiousness, agreeableness, neuroticism, and openness to experience (Srivastava & John, 1999). Big 5 personality measures are positively correlated with educational attainment, labor market earnings, and other important life outcomes (Heckman & Kautz, 2012).

Reading the Mind in the Eyes Test (RMET) is a measure of emotion recognition or social sensitivity (Kohen et al, 2001). It was originally created to diagnose "theory of mind" deficits such as Asperger syndrome and high-functioning autism, but psychologists have discovered that the RMET has predictive power for a wide variety of outcomes within a general population (Deming, 2014).

The Kirkpatrick’s model created by Donald Kirkpatrick is applicable for soft skills trainings as well. It presents evaluation methods and connects this to four different levels: reaction, learning, behavior and results (Kirkpatrick, D.J., 1994). Reaction shows how the participants felt about the training/ learning experience; learning presents the measurement of the increase of knowledge before and after the training; behavior shows the extent of the applied learning on the job; what is implemented from the training in the working environment and results describe the effects on the business/ environment by the trainee.

2.2 Data collection

For the purposes of the article, I arranged a survey among working people between 25 and 35 years in a technical company in Bulgaria. People are specialists and no one of them is a supervisor. The questionnaire is available in Appendix 1. With this survey I wanted to apply the Kirkpatrick’s model for measuring soft skills after trainings in this company, having in mind that currently all

trainings are web-based. The survey includes 7 questions on the topic and 3 demographic questions.

3. RESULTS AND ANALYSIS

I presented the survey in a middle-sized company and 45 people took part in it so far. 30 of them are between 25-27 years old, 8 are between 28 – 30 and 4 are in the range 31-33 and 3 are 34-35 years old. 15 of the participants are part of the HR team, 5 are from the IT department, 7 are from the Marketing team, 9 are from the Sales team and 9 are from the Technical support. The survey was conducted by 21 women and 24 men. In the table below I present a summary of the results from the main questions.

Table 1: Survey results

Question	Answer
What are the main soft skills that are evaluated after online trainings in your company?	Ranking is based on the number of people who chose it (1- the most popular choice, 5 - the least popular choice): 1. Communication, 2. Negotiation skills, 3. Leadership, 4. Self-motivation, 5. Creativity
Do you sign in an attendance sheet/ confirm your presence virtually when the training starts online?	In the online trainings all of the participants say that they confirm their presence: 17 people – "By turning on the camera" and 28 people said that "This happens automatically - when I join, it appears on the screen of the trainer".
Do you fill-in a feedback form when the training is over?	37 people fill-in training form and 8 people do not do it
How relevant was the content of the last online course you attended for your current work role?	It was "very relevant" for 28 people, "not that relevant" for 9, "more relevant than not" for 5 and "not relevant at all" for 3 people.
How much time do you spend with the learning resources from a training?	13 people spend between 2-3 hours, 17 people spend between 1-2 hours and 15 people spend no more than 1 hour.
Have you ever been asked to fill-in a knowledge test after the training is over?	11 people – yes, and 34 people – no
Do you notice a change in your work relationships after the training?	29 of the participants usually notice a change after the training and 16 people do not notice any change.

Kirkpatrick's model proposes that training effects be examined for four levels of impact: (1) participant reaction, (2) participant knowledge, (3) participant change in behavior, and (4) change in outcomes (Hutchinson, 1999). Level 1 outcomes were measured through program attendance, self-reported satisfaction, participants' ratings of the relevance of the program content to their current work roles, and self-reported estimates of time spent engaged with the learning resources. Level 2, knowledge, could be measured via a knowledge test, conducted after completion of the training. Level 3 outcomes could be measured by a self-report of whether participants had changed their practices since completing the program and this change is measured through the question "Do you notice a change in your work relationships after the training?" and then, by open text comment, "If you answered positive to the question above, please indicate in what way the program changed

your behavior" (Maloney et al, 2011). The results so far confirmed the application of Kirkpatrick's model for evaluation of soft skills trainings when the course is web-based.

4. CONCLUSION

This paper is a preliminary work on the metrics that could be used to measure the soft skills after trainings. The companies invest in courses that will develop specific personal skills of the employees and will return the investment in the future. Kirkpatrick's model is a key point of the analysis and the conducted survey aims to prove how it could be applied for web-based soft skills trainings.

Future work on this topic will include a deeper analysis of the arranged online courses and will focus on Level 4 (Results) of the Kirkpatrick's model. The survey could be extended to companies in different fields and interviews with managers would help understand how the results from non-technical trainings can be measured.

REFERENCES

Bachvarova, Y., Bocconia, S., van der Polsa, B., Popescu, M. and Roceanu, I. (2012), "Measuring the effectiveness of learning with serious games in corporate training", *Procedia Computer Science,* Vol. 15, pp. 221 – 232, available at: https://core.ac.uk/download/pdf/82134732.pdf (accessed on August 30th 2021)

Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y. and Plumb, I. (2001), "The 'Reading the Mind in the Eyes' Test Revised Version: A Study with Normal Adults, and Adults with Asperger Syndrome or High-Functioning Autism," *Journal of Child Psychology and Psychiatry*, 42(2), pp. 241–51.

Biggs, J. (1999), "What the student does: teaching for enhanced learning", *Higher Educ Res Dev*, Vol. 18(1), pp.57-75, available at: https://www.researchgate.net/publication/228559299 (accessed on October 20th 2021).

Cimatti, B. (2016), "Assessment of Soft Skills and their Role for the Quality of Organizations and Enterprises", *International Journal for Quality Research*, Vol.10(1), pp. 97–130 ISSN 1800-6450.

Engelberg, S. (2015), A developmental Perspective on Soft Skills. Speech at "Soft Skills and their role in employability – New perspectives in teaching, assessment and certification", workshop in Bertinoro, FC, Italy.

Gallivan, M., Truex III, D. and Kvasny L. (2004), "Changing Patterns in IT Skill Sets 1998-2003: A Content Analysis of Classified Advertising," Database for Advances in Information Systems, Vol. 35, No. 3, pp. 64-86.

Heckman, J. and Kautz, T. (2012), "Hard Evidence on Soft Skills", NBER Working Paper **18121**, June 2012, and *Labour Economics*, 19(4), pp. 451–64.

Hutchinson, L. (1999), "Evaluating and Researching the Effectiveness of Educational Interventions", *BMJ,* May 8;318(7193), pp.1267-1269

John, O. and Srivastava, S. (1999), *"The Big Five Trait Taxonomy: History, Measurement, and Theoretical Perspectives,"* in L. Pervin, O. John, eds., *Handbook of Personality: Theory and Research*, New York: The Guilford Press, pp. 102–38

Kirkpatrick, D.L. (1994), *"Evaluating Training Programs: The Four Levels"*, Berret-Koehler, San Francisco, p. 229.

Maloney, S., Haas, R., Keating, J.L., Molloy, E., Jolly, B., Sims, J., Morgan, P., Haines, T. (2011), "Effectiveness of Web-Based Versus Face-To-Face Delivery of Education in Prescription of Falls-Prevention Exercise to Health Professionals: Randomized Trial", *J Med Internet Res*, 13(4):e116,

available at: http://www.jmir.org/2011/4/e116/ doi: 10.2196/jmir.1680 PMID: 22189410 (accessed on October 15th 2021).

Appendix 1

Survey questions

Age	**Gender**	**Department**
a. 25-27	a. Male	a. Human resources
b. 28-30	b. Female	b. Marketing
c. 31-33	c. I do not want to specify	c. Sales
d. 34-35		d. Technical support
		e. IT

1. What are the main soft skills that are evaluated after online trainings in your company?
a. Self-motivation
b. Negotiation skills
c. Communication skills
d. Leadership
e. Creativity

2. Do you sign in an attendance sheet/ confirm your presence virtually when the training starts online?
a. Yes – by turning on the camera
b. Yes – this happens automatically when I join the session
c. No
d. I do not remember

3. Do you fill-in a feedback form when the training is over?
a. Yes
b. No
c. I do not remember

4. How relevant was the content of the last online course you attended for your current work role?
a. very relevant
b. more relevant than not
c. not that relevant
d. not relevant at all

5. How much time do you spend with the learning resources from a training?
a. 2-3 hours
b. 1-2 hours
c. no more than 1 hour

6. Have you ever been asked to fill-in a knowledge test after the training is over?
a. Yes
b. No

7. Do you notice a change in your work relationships after the training? If you answer positive to the question above, please indicate in what way the program changed your behavior.

a. Yes, I notice a change (specify what change, e.g. “I attempt to use more motivational interviewing techniques”, “I become more assertive when communicating”, “I try to balance my emotions at work”) …….
……
……
b. No, I do not notice any change

PUBLIC, PRIVATE AND FOREIGN INVESTMENT NEXUS IN THE REPUBLIC OF NORTH MACEDONIA: CROWDING-IN OR OUT EFFECT?

Vesna Garvanlieva Andonova
Faculty of Economics – Skopje, Ss. Cyril and Methodius University in Skopje
Center for Economic Analyses, CEA
vesna_nl@yahoo.com

ABSTRACT
In the last two decades the economic growth of North Macedonia can be qualified as sluggish and volatile. In this period, the government has been proclaiming a narrative of fiscal and economic policies focused on public investment driven development and growth, yet the capital budget bias, has been significant with regularly overestimated plans vs. the outturn. The public investment-to-GDP ratio, has been an average 5.47%, ranging from minimum 4.0% (Y2007) to maximum 6.7% (Y2010). Simultaneously, the private investment-to-GDP ratio has been an average 17.1%, with minimum of 15% (in Y2005) and a maximum value of 20.6% (in Y2008). The FDI inflows, have been ranging from minimal below 1% in 2014 to maximum 12.7% in 2001, with average of 4.6% per annum. The trends of the variables straightforwardly do not suggest a nexus between public and private investments i.e. causing crowding-in or crowding out effect. In this paper it is investigated whether public investment and foreign direct investments crowd-out or crowd-in the private investment in North Macedonia. To test this hypothesis, we use the available annual data on private investment, public investment, foreign direct investments and GDP for the period of 2000-2017 (in real terms). A model of autoregressive distributed lag bound testing is used for the variables private investment, public investment, GDP and foreign direct investment. The results indicate a crowding-out effect of public over private investments with significance of the foreign direct investments are expected to show whether there is crowding-in or -out effect of the public over private investment and crowding-in effect of the foreign direct investments. The crowding-out effect is immediate and short run.

Keywords: *private investment, public investment, crowding-out effect, ARDL bound testing*

JEL classification: *E22, H54, H11*

http://hdl.handle.net/20.500.12188/15932
http://doi.org/10.47063/EBTSF.2021.0019

THE GROUNDS OF PROTECTIONISM IN INTERNATIONAL TRADE IN THE 21st CENTURY IN THE CONTEXT OF MULTILATERAL TRADE NEGOTIATIONS

Agnieszka Piekutowska
Faculty of Economics and Finance, University of Bialystok
piekutowska@uwb.edu.pl

ABSTRACT
As the importance of tariffs diminishes, to avoid underestimation, analysis of the dynamics of protectionism implies the use of more complex data. Hence, this research explores the Global Trade Alert database, which covers a wide range of measures used by countries within trade policy. Once the dynamics of protectionism in trade is presented, the analysis of its grounds might be undertaken to answer the question: what are the reasons for high levels of protectionist tendencies in the 21st century? Is this a post-crisis repercussion only? Or is the failure of multilateral negotiations under the auspices of the WTO which, in turn, makes space for increased levels of protectionism? While many analyses highlight the indisputable impact of the crisis on the growing protectionist tendencies in the 21st century, it has been over ten years since the crisis, which requires a search for alternate or additional premises. The hypothesis was therefore adopted that the failure of multilateral negotiations within the Doha Round may make space for increased protectionism in the 21st century. Taking into consideration all of the negative consequences of protectionism, the analysis of its causes has a justification. Successful treatment requires a diagnosis of the sources of the problem; only once these are identified can an appropriate action be undertaken. The main conclusion from the research is that because of the diversification within the WTO, the multilateral liberalization agenda has been limited. Hence, "next generation" issues are addressed elsewhere, like within regional trade agreements, which, as a result, became very popular after 2001. However, RTAs should not be perceived as an alternative to liberalization under the auspices of the WTO, as they are not free from protectionist tendencies.

Keywords**:** *trade, protectionism, liberalization, WTO, multilateral trade negotiations*

JEL classification: *F13, F14*

1. INTRODUCTION

Protectionist tendencies in the 21st century raise the question: what are the reasons for increasing protectionism? Is this a post-crisis repercussion only? Aid packages or public aid have changed the direction of international trade policy set by the WTO for many years; however, in the time of global crises, they seemed to be justified as necessary (Grottel, 2016). Still, ten years after the onset of the crisis, further explanation is needed. The aim of this paper is to consider whether or not the failure of multilateral negotiations under the auspices of the WTO is making space for increased protectionism. The analysis led to the conclusion that rising diversity among WTO member states, which brings with it varying approaches and policy outlooks, impedes multilateral negotiations. This, in turn, encourages some members to engage in regional negotiations that address the multifaceted issues of 21st century international trade. Although there is no premise to conclude that the Doha Round failure directly resulted in an increase in protectionist measures, the diversity among WTO member states had, until this point, resulted in a limited liberalization agenda. RTAs can contribute to rising protectionism both toward non-members and, counterintuitively, within integration groups.

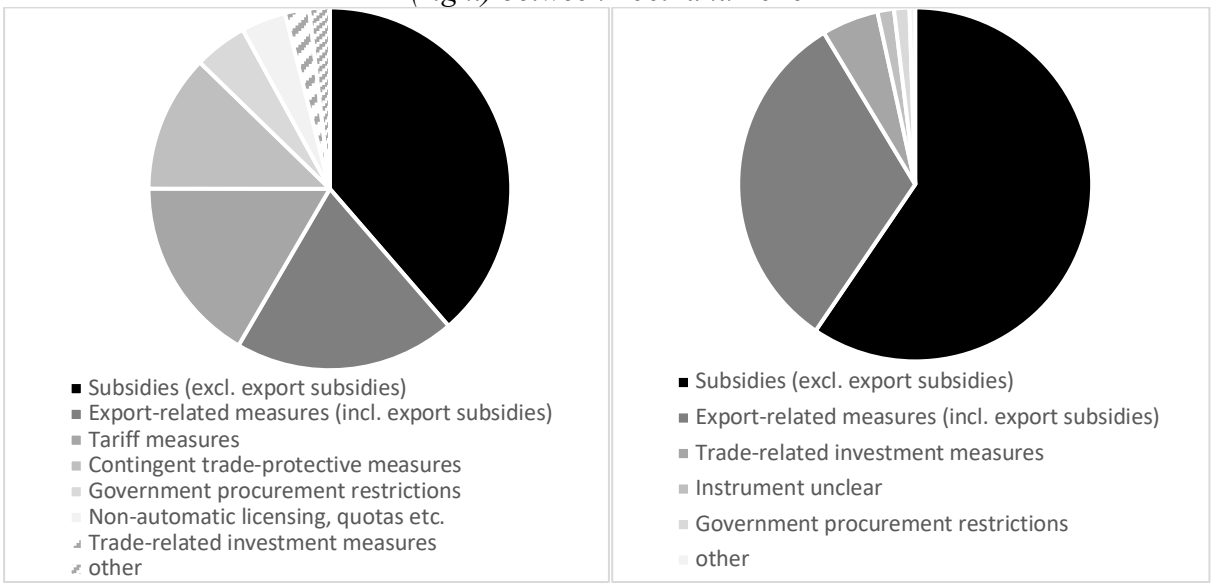
http://hdl.handle.net/20.500.12188/15933
http://doi.org/10.47063/EBTSF.2021.0020

This analysis is based on multi-faceted data that goes beyond the average tariff rate. As countries use more sophisticated measures in protectionism policy, this complex data approach avoids the risk of underestimating the actual degree of protectionism. Thus, statistical analysis was based on Global Trade Alert (launched in 2008), WTO, and IMF data.

2. PROTECTIONISM – SCALE AND DYNAMICS

Many events, data, and information signalled a growing level of protectionism in international trade in the first decade of the 21st century, indicated by increased mentions of protectionism in media news, political statements, declarations, notification, and reports. For instance, the Japanese Ministry of Economy, Trade and Industry uses a Protectionism Indicator that measures coverage of protectionist policies by tracking the share of articles that included "protectionism" or any synonym for the term on *The Washington Post*, *The New York Times*, *Nihon Keizai Shimbun*, *Yomiuri Shimbun*, *Le Monde*, *The Guardian.* This indicator reveals a rise in protectionism ideas and movements. Likewise, the US Monthly Trade Policy Uncertainty Index developed by S. R. Baker, N. Bloom and S. J. Davis (2016) reflects the frequency of articles in national newspapers that discuss policy-related economic uncertainty and contain one or more references to trade policy. As S. R. Baker, N. Bloom and S. J. Davis (2016) explain, newspaper text search can yield useful proxies for economic and policy conditions, which is particularly valuable for earlier eras and in countries with fewer data sources. Indeed, capturing the whole picture of protectionism is challenging, considering that countries use complex measures within their trade policy that go far beyond tariff measures (Figure 1).

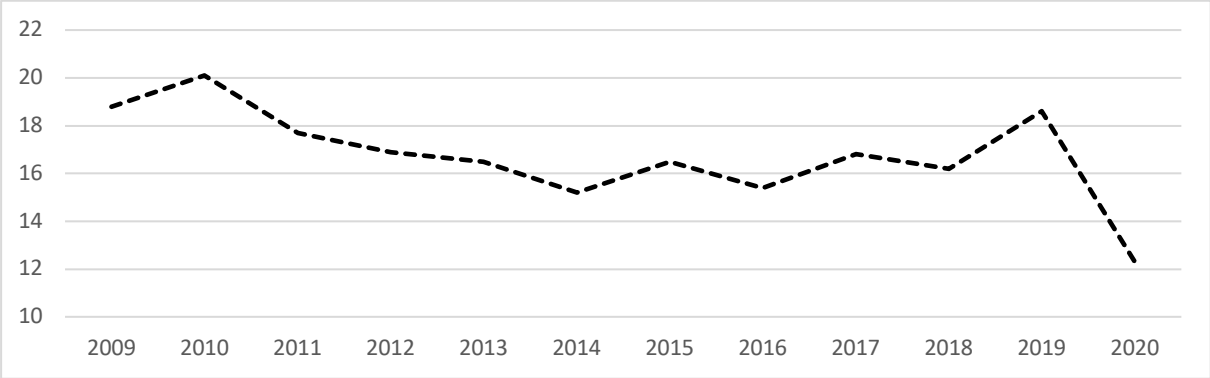
Figure 1: Harmful policy instruments in relation to global trade in goods (left) and services (right) between 2009 and 2020



(Source: Own elaboration based on Global Trade Alert database)

For this period, tariffs were never the most popular protectionist policy measure. With regard to trade in goods, almost 39% of all harmful instruments were subsidies (excluding export subsidies) and another 19.8% were export-related measures (including export subsidies). In relation to trade in services, 66.3% of all harmful instruments were subsidies and export related measures. Between 2009 and 2020 the role of tariffs has been falling - albeit inconsistently - with the share of 18.8% among harmful policy instruments in 2009, and 12.3% in 2020 (Figure 2).

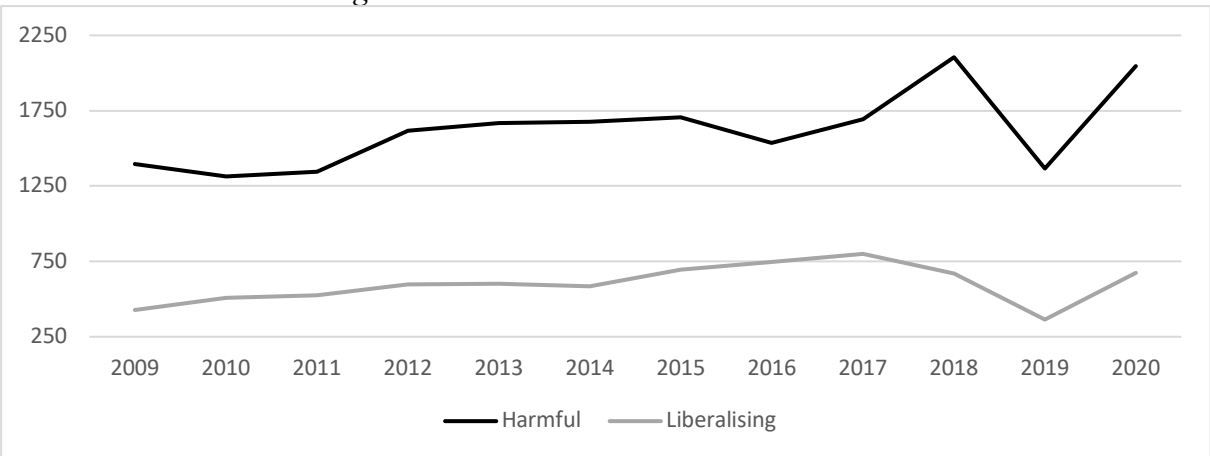
Figure 2: The share of tariffs among harmful policy instruments with regard to trade in goods between 2009 and 2020



(Source: Own elaboration based on Global Trade Alert database)

The decreasing role of tariffs is also reflected by the world average applied tariff. In 2018, it was approximately 9%, a one percentage point reduction from 9.9% in 2008 (WTO, 2019). It follows that an analysis based only on the tariffs risks underestimation when analysing protectionism. Countries use more complex methods and measures as protectionist policies skilfully adapt to the prevailing conditions (Sporek *et al.*, 2019). Thus, to better understand protectionist tendencies, this paper analyses the more complex data provided by Global Trade Alert, an easily understandable database that considers a variety of trade policy instruments. Whether or not an instrument is classified as harmful or liberalizing 'is one of the attractive features of this initiative' (Evenett, 2019). The division of harmful and liberalizing interventions gives a broad picture of policy instruments used with respect to international trade of goods and services (Figure 3). Here harmful interventions are defined by all policy interventions that worsened the relative treatment of some foreign commercial interest, while liberalizing interventions are defined by those that would likely improve the relative treatment of foreign commercial interests.

Figure 3: The number of new interventions implemented each year affecting global trade in goods and services between 2009-2020

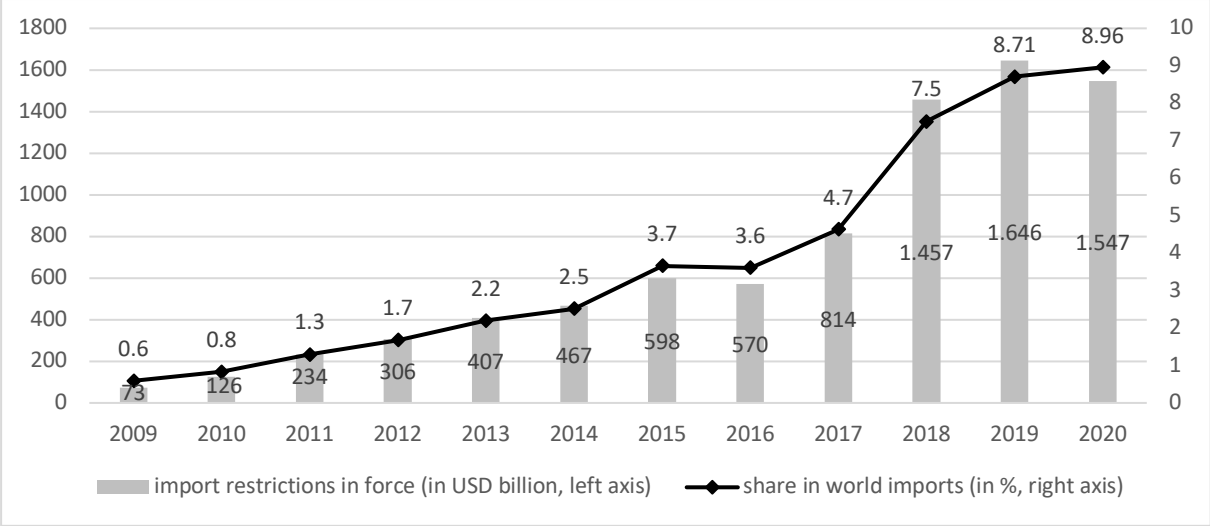


(Source: Own elaboration based on Global Trade Alert database)

Between 2009 and 2020, almost 27,000 policy interventions regarding trade in goods and services were undertaken. Of these, 73% were considered harmful ones, and of this 73%, the majority of them refer to trade in goods. What is striking is the high level of harmful interventions not only during the financial crisis, but also for many years after it. This suggests that protectionism was widely used during the recovery phase of national economies. The last

three years of analysis (2018-2020) show significant volatility: after a fall in protectionism in 2019, the Covid-19 pandemic caused a spike in protectionism in 2020.
Notably, import-restrictive measures cover more and more trade – both in terms of values and as a percentage of world imports. In 2019, 8.7% of world imports were affected by import restrictions that were implemented in 2009 and beyond. This was the equivalent to 1.6 trillion USD out of a total of 18.9 trillion USD in world imports. Provisional data for 2020 indicates that almost 9% of world imports were affected by import restrictions that were implemented in 2009 and beyond (Figure 4).

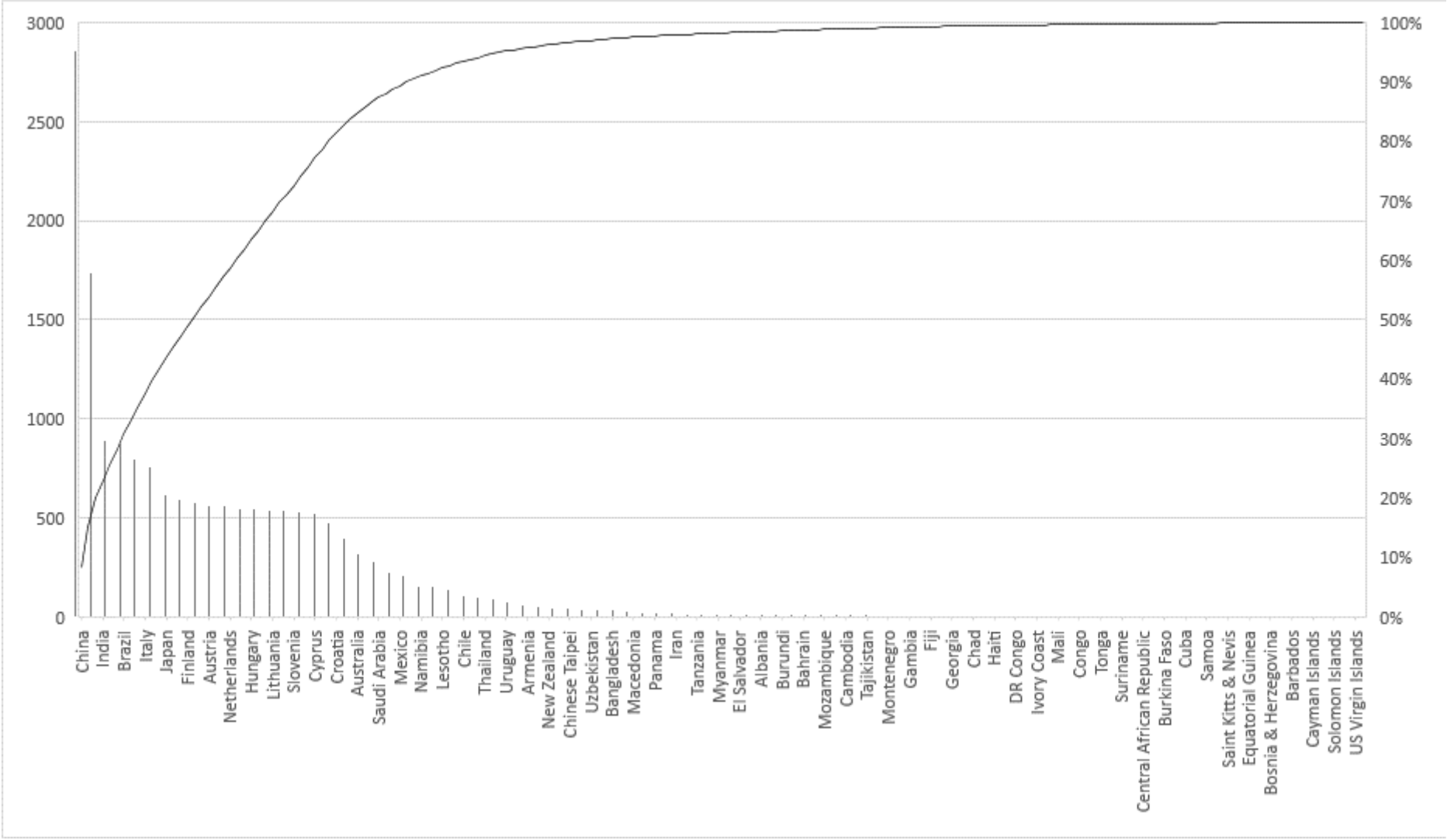
Figure 4: Cumulative trade coverage of import-restrictive measures in force since 2009 to 2020 (USD billions and % of world merchandise imports)



(Source: WTO, 2020, WTO, 2021b)

It is worth noting that the data presented in Figure 4 concerns regular, non-COVID-related measures implemented during 2020; therefore, an increase in the share of import-restrictive measures in world imports shall not be associated with pandemic. Furthermore, a significant increase in import-restrictive measures from 2017 to 2018 can largely be explained by both measures introduced on steel and aluminium and by increases in tariffs introduced as part of bilateral trade tensions (WTO, 2021b).
Indeed, particular countries have different contributions to interventions, and countries were not affected the same way. China is at the top of the list of countries contributing to harmful interventions between 2009 and 2020, while the United States of America and Germany are at the second and third place, respectively. Importantly, protectionist policies are concentrated within a small subset of countries: just 17 countries are responsible for 50% of all harmful interventions and just 30 countries are responsible for 71.1% of all interventions affecting global trade in goods and services (Figure 5).
Conversely, many countries were affected by harmful interventions. China, followed by Germany and the USA, is the most affected country in the world with 7,474 harmful interventions for Chinese trade in goods and services between 2009 and 2020, This is a much broader scope than countries that implemented harmful measures with 50% of measures harming 31 economies and approximately 70% of all measures harming 49 countries. Therefore, many more countries were affected by the harmful instruments that were implemented by far fewer countries.

Figure 5: Pareto Chart of countries contribution to intervention affecting global trade in goods and services between 2009 and 2020



(Source: Own elaboration based on Global Trade Alert database)

3. THE INSTITUTIONAL ASPECT OF LIBERALIZATION, MULTILATERAL NEGOTIATIONS AND DYNAMICS OF DEVELOPING COUNTRIES ROLE

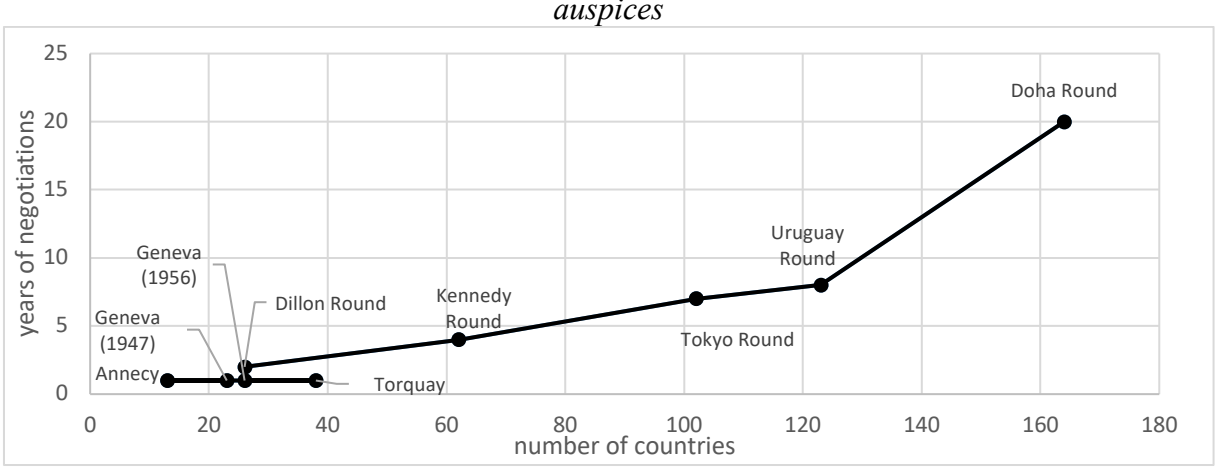
There are many premises for protectionism in international trade (Rynarzewski, 2007), but according to Bhagwati (1988), the forces behind free trade are stronger than the forces of protectionism. Consequently, according to the author, free trade ideology is likely to succeed in the future, but only when the institutions promoting these ideologies work properly. Therefore, an institutional aspect in regulating international trade is necessary. In this framework, many analyses and summaries focus on promoting trade liberalization within the GATT/WTO. Although tariffs have been reduced significantly since launching GATT, "the victory is never total" (Baldwin, 2000). Several barriers, with varying scopes and impacts, remain. However, reflections on the consequences of imperfections in international trade institutions' role in protectionism are scarce. Therefore, the question arises: are imperfections within the institutional framework of trade liberalization the reason for the increase in protectionism? Notably, it is worth discussing if the failure of multilateral negotiations under the auspices of the WTO is making space for more and more protectionism?

Most countries recognize the importance of negotiations in restraining protectionist pressures (Baldwin, 2004). As a result of the limited agenda of a multilateral negotiation process, the space for liberalizing developments is limited as well. The failure of the WTO Ministerial Conference at Cancún in 2003 resulted in the General Council's decision that issues of the relationship between trade and investment, competition policy, and transparency in government procurement will not be part of the Work Programme set out in the Ministerial Declaration. Therefore, no negotiations around these topics would take place during the Doha Round.

Still, one success can be mentioned here. In 2017 Trade Facilitation Agreement (TFA) entered into force. According to estimations, full implementation of the TFA could reduce trade costs by an approximately 14.3% and boost global trade by up to $1 trillion per year (WTO, 2021c). It became clear, that international trade is facing different types of barriers, including also administrative (complicated customs procedures and complex documentation requirements) and informal obstacles. As soon as it was realized that these barriers slow down the trade of goods, it became obvious that additional liberalization should be focused on trade facilitation (Toshevska – Trpchevska, Kikerkova, Makrevska Disoska, 2016).

On one hand, the growing number of WTO members increases the magnitude of the impact of trade liberalization actions. One the other hand, with more and more countries at different development levels and with different goals, multilateral negotiations are more difficult because reaching a compromise requires longer negotiations (Figure 6).

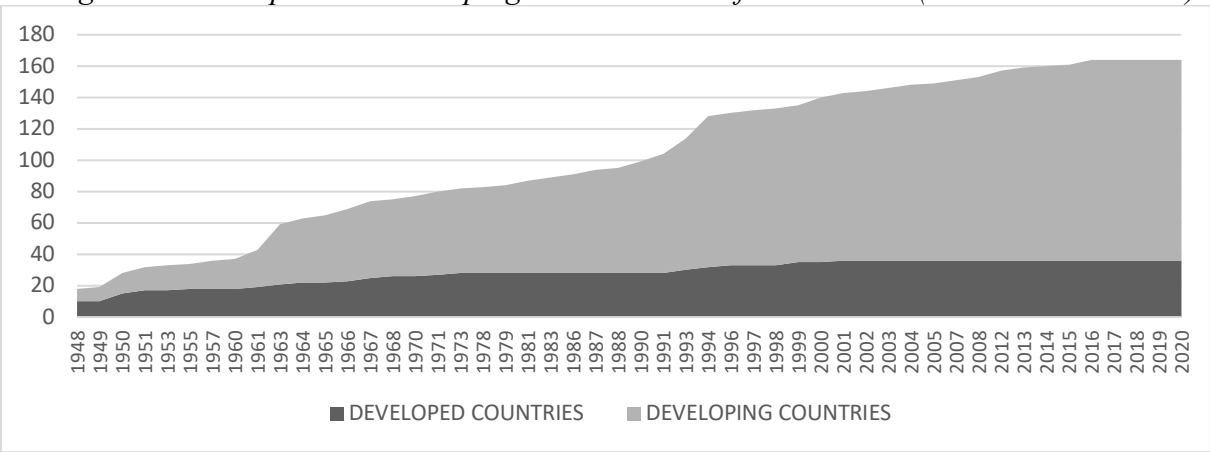
Figure 6: The number of negotiating countries versus years of negotiations under GATT/WTO auspices



(Source: Own elaboration)

Since the first negotiation round in Geneva, the number of negotiating countries and the length of negotiations has increased significantly. However, this is only part of the reason negotiation regarding trade liberalization has become more time-consuming. Another contributing factor is that as the number of GATT/WTO member states increased, the differentiation between these countries increased as well (Figure 7).

Figure 7: Developed and developing member states of GATT/WTO (cumulative numbers)



(Source: Own elaboration)

With the accession of Afghanistan and Liberia to the WTO in July of 2016, developing countries now comprise almost four-fifths of all WTO members. This shows a continued widening of the gap between the number of developed and developing countries that began in the 1960s. When the WTO was founded, developing countries comprised three-fourths of all WTO members. Furthermore, in 2019, developing countries represented 44.4% and 41.8% of world exports and imports, respectively (UNCTAD, 2020). This represented a large increase; in comparison, in 1995, the share of developing countries in export and import was 28% and 29%, respectively.

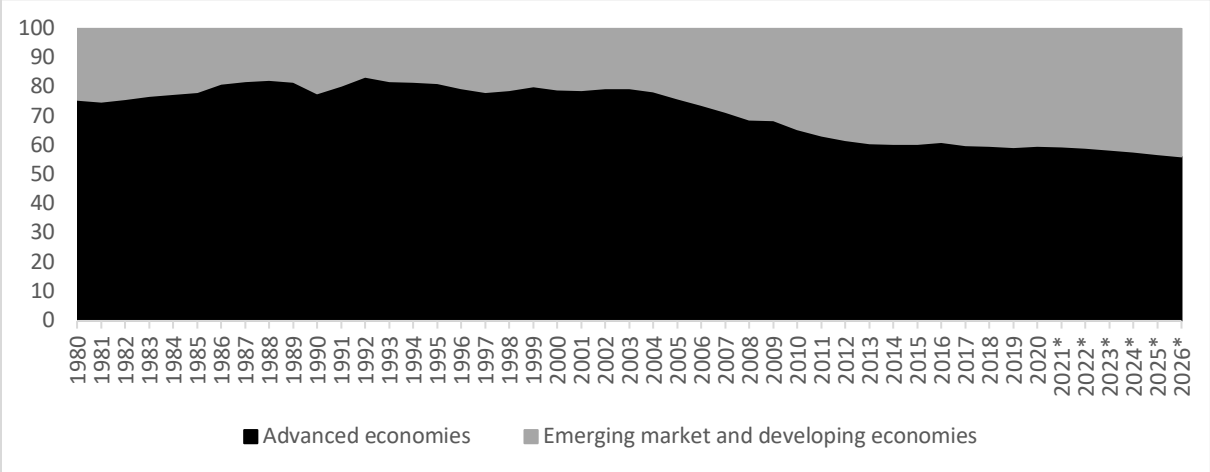
The differing development levels of member states brings challenges: it is argued that the two decades-long negotiations within the Doha Round are symptomatic of diametrically opposed perceptions of the nature of the round between developed and developing countries (Cho, 2010). From the analysis of Dugiel (2008), it follows that one of the main obstacles to progress in the Doha Round negotiations is the dissatisfaction of developing countries with existing WTO provisions and the demand for special status in the world trade system.

The discussion about the diverse perspectives on the process of trade liberalization among developed and developing countries prompts additional reflection about which countries are considered developed versus developing. There are no agreed upon formal definitions of "developed" and "developing" established by the WTO, and countries' varied ideas about self-identifying as "developed" or "developing" is another symptom of the increasingly diverse makeup of the WTO. The status of “developing country” brings some advantages, such as a longer transition period or “special and differential treatment” provisions. Since there are no minimum requirements to be classified as a “developing” country, there are a few striking examples of “developing countries” like Singapore, Hong Kong, United Arab Emirates or Qatar (WTO, 2019b).

The growing diversity of WTO’s member states, which contributes to their varied expectations, are some – out of many – factors that explain the inability to conclude trade multilateral trade negotiations. Some reasons include both more emerging economies and more assertive developing country coalitions; additionally, countries’ positions and negotiating interests have

changed over time (Bellmann*, et. al.,* 2012). In a couple of decades, the sharp growth of emerging economies has shifted the centre of gravity of economic power. While in 1980 the output of developed economies represented 76% of world GDP, by 2020 the share of output from advanced economies had fallen to 59.8%, and the share of emerging market and developing economies rose to 40.2%. Moreover, the increase in developing countries' share of global GDP is expected to continue to increase (Figure 8). Since the turn of the century, countries such as China, India, Brazil and South Africa have experienced significant economic growth resulting in them striving to maintain their political space within the WTO. At the WTO forum, this meant rejecting the proposals by developed countries regarding, among other things, a strengthening of international investment rules, intellectual property rules and government procurement (Gallagher, 2012).

Figure 8: Share of advanced economies and emerging markets & developing economies in global GDP, in %



**Note: estimates start after 2020*
(Source: Own elaboration based on IMF, WEO Database, 2021)

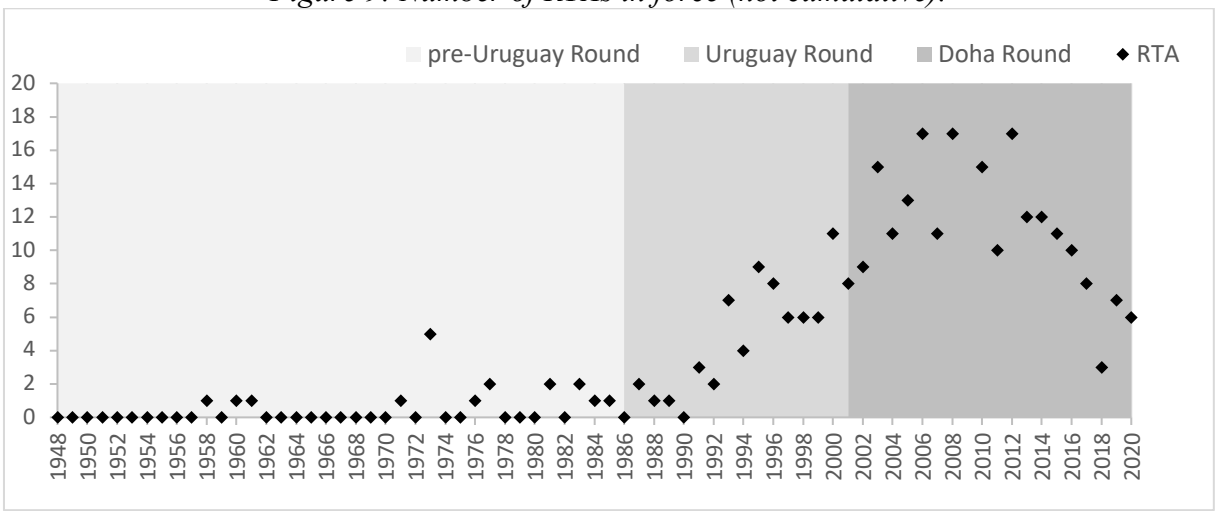
Exceptions to the trend toward liberalization under GATT were present from the outset, the diversity of countries played a role in these exceptions. One exception was that agriculture was not included in the liberalization agenda. For example, the United States, and major developed countries of Europe, perceiving its comparative advantage in agricultural trade, were influenced by strong protectionism lobbies. On the other hand, developing countries protected their manufacturers. The second exception is a compromise regarding the Most-Favoured-Nation Treatment in the context of integration. Exceptions reflected adjustment to the political objectives of powerful GATT members, with the United States broadly sympathizing with European integration. However, omissions (agriculture) and commissions (exceptions to MFN-based multilateralism) were influenced by the political weight of the powers. The special and different treatment of developing countries was grounded in their relative economic insignificance in world trade. Thus, the cost to others of these asymmetric solutions in the process of liberalization was small enough to invite indulgence (Bhagwati, 1988).
It would seem that free trade theory is widely recognized among participants of international trade. However, the liberal directions of actions in trade policy do not reflect the universality of their application. Such a trivial fact is at the same time strongly symptomatic: none of the world's economies are characterized by purely free trade policy. Many economies started to follow the idea that on a regional level there may be a consensus on the elimination of differentiated restrictions but only to a limited extent (Sporek, *et. al.,* 2019).

4. MULTILATERAL NEGOTIATIONS VERSUS REGIONAL LIBERALIZATION IN THE CONTEXT OF PROTECTIONISM

Some authors argue that WTO members, in light of the failure of multilateral negotiations, treat RTAs as an alternative to the WTO. Some scholars state that the tariffs reduction in the Uruguay Round might have helped in RTAs development by lowering the cost of creating regional agreements (Forere, 2015).

The significant development of RTAs is visible and unquestioned (Figure 9). However, there is uncertainty about the fundamental cause of this increase. Undoubtedly there is more than one cause of the increase in RTAs, and it is difficult to determine which factor has the greatest effect. Nevertheless, the vast majority - 73.5% - of active RTAs was created after 2001. This notable increase in the number of RTAs during the Doha Round is too overt to be considered just a coincidence.

Figure 9: Number of RTAs in force (not cumulative).



(Source: Own elaboration based on WTO, Regional Trade Agreements Database)

However, the rise of RTA's goes beyond tariff reductions. As the GATT and WTO established a multilateral trade system that has remained largely unchanged since 1995, some WTO members called for new rules that address potential nontariff barriers to trade – including public health, product safety standards, international investment, digital trade and e-commerce. This want is one of the most important drivers for negotiations of new RTAs as in the case of Comprehensive and Progressive Agreement for Trans-Pacific Partnership, CPTPP (Bown, 2017). As all "next generation" issues that go beyond those in the WTO's rulebook are addressed elsewhere (like through regional trade agreements), the real threat, therefore, is the erosion of the WTO's centricity in the world trade system (Baldwin, 2012). One might recall here the reasons for the failure in creating the International Trade Organization. The Havana Charter went beyond world trade issues and eventually the ratification process ended disastrously. Were issues inserted into the Havana Charter, like fair labour standards or internal taxation, too ambitious then? GATT undoubtedly played a role in the process of trade liberalization after World War II - apparently, the countries were not ready for broader terms then. The same might apply to a WTO – GATT successor. The rise of alternative liberalization forums at regional level potentially threatens the multilateral system. This, in turn, raises the question: is this system relevant enough to address the challenges of 21st century international trade?

The lack of progress in WTO negotiations in the past decades has led to the development of Mega-RTAs, defined here as strong partnerships between countries or regions with a large share of world trade and foreign direct investment (Meléndez-Ortiz, 2014). Since current WTO rules

are seemingly unable to regulate the complex, multi-layered network of global value chains, there is a space for Mega-RTAs which require not only at-the-border liberalization (like free trade in goods, services, and foreign investment), but also beyond-the-border economic reforms (Kimura, Chen, 2016). The emergence of Mega-RTAs is the answer to unsatisfactory negotiation progress in the international forum resulting in countries liberalizing at different speeds. Examples include the Comprehensive Economic and Trade Agreement (CETA) between Canada and the EU or Agreement between the EU and Japan for an Economic Partnership.

The development of Mega-RTAs raises concerns not only about the role of the WTO in managing world trade in the 21st century, but also about the risk of rising protectionism. Although exclusion from Mega-RTAs is not in itself enough to assume that countries will readily implement protectionist measures, the risk remains, particularly in places where the influential domestic electorate is hostile to trade. The disappointments with multilateral actions and exclusion from the most crucial parts of world trade may be a basis for antiglobalization lobbies (Dadush, 2014).

On the other hand, some proponents argue that these types of deeper integration agreements could be beneficial since many of the provisions provided are likely to be implemented on a non-discriminatory basis. Furthermore, if these rules are a part of Mega-RTAs that apply to a large amount of global trade, they may serve as templates for global trade rules when and if other WTO members are ready to negotiate them (Elliott, 2019). Some observations reveal, however, that the bilateral trade negotiations often put developing countries in a less advantageous position than multilateral trade negotiations (Stiglitz, 2010).

Moreover, an in-depth analysis by Wandel (2019) focusing on the protectionist potential of recently signed RTAs: CPTPP, USCMA, and CETA leads to the conclusion that all of them are far from the classical liberal ideal of totally free trade and have a high content of back door protectionism. This analysis proves that some agreements' (United States-Mexico-Canada Agreement, USMCA) protectionist provisions might outweigh their liberalizing stipulations, whereas others (CPTPP, CETA) can be deemed net liberalizing. The study of Ghosh and Yamarik (2004) composed of observations of 186 developing and developed countries during 1970, 1975, 1980, 1985, 1990 and 1995, leads to a similar conclusion, as any type of RTA results in a fall of trade outside the bloc of 6%. A study of Magee (2008), which, like previous research, is based on the gravity model, regarding the participation of 133 WTO member states in regional agreements between 1980 and 1998 brought different results: that aggregate trade creation significantly outweighs trade diversion. Additionally, according to the Wajda-Lichy study (2014), in the post-crisis era, protectionist actions were implemented not only towards the third countries, but also among the members of free trade areas like the EU, NAFTA, or BRICS countries. It follows that the net effect of RTAs is peculiar, therefore, one should be sceptical of general conclusions covering all RTAs and case studies are desirable. Still, several studies indicating protectionism within integration groups led to the conclusion that liberalization at the regional level cannot be taken for granted.

As Foroutan states in his 1998 paper 'Does Membership in a Regional Trade Arrangement Make a Country More or Less Protectionist?', RTAs do not necessarily lead to a more liberal import regime (Foroutan, 1998); therefore, regionalization as an alternative to multilateral liberalization process may be questionable. As no regional trade agreement is free of protectionist provisions, either within the group or in relation to non-members, the rise of RTAs, including Mega-RTAs, stemming from the disappointing results of multilateral negotiations within the Doha Round, threaten to raise protectionism. It follows that a progress of multilateral negotiations would be desirable to address the risk of rising protectionism within regional integration as well.

5. CONCLUSION

With the growing diversity of WTO member states resulting in varied expectations, the ability to conclude multilateral trade negotiations falls. These manifold postures already resulted in a limited agenda of multilateral negotiations. As a result, the pace of liberalization developments has been limited. Some countries search for more liberalization that goes far beyond those in the multilateral agenda; yet, "next generation" issues are addressed within regional trade agreements. As presented, there is a high rate of RTA development after 2001. The question is: are these developments, including the emergence of Mega-RTAs, an alternative to multilateral liberalization under the auspices of the WTO? On the one hand, the dimension of liberalization of Mega-RTAs exceeds the multilateral one; on the other hand, case studies reveal their high protectionist potential. It should not be surprising that the increase in the number of RTAs in the 21st century was not accompanied by a decline, but rather an increase in protectionism? Along with these studies, the results of which indicate protectionism of regional economic groups both towards non-members and between member states, the contribution of RTAs in the process of regional liberalization is questioned. Thus, with the limited role of RTAs as an alternative to liberalization under the auspices of WTO, the progress of multilateral negotiations is desirable to address the risk of rising protectionism. Still, further case-studies of particular RTAs are needed as they give insight into the risk of regional protectionism, which should be a matter of global concern.

REFERENCES

Baker, S.R., Bloom, N.S., Davis, J. (2016), "Measuring Economic Policy Uncertainty", *The Quarterly Journal of Economics*, Vol. 131, Issue 4, pp. 1593-1636.

Baldwin, R.E. (2000), "Regulatory Protectionism, developing nations and a two-tier world trade system", *CEPR Discussion Paper*, No. 2574, pp. 1-39.

Baldwin, R.E. (2004), "Failure of the WTO Ministerial Conference at Cancun: Reasons and Remedies", The World Economy, Vol. 29, Issue 6, pp. 669-855.

Baldwin, R.E. (2012), "WTO 2.0: Global governance of supply-chain trade", *CEPR Policy Insights*, No. 64, pp. 1-24.

Bellmann, Ch. and Hepburn**,** W. (2012), "Le système commercial multilatéral face aux défis des politiques publiques globales", *International Development Policy*, Vol. 3, available at: https://journals.openedition.org/poldev/964 (accessed 9 February 2021).

Bhagwati, J. (1988), *Protectionism*, The MIT Press, Cambridge, Massachusetts, London.

Bown, Ch. P. (2017), "Mega-Regional Trade Agreements and the Future of the WTO", *Global Policy*, Vol. 8, Issue 1, pp. 107-112.

Cho, S. (2010), "The Demise of Development in the Doha Round Negotiations", *Texas International Law Journal*, Vol. 45, pp. 573-601.

Dadush, U. (2014), "Potential Responses to Mega-regionals by Excluded Countries", González, A. (Ed.), *Mega-regional Trade Agreements Game-Changers or Costly Distractions for the World Trading System?* World Economic Forum, pp. 28-30.

Dugiel, W. (2008), "Światowa Organizacja Handlu a kraje rozwijające się", *International Journal of Management and Economics*, Vol. 24, pp. 9-37.

Elliott, K.A. (2019), "The WTO and regional/bilateral trade agreements", Looney, R.E. (Ed.), *Handbook of International Trade Agreements. Country, regional and global approaches*, Routledge Taylor&Francis Group, London, New York, pp. 17-27.

Evenett, S.J. (2019), "Protectionism, state discrimination, and international business since the onset of the Global Financial Crisis", *Journal of International Business Policy*, Vol., Issue 1, pp. 9-36.

Gallagher, K.P. (2012), "Challenging Opportunities For the Multilateral Trade Regime", Meléndez-Ortiz R., Bellmann Ch., Mendoza M.R. (Eds.), *The Future and the WTO:*

Confronting the Challenges. A Collection of Short Essays, ICTSD Programme on Global Economic Policy and Institutions, Geneva, Switzerland, pp. 15-21.
Ghosh, S. and Yamarik, S. (2004), "Does trade creation measure up? A reexamination of the effects of regional trading arrangements", *Economics Letters*, Vol. 82, pp. 213–219.
Global Trade Alert Database, (2021), available at: https://www.globaltradealert.org/data_extraction (accessed 10 August 2021).
Grottel., M. (2016), „Protekcjonizm we współczesnym handlu międzynarodowym", *International Business and Global Economy*, No. 35/1, pp. 69–80.
IMF, (2021), *World Economic Outlook Database,* available at: https://www.imf.org/en/Publications/WEO/weo-database/2021/April (accessed 7 August 2021).
Kimura, F. and Chen, L. (2016), "Implications of Mega Free Trade Agreements for Asian Regional Integration and RCEP Negotiation", *Economic Research Institute for ASEAN and East Asia Policy Brief*, No. 2016-03, pp. 1-4.
Magee, Ch.S.P. (2008), "New measures of trade creation and trade diversion", *Journal of International Economics*, Vol. 75, pp. 349–362.
Meléndez-Ortiz, R. (2014), "Mega-regionals: What Is Going on?" González A. (Ed.), *Mega-regional Trade Agreements Game-Changers or Costly Distractions for the World Trading System?* World Economic Forum, pp. 13-14.
Rynarzewski, T. (2007), „Ewolucja idei protekcjonizmu w teorii handlu międzynarodowego i praktyce współczesnej gospodarki światowej", *Prace Naukowe Akademii Ekonomicznej we Wrocławiu. Integracja a globalizacja,* No. 1173, pp. 308-319.
Sporek, T., Czech, A., Fronczek, M., Kos-Łabędowicz J. (2019), *Pomiędzy polityką a ideologią – globalne wyzwania współczesnej gospodarki światowej*, Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, Katowice.
Stiglitz, J.E. (2010), *The Stiglitz Report: Reforming the International Monetary and Financial Systems in the Wake of the Global Crisis*, The New Press, New York.
Toshevska–Trpchevska, K., Kikerkova, I., & Makrevska–Disoska, E., *"Trade Facilitation Agreement Tool to facilitate and secure trade, in: Trade Perspectives 2016. Safety, security, privacy and loyalty.* N. Knego, N., Renko, S., Knežević, B. (Eds.), University of Zagreb - Faculty of Economics and Business, Croatian Chamber of Economy, Zagreb 2016.
UNCTAD, (2020), *Handbook of Statistics 2020 - International merchandise trade*, available at: https://unctad.org/system/files/official-document/tdstat45_FS01_en.pdf (accessed 28 July 2021).
Wandel, J. (2019), "Do free trade agreements promote sneaky protectionism? A classical liberal perspective", *International Journal of Management and Economics*, Vol. 55, Issue 3, pp. 185–200.
WTO, (2019), *World Trade Statistical Review*, Geneva.
WTO, (2019b), *An Undifferentiated WTO: Self-Declared Development Status Risks Institutional Irrelevance. Communication from the United States*, General Council, No. WT/GC/W/757.
WTO, (2020), *Overview of Developments in the International Trading Environment. Annual Report by the Director-General (Mid-October 2019 to mid-October 2020)*, Trade Policy Review Body, No. WT/TPR/OV/23
WTO, (2021), *Regional Trade Agreements Database*, available at: https://rtais.wto.org/UI/PublicMaintainRTAHome.aspx (accessed 30 July 2021).
WTO, (2021b), *Report of the TPRB from the Director-General on trade-related developments (Mid-October 2020 to mid-May 2021)*, Trade Policy Review Body, No. WT/TPR/OV/W/15
WTO, (2021c), *Trade Facilitation*, available at: https://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm (accessed 17 October 2021).

HUMAN MOBILITY DURING THE COVID-19 PANDEMIC IN WESTERN BALKAN COUNTRIES

Srđan Damjanović
Faculty of Business Economics Bijeljina, University of Eastern Sarajevo
srdjan.damjanovic@fpe.unssa.rs.ba

Predrag Katanić
Faculty of Business Economics Bijeljina, University of Eastern Sarajevo
predrag@telrad.biz

Vesna Petrović
Faculty of Business Economics Bijeljina, University of Eastern Sarajevo
vesna.petrovic@fpe.unssa.rs.ba

ABSTRACT
At the end of 2019, a new coronavirus appeared in the Chinese province of Wuhan, causing the appearance of the disease COVID-19. The disease spread very quickly to other countries in the world, including the Balkans. The governments of many countries have decided to combat the spread of the COVID-19 virus in the community through social distancing measures. Decisions to ban the movement of people were easy to make, but they were very difficult to implement and enforce in practice. Some of the countries monitored their citizens through various applications installed on smartphones. This led to criticism by many NGOs, as they felt that this violated basic human rights of freedom of movement and privacy. Some lawsuits were even filed in the courts because the citizens felt that they were denied rights guaranteed by the respective constitution.
Google uses the ability to monitor all those citizens around the world on a daily basis who use smartphones or handheld devices, which provide the option to record the "location history" of the users. This is possible for them, since most people have voluntarily agreed to this option on their devices. In early 2020, Google began publishing global mobility data on a daily basis through a report called "Community Mobility Reports". The report shows the percentage change in human activity at six grouped locations. Data obtained in the reference days before the outbreak of the COVID-19 pandemic are used as a basis for comparison.
In this paper, we studied the dynamics of human mobility during the COVID-19 pandemic in 7 countries of the Balkans: Bosnia and Herzegovina, Serbia, Croatia, North Macedonia, Bulgaria, Greece, and Romania. For Montenegro and Albania Google did not provide data on human mobility. We present the processed data graphically. For all examined countries, we statistically analyzed the obtained data and presented them in a table.

Keywords: *Mobility, Data, Balkan*

JEL classification: *O15, J61*

1. INTRODUCTION

At the end of 2019, a new coronavirus appeared in China in the Chinese province of Wuahn, causing the appearance of the disease termed COVID-19. In order to stop the further spread of the disease, China locked down this province on January 23, 2020. However, this disease quickly began to spread to other countries around the world. The first cases in Europe were recorded in the second half of January 2020. The rapid spread of the COVID-19 pandemic

http://hdl.handle.net/20.500.12188/15934
http://doi.org/10.47063/EBTSF.2021.0021

has produced several different effects around the world. The governments of most countries have begun to apply various special measures to stop the spread of the virus, because the health systems were on the verge of collapse. Likewise, some countries in parts of Asia and Southern Europe have implemented very drastic policies of lockdowns, prohibiting the movement and gathering of large numbers of people. It was also recommended that all employers, who could feasible undertake, organize work from home and most educational institutions have switched to teaching classes online. In contrast, a small number of countries did not apply a strict approach to banning the movement and gathering of people (examples being Sweden and Belarus). At the beginning of this pandemic, there were no vaccines to prevent this disease. That is why the World Health Organization has recommended that the best strategy to fight the COVID-19 disease is to prevent the transmission of the virus by social distancing. This has been a major problem for most countries, as most social and economic activities are based on direct interaction between people. Each ban on physical interaction and gathering of people also produced huge economic losses for all countries involved. Ideally, the state could monitor the movement and contacts of people 24 hours a day. States have begun to develop various methods for tracking people. Some of the countries monitored their citizens through various applications installed on mobile phones. This led to protests by many NGOs, as they felt that this violated basic human rights and presented an intrusion of privacy. In some countries, lawsuits have also been filed before the courts, as citizens felt that the government's dictates denied their constitutionally guaranteed rights.

In 2020, Google began publishing data on global mobility daily through a report named Community Mobility Reports (CMR). This report contains collected data from 135 countries of the world, starting from 15.2.2020. This report includes some statistics, which aim to promote studies, which can help in the fight against COVID-19 disease. Furthermore, we believe that they can also be used to analyze economic trends. Google's CMR aggregates the data of those individuals who access the Google app with smartphones or handheld devices, which grants the option to record "location history." The physical presence of an individual user and the time spent in certain categories of location are compared, to determine certain activity characteristics of the participants. The data are categorized into six discrete categories, which can be summarized as follows:

- retail and recreation (restaurants, cafes, shopping malls, museums, libraries, cinemas);
- pharmacies and grocery stores (pharmacies, grocery stores, agricultural markets);
- parks (city parks, national parks, public beaches, marinas, camps, dog parks);
- transit stations (public transport hubs such as metro, bus and train stations, seaports, taxi stands, motorway rest areas);
- workplaces;
- and places of residence.

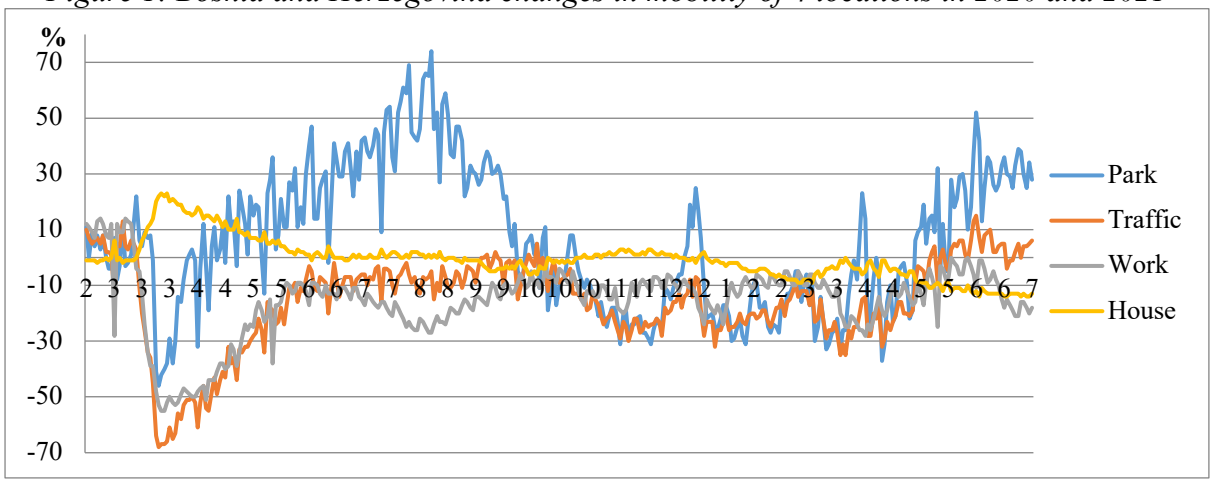
The CMR provides a percentage change in human activity for each listed site category and compares it to total the activity in the reference days prior to the onset of COVID-19 (a five-week period running from January 3, 2020 to February 6, 2020). Daily activity fluctuations are compared to the corresponding reference day. For example, the data for Mondays are compared with the corresponding Mondays in the reference set. The values shown thus represent a relative percentage change compared to the reference days, rather than an absolute number of visitors. With the help of these data, it is easy to see whether the population in a country had complied with the measures physical distancing, which were adopted by the governments of those respective countries. The CMR report is provided for each country individually or combined for the entire world in a CSV extension file. This file contains data written in plain text and, contains a comma-separated list of data. Each row of data is linked to one date. For some countries, there is data for the whole country only, while for other countries data are given broken down by regions and cities. In this paper, we took data only

at the whole country level. CSV files can be opened using most programs that work with text and tables. We loaded this data into a Microsoft Excel worksheet via the **Data** menu of the **Get External Data** submenu and using the **From Text** command.
In this paper, we studied the dynamics of human mobility during the COVID-19 pandemic in 7 countries in the Balkans: Bosnia and Herzegovina, Serbia, Croatia, Northern Macedonia, Bulgaria, Greece and Romania. There is no CSV file for Albania and Montenegro, so it is not possible to monitor the mobility of people in these two countries. The data were observed starting from February 15, 2020 until July 1, 2021 years. In some countries, values for some of the 6 observed parameters were missing for certain days in the observed period, if human activity at that location was too low on a certain day and therefore the anonymity threshold set by Google was not able to be achieved.

2. GRAPHS OF HUMAN MOBILITY IN 7 BALKAN COUNTRIES

In this paper, we have processed and presented data on the dynamics of human mobility during the COVID-19 pandemic in seven Balkan countries starting from February 15, 2020 until July 1, 2021 for six different location categories. For each country, we made attendance fluctuation graphs for four categories of locations: parks, transit stations, workplaces, and housing facilities. The X-axis covers the months from February 2020 to June 2021. The Y-axis shows the percentage change in attendance of the observed locations. We left out the data from the retail and recreation category, as well as pharmacies and grocery stores, because we wanted the diagrams to be as uncluttered as possible. Observing the obtained graph for each country, we noticed that on weekends and on public and religious holidays, large peaks in attendance changes appeared. To reduce these peaks, we excluded data for all Saturdays and Sundays, as well as non-working holidays Christmas, New Year's Day, May 1st, and certain non-working days corresponding to public holidays in individual countries. Figure 1 shows diagrams of the changes in mobility measured as attendance at four locations in Bosnia and Herzegovina.

Figure 1: Bosnia and Herzegovina changes in mobility of 4 locations in 2020 and 2021

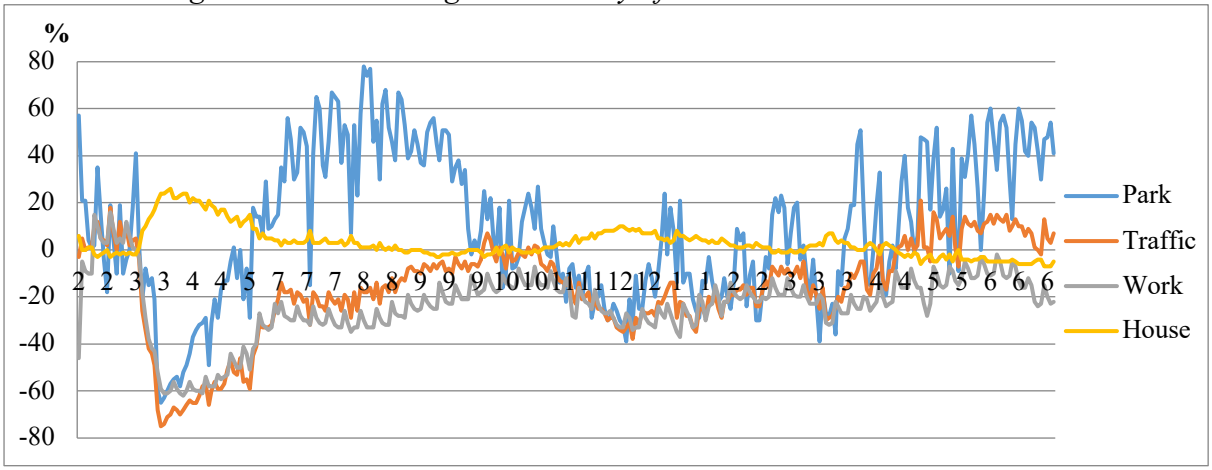


(Source: Authors)

For Bosnia and Herzegovina, it is very easy to see a large decline in the movement of people in March 2020, and the largest declines are observed in the categories of work and traffic. In the same period, a sudden increase in the time people spent at home can be seen. This is exactly the period when the first instance of an increased number of infected people in Bosnia and Herzegovina emerged. Following the "Work" curve, it can also be seen that the second

period of declining job attendance occurred in July and August 2020, but this can be attributed to people taking vacations rather than an increase in the number of patients. This is confirmed by the "Park" curve, because it is during this period that the largest increase in attendance at parks and places of leisure takes place. Following the “Work” curve, it can be seen that the third period of declining job attendance occurred in March and April 2021.
Figure 2 shows graphs of the changes in mobility in terms of attendance at four locations in Serbia. We can see the first significant drop in the people's movements was in March 2020. Following the “Work” curve, it can be seen that the second period of declining work attendance occurred in December 2020 and January 2021. The third period of declining work attendance occurred in March and April 2021.

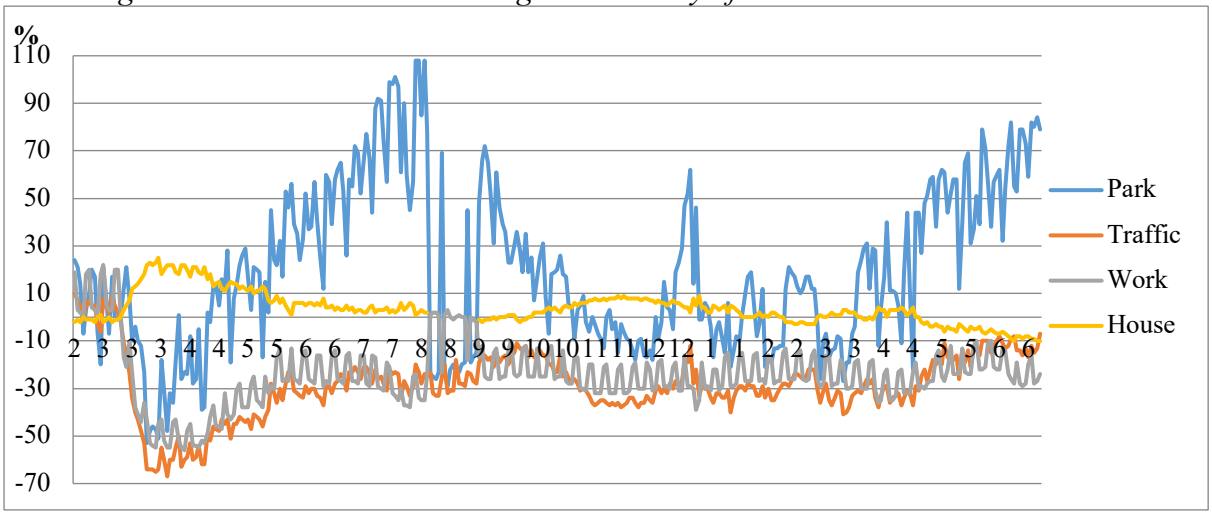
Figure 2: Serbia changes in mobility of 4 locations in 2020 and 2021



(Source: Authors)

Figure 3 shows graphs of changes in mobility in terms of attendance at four locations in Northern Macedonia. Comparing the "Work" curve with other countries, it can be seen that peaks appear periodically. By observing each individual data, we noticed that these peaks appear periodically for each Friday. We presume that the cause of these peaks lies in inadequate data for the Friday weekday in the reference period before the pandemic.

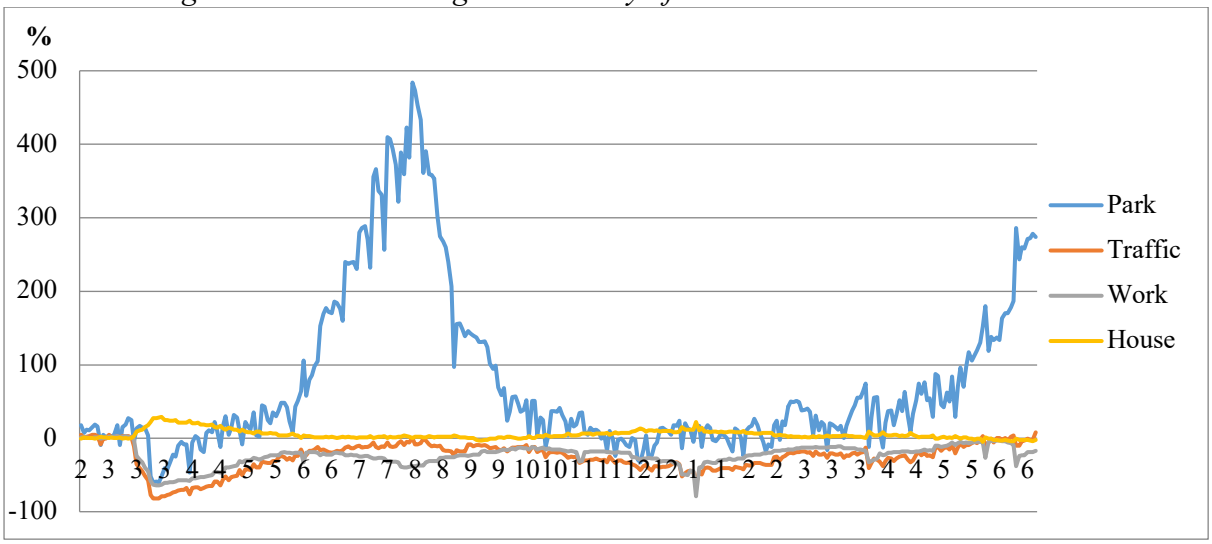
Figure 3: North Macedonia changes in mobility of 4 locations in 2020 and 2021



(Source: Authors)

Figure 4 shows graphs of changes in attendance at four locations in Croatia. The diagram shows a sharp increase in attendance of the "Park" category in the period of June, July, August, and September of 2020 of up to 500% compared to the reference period before the pandemic. This is grasped by the fact that in this period the Croatian coast was visited many tourists from a large number of European countries. Google registered the movement of all these people on the territory of Croatia and added their impact to the total number of citizens of Croatia. A similar tendency of a sharp increase in the number of tourists in the period of June, July, August, and September of 2020 can be seen in Greece and Bulgaria.

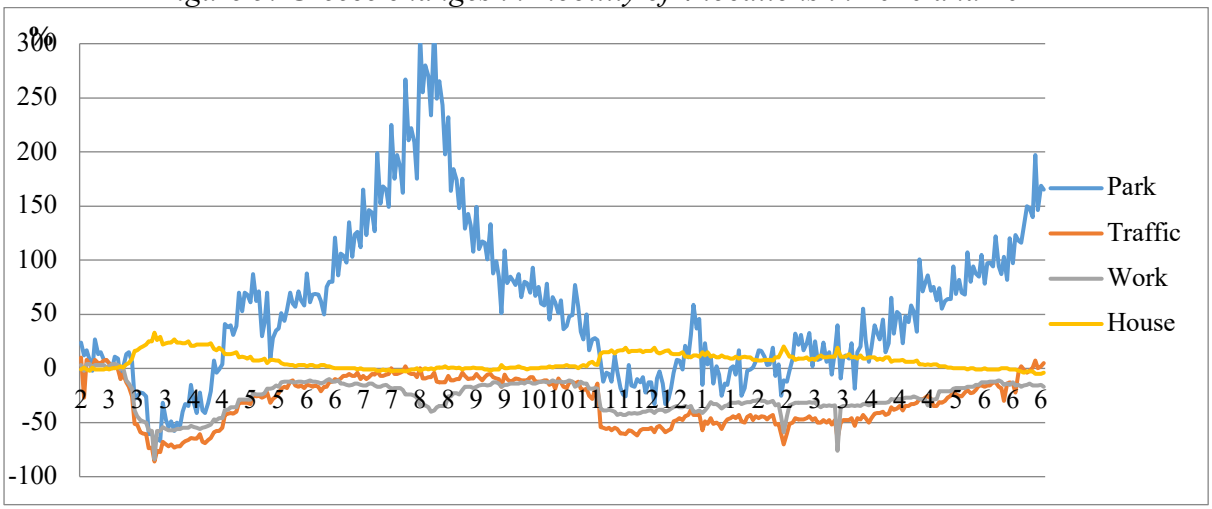
Figure 4: Croatia changes in mobility of 4 locations in 2020 and 2021



(Source: Authors)

Figure 5 shows graphs of changes in attendance at four locations in Greece. Looking at the "Park" curve, it can be assumed that Greece was visited by about 20% more tourists in June 2021 than in the same period in 2020. To confirm this presupposition, it is necessary to compare official data from the tourism association, and that could be the subject of another paper.

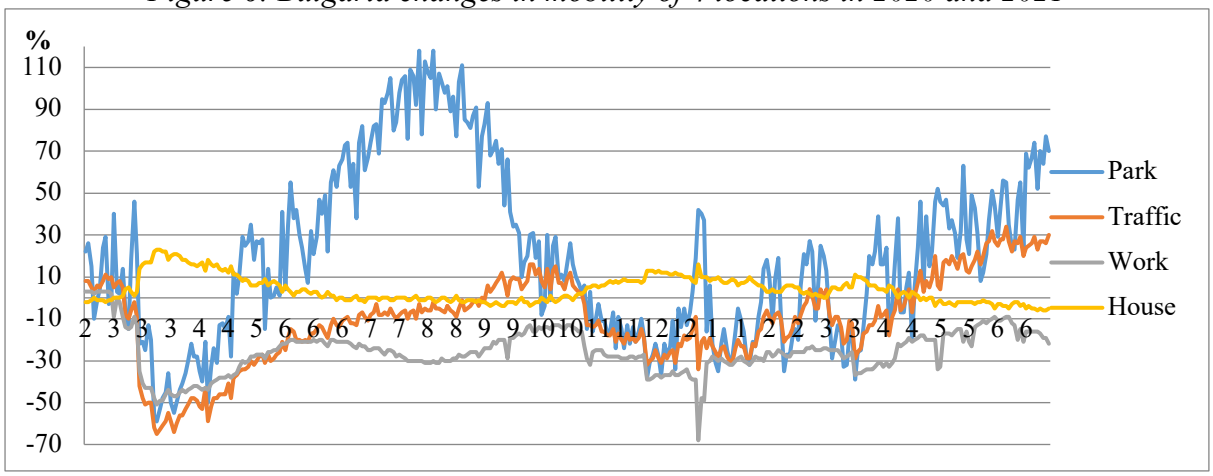
Figure 5: Greece changes in mobility of 4 locations in 2020 and 2021



(Source: Authors)

Figure 6 shows graphs of changes in attendance at four locations in Bulgaria. We can see the first big drop in peoples' movements occurring in March 2020. Following along the "Work" curve, the second period of declining work attendance occurred in November and December 2020. The third period of declining work attendance occurred in March and April 2021.

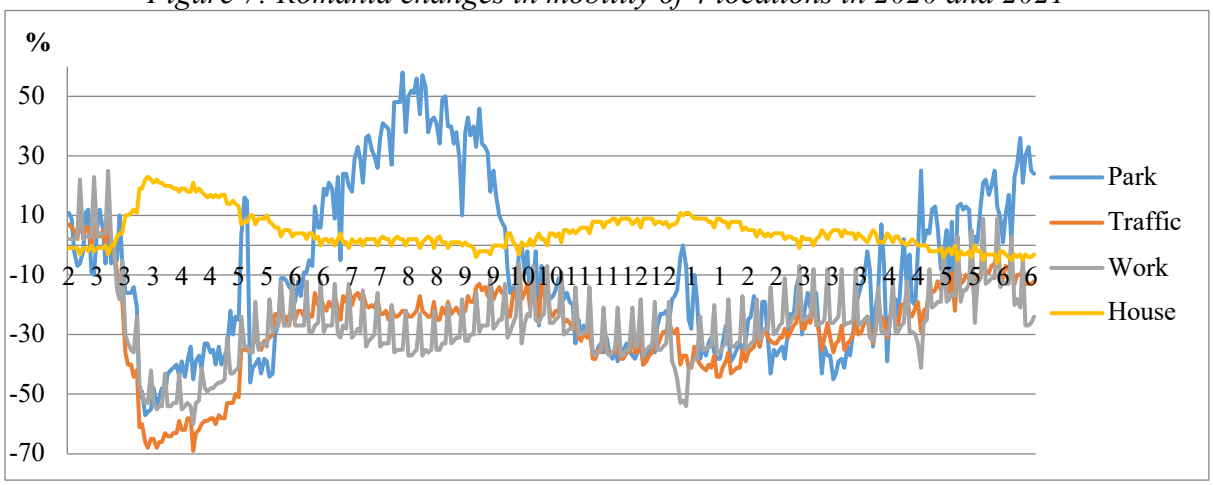
Figure 6: Bulgaria changes in mobility of 4 locations in 2020 and 2021



(Source: Authors)

Figure 7 shows graphs of changes in attendance at four locations in Romania. Comparing the "Work" curve with other countries, it can be observed that peaks appear periodically, as was the case in Northern Macedonia for every Friday. We assume that the cause of these peaks is inadequate data for the Friday weekday in the reference period before the pandemic.

Figure 7: Romania changes in mobility of 4 locations in 2020 and 2021



(Source: Authors)

3. COMPARISON OF HUMAN MOBILITY IN 7 BALKAN COUNTRIES

In this part of the paper, data on citizen mobility at six grouped locations in seven Balkan countries are statistically dealt with. Data for all Saturdays, Sundays, non-working days Christmas, New Year's and public holidays in individual countries have been omitted.

Table 1, Table 2 and Table 3 for the seven Balkan countries for each of the six different locations illustrate six different statistical parameters of human mobility data starting from

February 17, 2020 and going through July 1, 2021. The abbreviations in this table for the observed statistical parameters are:

- Avg - Average value of percentage change in attendance;
- SD - Standard deviation of percentage change in attendance;
- Cor - Correlation of the percentage change in attendance of each individual location to the change in attendance of the workplace location;
- Max - Maximum percentage change in attendance;
- Min - Minimum percentage change in attendance;
- Dif - The difference between the maximum and minimum percentage change in attendance (= Max – Min).

Table 1: Changes in attendance of retail stores and recreation, pharmacies and grocery stores expressed as a percentage

	Retail stores and recreation						Pharmacies and grocery stores					
Country	Avg	SD	Cor	Max	Min	Dif	Avg	SD	Cor	Max	Min	Dif
Bosnia and H.	-14	19	0,76	15	-73	88	7	17	0,53	72	-42	114
Serbia	-13	20	0,78	19	-72	91	9	16	0,67	53	-43	96
N. Macedonia	-19	17	0,71	9	-67	76	2	12	0,42	37	-32	69
Croatia	-15	25	0,57	32	-80	112	7	17	0,59	58	-51	109
Greece	-25	29	0,79	35	-86	121	10	16	0,52	63	-85	148
Bulgaria	-20	20	0,67	14	-67	81	3	13	0,60	35	-39	74
Romania	-21	18	0,66	9	-73	82	-1	15	0,63	30	-52	82

(Source: Authors)

Table 2: Changes in attendance of parks and places of rest and transit stations expressed as a percentage

	Parks and places of rest						Transit stations					
Country	Avg	SD	Cor	Max	Min	Dif	Avg	SD	Cor	Max	Min	Dif
Bosnia and H.	6	25	0,03	74	-46	120	-15	16	0,77	15	-68	83
Serbia	10	31	0,35	78	-65	143	-16	20	0,90	21	-75	96
N. Macedonia	19	34	0,06	108	-53	161	-28	14	0,74	10	-67	77
Croatia	76	112	0,01	484	-60	544	-26	19	0,80	8	-82	90
Greece	55	71	0,43	317	-67	384	-30	22	0,88	10	-86	96
Bulgaria	20	41	0,32	118	-59	177	-10	21	0,79	34	-65	99
Romania	-9	28	0,27	58	-57	115	-27	16	0,84	11	-69	80

(Source: Authors)

Table 3: Changes in attendance of workplaces and places of residence expressed as a percentage

	Workplaces						Places of residence					
Country	Avg	SD	Cor	Max	Min	Dif	Avg	SD	Cor	Max	Min	Dif
Bosnia and H.	-16	13	1,00	14	-55	69	-1	7	-0,70	23	-14	37
Serbia	-24	14	1,00	16	-62	78	3	7	-0,85	26	-7	33
N. Macedonia	-24	14	1,00	22	-56	78	4	7	-0,62	25	-10	35
Croatia	-23	14	1,00	3	-79	82	5	6	-0,83	29	-5	34
Greece	-26	15	1,00	4	-84	88	7	8	-0,88	33	-5	38
Bulgaria	-25	11	1,00	3	-68	71	4	6	-0,79	23	-6	29
Romania	-27	14	1,00	25	-60	85	4	6	-0,76	23	-6	29

(Source: Authors)

Table 4 shows the correlation of the change in attendance of six statistical parameters of individual countries in relation to Serbia, which was taken as the reference country. This is because Serbia borders most of the Balkan countries, which were the subject of this analysis. The abbreviations in Table 4 for the observed statistical parameters are:

- Ret - retail and recreation;
- Phar - pharmacies and grocery stores;
- Park - city parks, national parks, public beaches, marinas, camps, dog parks;
- Traf - transit stations and public transport hubs;
- Work - workplaces;
- Hou - places of residence.

The correlation was first calculated for the time period from February 17 to May 18, 2020, which coincides with the period of the outbreak of the COVID-19 pandemic throughout Europe. Observing the obtained correlation coefficients, it can be concluded that they are generally higher than 0.75 during this period. This means that in this time period there was a close functional connection between the observed phenomena of changes in the mobility of people in Serbia and the other 6 Balkan countries. Only the parameter of pharmacy and food store in Bulgaria and Greece had a correlation coefficient in the interval from 0.5 to 0.75, but we can say that here too there is a significant degree of connection between the concurrent phenomena.

Then, the correlation was calculated for the time period from March 2 to April 23, 2021, when a new large wave of patients with the COVID-19 virus appeared in Serbia. Observing the obtained correlation coefficients, it can be concluded that in this period, the change in the mobility of people in Serbia in relation to other parts of the Balkan countries behaved completely differently. The data between Serbia, Bulgaria and Romania had the highest degree of correlation. The data between Serbia and Croatia had the lowest degree of correlation, followed by Greece and Northern Macedonia. Based on this, it can be concluded that people in the beginning stages of the pandemic in Europe, as in all Balkan countries, behaved in a similar way when it come to mobility. On the other hand, it can be concluded that human mobility did not behave in the same way in all Balkan countries during the following waves of the virus.

Table 4: Correlation of changes in attendance of individual countries in relation to Serbia

	Period February 17 to May 18, 2020						Period March 2 to April 23, 2021					
Country	Ret	Phar	Park	Traf	Wor	Hou	Ret	Phar	Park	Traf	Wor	Hou
Bosnia and H.	0,98	0,89	0,79	0,97	0,92	0,97	0,68	0,62	0,84	0,71	0,41	0,75
N. Macedonia	0,94	0,86	0,88	0,97	0,91	0,95	0,32	0,70	0,63	0,56	0,27	0,50
Croatia	0,98	0,87	0,78	0,99	0,95	0,98	0,38	0,52	0,54	0,05	-0,1	0,16
Greece	0,95	0,63	0,76	0,92	0,89	0,94	0,67	0,68	0,49	0,80	0,33	0,75
Bulgaria	0,93	0,72	0,85	0,93	0,86	0,91	0,76	0,74	0,85	0,86	0,68	0,85
Romania	0,93	0,86	0,80	0,96	0,90	0,92	0,74	0,65	0,86	0,72	-0,2	0,80

(Source: Authors)

We then transferred the data on the change in human mobility for the seven Balkan countries from MS Excel to a MS Access database, so that we could make various SQL queries over the input data. We did a grouping of data by years and calendar weeks. For each of the six observed locations of human mobility we calculated the average value for each week separately for 2020 and 2021. The five smallest percentage changes in the mobility of the "work" location are shown in Table 5 and Table 6. The five smallest percentage changes in the mobility of the "transit station" location are shown in Table 7 and Table 8. The five largest percentage changes in mobility of the "places of residence" location are shown in

Table 9 and Table 10. The five largest percentage changes in mobility of the "parks" location are shown in Table 11 and Table 12. The five smallest percentage changes in mobility of the "retail and recreation" location are shown in Table 13 and Table 14. The five smallest percentage changes the mobility of the "pharmacy and grocery stores" location are shown in Table 15 and Table 16.

The analysis of the presented data shows that the largest decline in human mobility in most countries in 2020 was at 13, 14, 15, 16 and 17 weeks. On the other hand, in 2021, the biggest declines in human mobility were not concomitant for the different Balkan countries.

Table 5: Least percentage changes in workplaces mobility in 2020

BH		Serbia		North Mac		Croatia		Greece		Bulgaria		Romania	
%	week	%	week	%	week	%	week	%	week	%	week	%	week
-45	17	-57	17	-49	17	-52	17	-54	17	-43	16	-52	15
-48	16	-60	16	-50	14	-56	16	-55	16	-44	15	-52	17
-49	15	-63	15	-50	13	-57	15	-56	15	-46	14	-52	14
-51	14	-68	14	-51	15	-61	14	-57	14	-49	13	-53	53
-53	13	-72	13	-52	16	-63	13	-63	13	-55	53	-54	16

(Source: Authors)

Table 6: Least percentage changes in workplaces mobility in 2021

BH		Serbia		North Mac		Croatia		Greece		Bulgaria		Romania	
%	week	%	week	%	week	%	week	%	week	%	week	%	week
-19	26	-24	5	-27	18	-29	5	-35	11	-31	4	-31	18
-22	2	-25	4	-29	17	-30	4	-35	13	-32	15	-31	6
-23	13	-26	2	-29	15	-31	15	-39	2	-33	14	-32	4
-24	15	-26	12	-30	16	-34	3	-43	8	-34	19	-32	3
-26	14	-30	3	-35	2	-50	2	-44	12	-36	13	-37	2

(Source: Authors)

Table 7: Least percentage changes in transit stations mobility in 2020

BH		Serbia		North Mac		Croatia		Greece		Bulgaria		Romania	
%	week	%	week	%	week	%	week	%	week	%	week	%	week
-50	17	-57	17	-57	17	-67	17	-64	16	-50	16	-60	16
-51	15	-60	16	-57	16	-70	16	-67	17	-52	15	-63	15
-53	16	-63	15	-58	15	-70	15	-70	15	-52	17	-64	17
-61	14	-68	14	-61	14	-76	14	-71	14	-59	14	-64	13
-66	13	-72	13	-65	13	-81	13	-78	13	-62	13	-66	14

(Source: Authors)

Table 8: Least percentage changes in transit stations mobility in 2021

BH		Serbia		North Mac		Croatia		Greece		Bulgaria		Romania	
%	week	%	week	%	week	%	week	%	week	%	week	%	week
-24	4	-24	5	-33	5	-36	6	-50	11	-22	2	-35	6
-25	3	-25	4	-33	4	-41	5	-51	3	-23	13	-39	2
-26	16	-26	2	-34	12	-42	4	-52	12	-26	5	-41	3
-26	12	-26	12	-35	17	-42	3	-53	2	-26	4	-41	5
-31	13	-30	3	-37	13	-50	2	-59	8	-26	3	-41	4

(Source: Authors)

Table 9: Largest percentage changes in places of residence mobility in 2020

BH		Serbia		North Mac		Croatia		Greece		Bulgaria		Romania	
%	week	%	week	%	week	%	week	%	week	%	week	%	week
22	13	24	13	23	13	26	13	27	13	22	13	21	13
20	14	23	14	20	14	24	14	24	14	20	14	21	14
16	16	20	15	20	15	21	16	23	15	17	15	19	15
16	15	18	16	19	16	21	15	22	17	16	17	19	17
14	17	15	17	18	17	18	17	21	16	16	12	18	16

(Source: Authors)

Table 10: Largest percentage changes in places of residence mobility in 2021

BH		Serbia		North Mac		Croatia		Greece		Bulgaria		Romania	
%	week	%	week	%	week	%	week	%	week	%	week	%	week
2	2	7	2	7	2	14	2	14	8	9	13	9	2
-1	3	5	3	4	4	8	3	14	2	9	2	8	3
-2	13	5	12	3	3	8	5	13	12	8	3	8	4
-2	4	4	4	3	5	8	4	11	3	8	5	7	5
-3	5	3	5	2	17	6	7	10	11	7	4	4	6

(Source: Authors)

Table 11: Largest percentage changes in parks mobility in 2020

BH		Serbia		North Mac		Croatia		Greece		Bulgaria		Romania	
%	week	%	week	%	week	%	week	%	week	%	week	%	week
63	33	67	33	97	33	440	33	269	33	106	33	50	33
57	31	56	31	91	31	388	32	254	34	100	32	48	32
49	32	54	35	80	30	381	31	216	32	99	34	46	34
49	34	53	34	63	29	352	34	189	31	94	35	42	35
44	30	48	37	63	32	329	30	180	35	94	30	38	37

(Source: Authors)

Table 12: Largest percentage changes in parks mobility in 2021

BH		Serbia		North Mac		Croatia		Greece		Bulgaria		Romania	
%	week	%	week	%	week	%	week	%	week	%	week	%	week
33	26	48	27	81	27	273	27	169	27	70	27	28	27
32	23	45	24	68	26	261	26	142	26	64	26	26	26
30	25	44	26	65	25	173	25	114	25	49	19	19	24
30	27	43	25	59	23	145	23	97	24	43	24	9	23
27	24	40	22	56	20	132	24	94	23	38	20	9	22

(Source: Authors)

Table 13: Least percentage changes in mobility in retail and recreation in 2020

BH		Serbia		North Mac		Croatia		Greece		Bulgaria		Romania	
%	week	%	week	%	week	%	week	%	week	%	week	%	week
-59	17	-51	17	-54	16	-61	17	-67	16	-50	17	-57	16
-61	16	-53	16	-55	17	-64	15	-72	14	-51	15	-62	17
-61	15	-60	15	-57	15	-65	16	-73	15	-54	12	-63	15
-69	14	-65	14	-61	14	-73	14	-74	17	-59	14	-68	14
-72	13	-69	13	-67	13	-78	13	-80	13	-64	13	-68	13

(Source: Authors)

Table 14: Least percentage changes in mobility in retail and recreation in 2021

BH		Serbia		North Mac		Croatia		Greece		Bulgaria		Romania	
%	week	%	week	%	week	%	week	%	week	%	week	%	week
-20	15	-24	5	-25	4	-41	7	-55	11	-41	8	-29	6
-20	5	-24	4	-28	13	-42	3	-56	2	-45	4	-32	2
-22	16	-25	3	-30	15	-44	4	-57	3	-46	3	-34	4
-24	14	-33	13	-35	16	-45	5	-57	12	-47	5	-34	3
-34	13	-36	12	-36	17	-46	2	-59	8	-49	13	-34	5

(Source: Authors)

Table 15: Least percentage changes in mobility in pharmacies and grocery stores in 2020

BH		Serbia		North Mac		Croatia		Greece		Bulgaria		Romania	
%	week	%	week	%	week	%	week	%	week	%	week	%	week
-25	16	-15	17	-12	16	-28	15	-12	17	-19	15	-31	18
-27	15	-17	19	-15	15	-31	17	-13	12	-21	17	-34	15
-28	17	-24	15	-22	17	-33	16	-14	15	-24	12	-36	17
-38	14	-32	14	-24	14	-43	14	-19	14	-30	14	-42	14
-40	13	-38	13	-31	13	-48	13	-34	13	-34	13	-43	13

(Source: Authors)

Table 16: Least percentage changes in mobility in pharmacies and grocery stores in 2021

BH		Serbia		North Mac		Croatia		Greece		Bulgaria		Romania	
%	week	%	week	%	week	%	week	%	week	%	week	%	week
2	7	5	6	-12	16	2	6	-2	3	-1	13	-7	6
1	6	4	7	-15	15	1	3	-2	5	-2	2	-8	2
-2	3	-1	4	-22	17	-2	4	-3	8	-6	3	-8	3
-5	4	-1	3	-24	14	-4	2	-5	12	-8	4	-10	4
-6	5	-2	5	-31	13	-4	5	-6	4	-9	5	-11	5

(Source: Authors)

In this paper, we have shown how the mobility of people in the seven Balkan countries changed from 2020 to 2021. During this period, states took various measures to reduce the mobility of people and to force people to spend as much time as possible in their homes.

4. CONCLUSION

In this paper, we have shown how the mobility of people in the seven Balkan countries changed from 2020 to 2021. During this period, states took various measures to reduce the mobility of people and to require people to spend as much time as possible in their homes. By observing the derived data, we showed that the decrease in human mobility occurred with a similar intensity and during the same time periods in most of the observed countries. However, the enforcement measures of imprisonment, adopted by the governments of the observed countries, have had a high social and economic cost and it has become clear to everyone that these measures of social distancing cannot last indefinitely. Therefore, we believe that governments of all countries should continuously monitor these data, which we have also analyzed and constantly assess what interventions are necessary in order to maintain proper epidemiological restrictions.

The dataset utilized in this paper has a few limitations. First, people without smartphones and / or people who do not carry their devices when visiting the above-mentioned places are not

included in Google's database. Second, the database only includes people who have Google Accounts and with the "Location History" setting enabled. We can conclude that most of the data for job locations, transportation, and housing facilities in this paper refer to changes in people's visits due to social distancing measures. On the other hand, the changes in the number of visitors to the "Park" location are primarily driven by the increase in the number of tourists in the summer months. The large percentage increase in mobility of people at the "Park" location in Croatia, Greece and Bulgaria is primarily caused by foreign tourists who came on vacation to these countries, so these foreign tourists are added to the mobility data of the local populations of the respective countries.

In 2020, social distancing led to a decline in gross domestic product (GDP) of the Balkan countries in this paper. We are optimistic that the data we obtained in this paper will be further elaborated alongside other daily interval data in these respective countries and thus permit further research efforts to be undertaken in other areas of social and economic realms of these Balkan nations.

REFERENCES

Carlos S., Francesco S., Spyridon S., Stefano M. I., Alessandro A., Dario T., MicheleV. (2020), „Measuring the impact of COVID-19 confinement measures on human mobility using mobile positioning data. A European regional analysis", Safety Science, Volume 132, Article 104925.

Chan H., Skali A., Torgler B. (2020), „A global dataset of human mobility", CREMA Working Paper, No. 2020-04, Center for Research in Economics, Management and the Arts (CREMA), Zürich.

Damjanović S., Katanić P., Krsmanović B. (2020), „*Excel za ekonomiste"*, Fakultet poslovne ekonomija, Bijeljina.

Google (2021), "COVID-19 Community Mobility Report", available at: https://www. google.com/covid19/mobility (accessed 3 July 2021).

Lapatinas A. (2020), „The effect of COVID-19 confinement policies on community mobility trends in the EU", Technical report by the Joint Research Centre, Publications Office of the European Union, Luksemburg.

Mendolia S., Stavrunova O., Yerokhin O. (2020), „Determinants of the Community Mobility during the COVID-19 Epidemic: The Role of Government Regulations and Information, IZA", Institute of Labor Economics, Germany.

Moritz U. G. K., Chia-Hung Y., Bernardo G., Chieh-Hsi W., Brennan K., David M. P. (2020), „The effect of human mobility and control measures on the COVID-19 epidemic in China", SCIENCE Vol 368, pp. 493-497.

Simon P. ,Thomas R. (2021), „Social distancing beliefs and human mobility: Evidence from Twitter", PLOS ONE.

Stefano M. I., Carlos S., Francesco S., Spyros S., Dario T., Michele V. (2020), „Human mobility and COVID-19 initial dynamics", Nonlinear Dyn, pp. 493-497.

Sulyok M., Walker M. (2020), „Community movement and COVID-19: a global study using Google's Community Mobility Reports", Cambridge University Press, England.

MACROECONOMIC AND MACRO-FINANCIAL FACTORS OF THE STABILITY OF THE BANKING SECTOR - THE CASE OF THE REPUBLIC OF NORTH MACEDONIA

Blagica Donev
Faculty of Economics-Skopje, Ss.Cyril and Methodius University in Skopje
tevdovska@gmail.com

ABSTRACT

Banks, as financial institutions, play a vital role in achieving financial stability and economic growth, with their expected contribution through mobilization and allocation of financial resources throughout the economy. Only a reliable and stable banking system that enjoys the trust of economic entities can be an effective intermediary of the resources of the national economy in order to intensify economic development. The role of banks is even more important for developing economies with underdeveloped capital markets. The banking sector is still the primary form of financial intermediation in the Republic of North Macedonia. The study examine the stability of the banking sector in North Macedonia, and explores the macroeconomic, macro financial factors behind stability indicators of banking sector functioning in North Macedonia over the 1996- 2017 period by employing correlations and multiple linear regression model.
Results of the analysis showed that macroeconomic factors are not affecting selected bank stability indicators: NPL and capital adequacy. In addition, macro-financial factors (that include the specific determinants of the banking sector that relate to the size, structure, efficiency of the banking sector, competition) are affecting indicators and can be shown to be reliable early warning indicators.
There is a broad consensus that strong and effective micro- and macroprudential policies are needed to assure a robust and resilient financial system. Author's recommendation is implementation regulatory framework and construction of legal, institutional, regulatory landscape for macro-prudential regulation and policies, that act complementing to microprudential and macroeconomic policies, that have an impact on systemic financial stability.

Keywords: *Non-performing loans, capital adequacy, macroeconomic factors, macro financial factors, banking sector*

JEL classification: *JEL G0, JEL G18, JEL G21*

1. INTRODUCTION

Financial stability is a condition in which the financial system, comprising key financial markets and institutions, is resistant to economic shocks and can perform its core functions smoothly: financial intermediation, risk management and execution of payments. Most definitions of financial stability have in common that it is a state of resilience of stress of financial systems and their ability to function and adapt in times of crisis. The financial system is stable "when it responds solidly to financial imbalances that occur endogenously or because of significant adverse and unforeseen events that may arise from either the real economy or the financial system itself. If it is stable, it will absorb shocks primarily through self-correction mechanisms, preventing side effects from having a disruptive effect on the real economy or the participants in the financial system" (definition by The World bank). Banks, as financial institutions, play a vital role in achieving financial stability and economic growth, with their

http://hdl.handle.net/20.500.12188/15935
http://doi.org/10.47063/EBTSF.2021.0022

expected contribution through mobilization and allocation of financial resources throughout the economy. The role of banks is even more important for developing economies with underdeveloped capital markets (Zhang, et al., 2013). The banking sector is still the primary form of financial intermediation in the Republic of North Macedonia, representing the largest channel for mobilization of domestic savings and their transformation into a major source of external capital for companies. Financial system regulators understand that a loss of confidence in the banking system can have disastrous consequences for the entire financial system. For this reason, banking stability has always been the ultimate regulatory and supervisory goal of regulators (Brunnermeier, et al., 2009).

Globalization of markets, technological innovations, introduction of new and more complex banking products, complemented by developments in the economic environment, have led to increased risk in the international spread of crises, which has led to the need to minimize contingency risks and increase the strength of international financial system, and thus financial stability to be the subject of interest of national and international institutions.

In an effort to improve the quality and ensure the comparability of the level of financial stability in different countries, The International Monetary Fund (IMF) in 1999 introduced financial soundness indicators. Part of these indicators are compatible with the so-called CAMELS methodology that involves the analysis of indicators that interpret the risks to which banks are exposed: capital adequacy, asset quality, management stability, earnings, liquidity and market risk sensitivity. In parallel, the European Central Bank (ECB) in cooperation with the national central banks and banking supervisors started working on a methodology and collection of so-called macroprudential indicators (MPI) for monitoring the financial soundness of the banking sector with primary motive to identify risky developments in the financial sector, and especially in the banking sector.

The problem that this research deals with is the stability of the banking system of the Republic of North Macedonia. This paper reviews the literature and empirical studies on the determinants and indicators of banking stability. Based on the theoretical background, the sources of vulnerability or potential factors that affect the (in)stability of the banking sector are identified. Furthermore, this paper summarizes the importance of macroeconomic factors and macro-financial factors that may affect the stability of the banking system in the Republic of North Macedonia.

2. LITERATURE REVIEW

Financial stability is one of the most widely discussed issues in today's economic literature. The relevance of analyses on financial stability was first recognised during the international financial crises at the end of the 90s, also strengthened by the financial and economic crisis emerging in 2007 and covid-19 pandemic in 2020 . There is also a growing academic literature, much of it covering specific financial stability topics in considerable depth, and some of it providing rigorous anchors for debating determinants of financial stability, as well as policies and instruments implemented for its maintenance. A wide range of instruments is used to assess the stability of the financial system in analytical practice. These include in particular the analysis of quantitative indicators and the combination of different approaches, including the calculation of indicators for financial viability, stress testing and a summary of the development of the financial or banking sector based on a simple aggregate indicator.

Empirical evidence for the determinants of crises and instability in the banking system has a long history. While some studies cover periods of crisis for several binary variable countries and explain the latter with macroeconomic factors using regression models, other studies focus on one country and identify appropriate determinants of country-specific banking system stability. Important studies focus on leading indicators of banking crises. By applying multiple

regression, and linking a set of explanatory variables to the probability of a binary crisis variable, research shows that low real economic growth, high inflation and high real interest rates significantly affect the likelihood of a banking crisis (Demirgüç-Kunt & Detragiache, 1998). Banking crises mainly depend on conducting business activities within the banks and may be caused by microeconomic factors. One study pointed out that the balance sheet information is important to calculate the indicators for financial analysis and comparisons between banks to determine the position of banks in the market and the degree of stability (Van den End, 2006). Adverse macroeconomic developments should not cause serious banking problems if the bank's management acts farsightedly and reflects the cyclical nature of the economy in its decisions. Because this is not always the case, and because cyclical fluctuations are sometimes unexpectedly extreme, macroeconomic variables can provide good indicators of the likelihood of increased stress in the banking system (Markus, et al., 2001).Other empirical studies show that banking crises are mainly due to deteriorating economic fundamentals, especially declining asset quality. Furthermore, a banking crisis with significant economic costs often results from the exposure of several institutions to common risks.Third, weaknesses tend to increase over time, reflecting the mutually reinforcing interaction between the financial sector and the real economy. Finally, although the timing of the crisis may be unpredictable, it should be possible to detect the symptoms of increasing financial imbalance. The results of the conducted research show that the use of the indicator credit to GDP, gross investments and asset prices (especially real estate prices) are among the best indicators for forecasting banking crises (Borio & Lowe, 2002). On the other hand , other study suggest use of quantitative indicators that seek to cover the issue of financial stability as a systemic phenomenon and therefore refer not only to financial institutions and markets, but also to the real and government sector as major debtors of financial institutions, but also the financial infrastructure (Indraratna, 2013).

Other empirical researches create a financial stability index, which includes many economic, financial, and behavioral factors that interact with each other in building the financial system. This is a very difficult task given the complex nature of the financial system and the existence of numerous links between financial market participants, non-financial sectors and financial institutions. Most attempts focus on building a aggregate indicator for the banking sector, which is the most important part of the financial system in terms of financial stability.

Despite considerable practical and intellectual progress in recent years, financial stability analysis is still in its infancy.

Many empirical studies consider macroeconomic and banking specific factors as precursors to bank stability. From the studies that discuss the importance of macroeconomic factors in assessing banking risk (Borio et al. 2014) believe that micro-indicators (bank-specific) and macro-indicators (system-wide) should be used together, and serve as a useful cross-check for each other. While (Drehmann & Tarashev, 2011) researched a number of macroeconomic, market and banking sector indicators as signals for increasing and releasing the protective layers of capital. The study by (Langrin, 2002) suggests the existence of an early warning system that monitors changes that may occur at the level of macro and microeconomic indicators and works to establish indicators of stability of the banking system. Furthermore, (Kaminsky & Reinhart, 1999) study the behavior of a number of macroeconomic variables months before and after the crisis in a sample of 20 countries, with the aim of identifying variables that act as "early warning signals" of crises.

3. BANKING SECTOR IN THE REPUBLIC OF NORTH MACEDONIA - DEVELOPMENT AND CHARACTERISTICS

The monetary system of the Republic of North Macedonia was institutionalized in 1992 with the introduction of the "Denar" as the national currency and the adoption of the legal framework. At the time of monetary independence, the banking system was relatively underdeveloped and poor with inherited problems from the previous system.

In order to increase the competitiveness between the banks, more liberal legislation for establishing banks was introduced, which resulted in an increase in the number of banks. However, this later proved to be a mistake, due to the inflow of speculative capital into the banking sector. (Trpeski, 2004). Beneficial to strengthen the confidence of depositors in the financial system in general, especially after the occurrence of episodes of pyramid savings banks, which ended catastrophically, in 1997 the Deposit Insurance Fund was established to protect small depositors. In the following years, significant changes and amendments were made to the legal framework governing the operation of the banking system. Activities have been undertaken to implement the Basel Principles for efficient banking supervision. Up to 2006, improvement of the overall performance of the banking system can be noted, increased competition in the banking market and improvement of operational efficiency and profitability. By strengthening the position of the large banks, the concentration in the banking system remains at a relatively high level. In parallel, there is a trend of increasing market share of banks dominated by foreign shareholders.

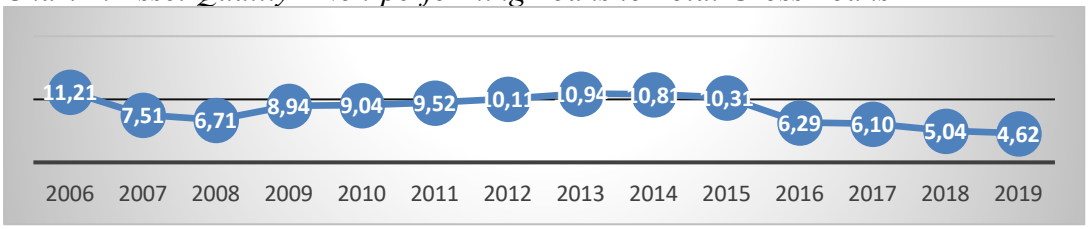
The banking sector and the Macedonian economy, as a small and open economy, are inevitably sensitive to developments in the international environment, and the negative effects of the global financial and economic crisis of 2008 have resulted in stagnation of the level of financial intermediation of the banking system. The halved profit of the banks in 2009 is due to the slower activity of the banks and the deteriorating quality of the portfolio.

As of 2017, the banking system in the Republic of North Macedonia consists of banks predominantly owned by shareholders originating from the European Union. In terms of size, several banks are key to the overall banking sector and the domestic economy, and the growth of medium-sized banks is increasingly reducing the importance of the three largest banks in the system. At the end of 2019, in the Republic of North Macedonia, there were 17 deposit taking institutions i.e. fifteen banks and two savings houses. The number of banks owned by foreign shareholders was 11. The banks in dominantly foreign ownership in 2019 still have the largest share in most of the activities: in lending 80.3%, in total revenues 76.7% and in total profit 70.8%. By country of origin, highest participation in total capital and reserves has shareholders from Greece -21,4%, Slovenia- 16,2%, Turkey-12.2% and Austria- 11,2% (NBRNM, 2020).

Although considerably improved over the past several years, North Macedonia's banking system is still relatively underdeveloped compared to Western standards. Banking is very conservative, offering traditional banking services only.The analysis of the National bank of Republic of North Macedonia shows that today the banking sector is healthy, stable and with stronger resistance to shocks, compared to the global economic crisis of ten years ago. The strengthened regulatory and supervisory requirements in the period after the global economic crisis, in line with the strengthened international and European standards, have contributed to this, which lead to further strengthening the protective layers of capital and liquidity of domestic banks, as basic pillars of sector stability.

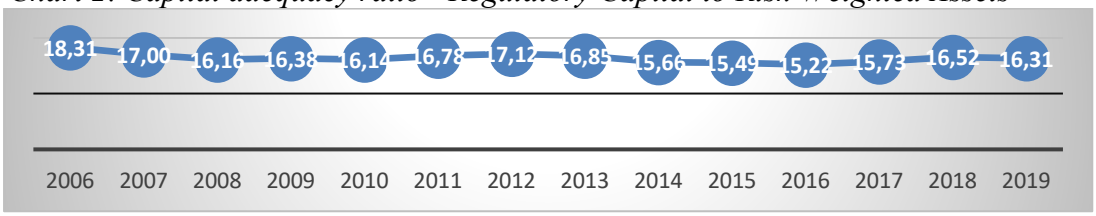
The charts below show the movement of key indicators of stability of the banking system in the Republic of North Macedonia

Chart 1: Asset Quality - Non-performing Loans to Total Gross Loans



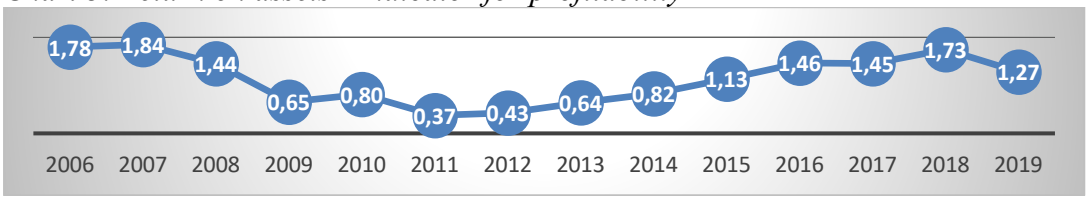
(Source: Financial Soundness Indicators, IMF)

Chart 2: Capital adequacy ratio - Regulatory Capital to Risk-Weighted Assets



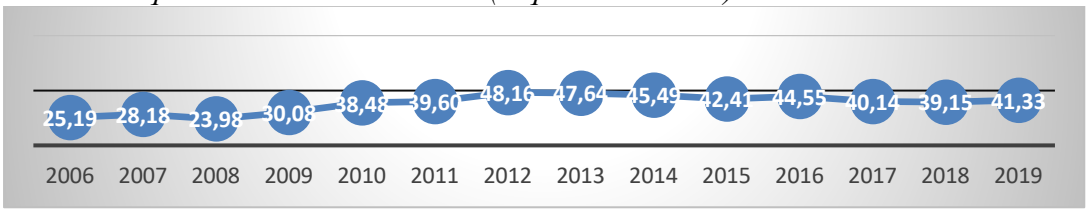
(Source: Financial Soundness Indicators, IMF)

Chart 3: Return on assets - Indicator for profitability



(Source: Financial Soundness Indicators, IMF)

Chart 4: Liquid assets to Total assets (Liquid asset ratio)



(Source: Financial Soundness Indicators, IMF)

4. THEORETICAL HYPOTHESES THAT LINK THE STABILITY OF THE BANKING SECTOR WITH THE MACROECONOMIC AND MACRO-FINANCIAL VARIABLES OF THE BANKING SECTOR

The key indicators for assessing the stability of financial institutions refer to the key areas relevant from the point of view of the banking business and may include groups of indicators of banking soundness: capital adequacy, asset quality, management stability, earnings, liquidity and market risk sensitivity. The capital adequacy indicators measure the banking sector's ability to absorb sudden losses and are thus closest to the "resilience to shocks" concept, whereas the asset quality indicators are directly associated with potential risks to banks' solvency. The profitability indicators measure the ability to absorb losses without any impact on capital, while the liquidity indicators measure banks' resilience to cash flow shocks. Foreign currency exposure is an indicator measuring a bank's risk exposure with regard to movements in asset prices on financial markets. The management quality indicators were ultimately not included in the stability indicators owing to difficulties connected with quantifying indicators that are qualitative in nature (Sundararajan, et al., 2002).

Macroeconomic variables - These variables refer to economic factors at the country level and the degree of their impact on the economic cycle and financial systems, and that light is determined by the flexibility of policies and procedures in the country and the control of fiscal

and monetary policy, which is reflects the stability of financial banking and is measured by GDP (real growth rates, in%), unemployment rate (in%), inflation (end of period, on annual basis, in%), housing price index - annual rate of change (%), remittance inflows to GDP (%).

Table 1: Theoretical hypotheses that link the stability of the banking sector with the macroeconomic variables of the banking sector

GDP	GDP is one of the basic indicators of the size and success of an economy and is a central macroeconomic category through which the total economic activity of a country is measured. At the same time, the expectations for economic growth direct expectations to cause greater projected stability of the banking system and better performance, while, in case of expected economic downturn, the future stability of the banking system should be adversely affected. As the economic situation of the business deteriorates during the period of recession in the economy, the risks from intermediation tend to increase.(Salas & Saurina, 2002) found that there is a negative relationship between the real economic growth rate and NPLs.
Price of assets and real estate	According to economic theory, higher growth in the price of assets and real estate is related to the boom phase in the business cycle, which may mean an increase in financial imbalances and has the potential to result in instability of the banking system. For asset price indicators, it is important to distinguish between real estate and capital prices, as they reflect different channels of transmission of exogenous shocks to the real economy (Nadya & Kick, 2012)
Inflation	It is assumed to be positively corelated to non-performing loans (Khemraj & Pasha, 2009). Higher inflation would mean higher business costs, which could ultimately result in lower business returns and lower loan repayment capacity, as well as reduced purchasing power of people with fixed incomes, which would also reduce their creditworthiness and their loan repayment capacity.
Unemployment rate	Two main channels for transmitting shocks over banking stability can be identified: the first, trough the effect of non-performing loans - an increase in the unemployment rate will cause a reduction in the repayment capacity of households, causing an increase in the default rate; and the second through the demand for new loans - the increase in the unemployment rate can result in a significant reduction in the demand for new loans, which can lead to a significant deterioration of the relationship between interest-bearing assets and deposit interest liabilities.
Remittances	The literature suggests that remittances have a stronger impact on growth in less developed financial economies. This indicator also indicates the extent to which the country's financial system is linked to international financial markets. They are an alternative source of funding for investments that help solve liquidity problems. Monetary transactions as a result of remittances have a significant impact on financial institutions, especially the banking sector in the host economy. Remittances have a positive impact on the development of credit markets along with the expansion and deepening of finance (Orozco, 2006). Therefore, this results in increased demand for financial products and services, which in turn leads to institutional development. In addition, banks and other financial institutions are more willing to lend to families that receive remittances as they are seen as a stable source of income (Čihák, , et al., 2013). In addition, remittances increase lending capacity to other members of the community (Aggarwal, et al., 2011). Thus, remittances directly affect the recipient family, but also indirectly serve the financial institution and the community.

(Source: Authors own elaboration)

Macro-financial variables of the banking sector - include the specific determinants of the banking sector that relate to the size, structure, efficiency of the banking sector over time. These determinants include indicators such as private sector loans granted by banks and savings houses (lending to private sector), weighted interest rates on total denar loans, concentration of the banking sector, Lerner index - a measure of monopoly, bank deposits in of GDP, share of foreign banks among total banks and profitability indicators of the banking sector.

Table 2: Theoretical hypotheses that link the stability of the banking sector with the mac macro-financial variables of the banking sector

Profitability (efficiency) of the banking sector - ROA and ROE	Efficiency indicators can also provide signals for the health of the financial industry. Many studies have shown that strong capital levels are associated with efficient banking performance, as well-performing banks are able to generate higher profits, which enhances their solvency; on the other hand, the level of non-performing loans may be negatively related to the efficiency of banks (Berger & Humphrey, 1997) (Berger & Mester, 1997).
The concentration in the banking sector	There are opposing views -First, larger banks can create greater protective layers of capital and profits, making them less sensitive to macroeconomic and liquidity shocks. Second, supervisory bodies over larger banks focus on effective supervision in order to mitigate the risk of contagion across the system of concentrated financial markets. Third, larger banks provide better monitoring on lending. Fourth, larger banks are effectively diversifying their loan portfolios and related risk as they enjoy better economies of scale. According to the other hypothesis, the stability of larger banks is declining in a concentrated market and raises the question of the moral hazard due to the fact that those banks that are larger may be considered "too large to fail" and are expected to to receive state guarantees (Ali & Puah, 2018).
The competition in the banking sector	Increased competition in the banking sector may affect the health of the financial system. In a situation where many banks are competing, profit margins are eroded and banks can take excessive risks to increase yields while deteriorating the quality of the loan portfolio and thus increase the bank's vulnerability (Berger, et al., 2017). On the other hand, another study found a negative relationship between lending market power and portfolio risk and showed that non-performing loans decrease with increasing lending market power, which promotes financial stability (Jimenez, et al., 2007).
The share of foreign ownership in domestic banks	Foreign ownership is expected to bring advanced technology, modern banking techniques and superior management skills. On the one hand, greater presence of foreign banks can lead to greater banking efficiency and competition in domestic financial systems. However, the individual characteristics of the domestic banking system affect the performance of foreign banks (Claessens & Forbes, 2001). On the other hand, foreign banks can provide a channel for cross-border contagion when as they can easily transmit foreign shocks from one region to another.
Lerner index	A measure of market power in the banking market and is a frequently applied measure of competitiveness in the banking system that has a long list of obvious benefits: greater efficiency in the production of financial services, higher quality financial products and more innovation. When financial systems become more open and contestable, generally this results in greater product differentiation, a lowering of the cost of financial intermediation and more access to financial services. However, when we turn to the issue of financial stability, it is no longer so obvious whether competition is beneficial or not, with a continuing debate among academics and policymakers alike (Anginer, et al., 2013).

(Source: Authors own elaboration)

5. METHODOLOGY

The basic research techniques that was conducted for this research is the use of correlation analysis and multiple linear regression model in the observed banking system of the Republic of Northern Macedonia.

The data for the variables in the research was gathered using a secondary source from the World Bank database -Global Financial Development Database (https://www.worldbank.org/en/publication/gfdr/data/global-financial-developmentdatabase), for that purpose, the version of the database October 2019 was used. The data on macroeconomic variables are taken from the National Bank of the Republic of North Macedonia - Basic economic indicators and real estate prices (https://www.nbrm.mk/osnovni_ekonomski_pokazateli.nspx). The data for some of the indicators for monitoring the stability of the banking system are taken from the IMF database Financial Soundenss indicators (https://data.imf.org/?sk=51B096FA-2CD2-40C2-8D09-0699CC1764DA&sId=1411569045760). The analysis includes annual observations for the

Republic of North Macedonia for the period from 1996 to 2017. The construction and evaluation of the models is done in the statistical software package SPSS.

5.1. Correlation

In order to determine whether there is a quantitative dependence (correlation) between the variations of the observed phenomena and if there is to what degree or intensity, a correlation was made between all pairs of variables - macroeconomic factors, macro-financial factors and banking stability indicators. The most familiar measure of dependence between two quantities (variables) is the Pearson product-moment correlation coefficient or "Pearson's correlation coefficient", commonly called simply "the correlation coefficient". Mathematically, it is defined as the quality of least squares fitting to the original data. It is obtained by taking the ratio of the covariance of the two variables in question of our numerical dataset, normalized to the square root of their variances.

The Pearson's correlation coefficient, or bivariate correlation, is a measure of the linear correlation between two variables A and B.

$$\rho_{AB} = \frac{COV_{AB}}{\sigma_A \sigma_B}$$

The correlation coefficient ρ_{AB} ranges from - 1 to 1. A value of 1 implies that a linear equation that perfectly describes the relationship between A and B where all data points lying on line A increases as B increases. A value of −1 means that all data points lie on a line for which A decreases with increasing B. A value of 0 implies that there is no linear correlation between the variables.

Table 3 summarize the interpretation of variables related to the stability of the banking system in which the estimated correlation coefficients are statistically significant at the level of 99%:

Table 3: Summary of correlation made between all pairs of variables - macroeconomic factors, macro-financial factors and banking stability indicators.

	Positive correlation	**Inverse correlation**
Z- score is:	in strong positive correlation with the weighted interest rates on total loans denominated in MKD (.840), indicator on the concentration of the banking sector (.850), while in moderately positive correlation with the Lerner index (.617) and the liquidity indicator (.575).	in strong inverse e correlation with remittances in relation to GDP (-.677), bank deposits in relation to GDP (-.896) and the share of foreign banks (-.890)
The indicator for non-performing loans is:	in strong positive correlation with weighted interest rates on total loans in MKD (.920), weighted interest rates on total deposits in MKD (.831) and indicator the concentration of the banking sector (0.720).	in strong inverse correlation with Bank deposits relative to GDP (-.899), share of foreign banks (-.931), non-performing loan provisions (-.834) and moderate inverse correlation with foreign currency remittances relative to GDP (-699)
The indicator of the banking capital in relation to the total assets is:	in strong positive correlation with weighted interest rates on total loans denominated in MKD (.725), indicator on the concentration of the banking sector (.765). The indicator in strong positive correlation with other indicators of banking stability: capital adequacy (.980), liquidity (.883)	in strong inverse correlation with bank deposits in relation to GDP (-.912), the share of foreign banks (-.939), as well as the loans indicator in relation to bank deposits (-.860)
The indicator of loans in relation to bank deposits (%) is:	in moderately positive correlation with the following indicators: weighted interest rates on total loans denominated in MKD (.663), the concentration of the banking sector (.613), Lerner index (.668)	in moderately inverse correlation with bank deposits in relation to GDP (-.625), share of foreign banks (-.939), foreign currency

		remittances in relation to GDP (-.695). This indicator is strongly inverse correlated with the following indicators of stability: bank capital in relation to total assets (-.860), as well as provisions for non-performing loans (-.935)
The capital adequacy ratio is:	in strong positive correlation with weighted interest rates on total loans denominated in MKD (.937), the concentration of the banking sector (.824). This indicator is strongly correlated with the following indicators of stability: bank capital in relation to total assets (.980), liquidity indicator - Short-term assets in relation to deposits and short-term financing (.890)	in moderately inverse correlation provisions for non-performing loans (-.685), and in strong negative correlation with bank deposits in relation to GDP (-.933)
Liquidity indicator - Short-term assets in relation to deposits and short-term financing (%) is:	in strong positive correlation with the following indicators of financial stability: bank capital in relation to total assets (0.883) and capital adequacy (.890), while in moderately positive correlation with the following indicators: with weighted interest rates on total loans denominated in MKD (.707), the concentration of the banking sector (.681).	in moderately inverse correlation with Bank deposits relative to GDP (-.760), Share of foreign banks (-.671)
The indicator net foreign exchange position in relation to capital (market risk sensitivity) is:	in strong positive correlation with the unemployment rate (.791), lending to the private sector (.813), the following indicators of financial stability of bank capital in relation to total assets (0.780) and the liquidity indicator (.729), while in moderate positive correlation with the concentration of the banking sector (.688).	in strong negative correlation with Bank deposits in relation to GDP (-.938), The share of foreign banks (-.807)
Profitability indicators	moderately positively correlated with the private sector lending indicator (.537)	

(Source: Authors own elaboration)

5.2. Basics of multiple linear regression model

In order to determine the effect of macroeconomic and macro-financial factors on the stability of the monitored banking system of the Republic of North Macedonia, a multiple linear regression model was applied. The multiple linear regression model defines the dependence between the dependent (endogenous) variable Y and a group of independent (exogenous) variables: x1, x2, x3 ,...,xк. However, in order to examine the nature of the relationship between the phenomena, the variables (factors) are identified, and then a sample of size n is drawn for selected values of the independent variables of the base population.

The multiple linear regression equation is as follows: $Y_i \equiv \beta_0 + \beta_1 x_1 + \beta_2 x_2 + ... + \beta_k x_k + \varepsilon_i$ where y_i ro is the appropriate indicator of stability i (the analysis includes a total of 2 indicators of stability - non-performing loans and capital adequacy) , k is the number of independent variables and x_i' is the explanatory variable, $\beta_0, \beta_1, \beta_2, \ldots \beta_k$ are the parameters of the model. The model's random error (residual) term is marked with ε_i.

The observation period is from 1996 to 2017 and covers 22 observations. The explanatory variables used in the analysis are divided into a group of macroeconomic variables and a group of macro-financial variables of the banking system. Regression is constructed for each group of explanatory variables separately. Furthermore, in order to determine the linear dependence between the independent variables, on the one hand, as well as the individual dependent

variables, on the other hand, a calculation of the correlation analysis is given, through the so-called correlation coefficient.
From the obtained results (presented in Annex 1) it can be concluded that the macroeconomic variables do not have a significant impact on the indicator NPLs. Impact of the variable NPLs has only a part of the variables from macro-financial variables of the banking system at the level of significance 1%, the other explanatory variables are insignificant.
The coefficient before the indicator weighted interest rates on total deposits in MKD shows that its increase by 1 percentage point leads ceteris paribus to increase the dependent variable NPLs by 0.339 percentage points. Ratios before the indicator concentration in the banking sector, banks' deposits relative to GDP (%), ROE shows that its increase by 1 percentage point leads ceteris paribus to decrease the dependent variable NPLs by -.827, -1.328 and - 215 percentage points respectively . From the obtained results, it can be concluded that the macroeconomic variables do not have a significant impact on the capital adequacy ratio.
The coefficient before the banks' deposit ratio in relation to GDP (%) shows that its increase by 1 percentage point leads ceteris paribus to decrease the dependent variable capital adequacy by -1,068 percentage points respectively, at a level of significance of 1%. While at the significance level of 5%, the coefficient before the Lerner index shows that its increase by 1 percentage point leads ceteris paribus to decrease the dependent variable capital adequacy by -.277 percentage points respectively.

6. CONCLUSION

The banking system is still the primary form of financial intermediation in the Republic of North Macedonia, representing the largest channel for mobilization of domestic savings and their transformation into the main source of external capital for companies. In the development period after its independence, it has made significant progress and growth. Activities have been undertaken for the implementation of the Basel principles for efficient banking supervision, and in accordance with international and European standards, the legal framework governing the operation of the banking system has been established.
The financial stability indicators show that the quality of banks' assets has improved through the indicator of non-performing loans to total gross loans, noting a downward trend of 11.21% in 2006 to 4.62% in 2019. The capital adequacy ratio is stable and its average is 16.40%. The capital adequacy ratio of the banking system is higher by 1.1 percentage point of the total regulatory and supervisory requirements, including the activated capital buffers determined as of 31.12.2019. Indicator ROA in observed period showed that the banking sector is at the level of average efficiency. Except, the global financial crisis in 2009 affected the profitability of Macedonian banks resulting in negative ROA indicators for the crisis and post-crisis period. In terms of liquidity, the banking system is liquid and maintains stable liquidity, at the level of 41.33% in the last year.
The research showed that the macroeconomic variables do not have a significant impact on the NPLs. This variable is important because it indicates the quality of assets in the banking sector. Impact on the variable the NPLs has only a part of the variables of macro financial factors of the banking system, the other variables are not statistically significant.That is, the increase in interest rates leads to an increase in NPLs, while the increase in the concentration in the banking sector, banks' deposits to GDP (%), as well as profitability expressed through ROE affect the reduction of the NPLs. The obtained results confirm the assumptions that the larger banks provide better lending monitoring, which results in a better loan portfolio and a smaller amount of NPLs. As well as confirmation of the assumption about the negative relationship between the level of NPLs and the efficiency of banks. Any bad credit in the financial sector increases the possibility of a leadership crisis and results in unprofitability.

The research showed that the NPLs indicator is in a strong positive correlation with the indicators for weighted interest rates on deposits (loans) and a strong negative correlation with the participation of foreign banks, non-performing loan provisions. The participation of foreign banks is expected to bring advanced technology, modern banking techniques and superior management skills and thus lead to greater banking efficiency and competition in domestic financial systems.

Furthermore, from the obtained results it can be concluded that macroeconomic variables do not have a significant impact on the capital adequacy ratio as well. This indicator is important because it determines the capacity of the bank to meet obligations and other risks, as well as to amortize the shocks of crises. From the obtained results, it was determined that the increase of the banks' deposits ratio in relation to GDP (%) and the Lerner index leads to a decrease in the capital adequacy ratio. It can be concluded that increase of the size and market power in the banking market disrupts capital adequacy, ie confirms the hypothesis that the stability of larger banks decreases in a concentrated market and raises the question of moral hazard due to the fact that those banks that are larger may be considered "too large to fail" and are expected to receive government guarantees.

The research showed that capital adequacy is strongly correlated with interest rates, the concentration of the banking sector. This indicator is strongly correlated with the following indicators of stability: bank capital in relation to total assets, the liquidity indicator, which is logical. While in a strong negative correlation with bank deposits in relation to GDP - the indicator of deposit resources available to the banking sector for its lending activities.

It is obvious that the indicators that refer directly to the soundness of the banking system are ideal for predicting banking crises, and hence the recommendation would be early monitoring and maintenance of appropriate levels of capital adequacy, asset quality, stable management, profitability, liquidity and market risk sensitivity in order to maintain stability. There is no doubt that the performance of banks and the likelihood of disruption of the banking system are mainly driven by business activities and developments within the banking sector. Unfavorable macroeconomic developments should not cause serious banking problems if the bank's management is satisfactory. Qualitative components such as supervision, implementation of the legal framework and international standards such as proper regulation of accounting and internal audit certainly remain important. Existing changes in the international financial markets, the development of new banking products, services and instruments impose a constant revision of the rules and principles of operation of banks on the one hand, as well as the need to strengthen prudent banking supervision on the other hand. There is a broad consensus that strong and effective micro- and macroprudential policies are needed to assure a robust and resilient financial system. Author’s recommendation is implementation regulatory framework and construction of legal, institutional, and regulatory landscape for macro-prudential regulation and policies that act complementing to microprudential and macroeconomic policies that have an impact on systemic financial stability in order to identify and reduce the risks to financial stability that occur in both temporal and structural dimensions.

REFERENCES

1. Aggarwal, R., Demirgüç-Kunt, A. and Pería, M.S.M., 2011. Do remittances promote financial development?. *Journal of development economics*, *96*(2), pp.255-264.
2. Ali, M. and Puah, C.H., 2018. Does bank size and funding risk effect banks’ stability? A lesson from Pakistan. *Global Business Review*, *19*(5), pp.1166-1186.
3. Anginer, D., Demirgüç-Kunt, A. and Zhu, M., 2013. How does bank competition affect systemic stability?. *Journal of Financial Intermediation, Forthcoming*.

4. Arpa, M., Giulini, I., Ittner, A. and Pauer, F., 2001. The influence of macroeconomic developments on Austrian banks: implications for banking supervision. *Bis Papers*, *1*, pp.91-116.
5. Berger, A.N. and Humphrey, D.B., 1997. Efficiency of financial institutions: International survey and directions for future research. *European journal of operational research*, *98*(2), pp.175-212.
6. Berger, A.N. and Mester, L.J., 1997. Inside the black box: What explains differences in the efficiencies of financial institutions?. *Journal of banking & finance*, *21*(7), pp.895-947.
7. Berger, A.N., Klapper, L.F. and Turk-Ariss, R., 2017. Bank competition and financial stability. In *Handbook of competition in banking and finance*. Edward Elgar Publishing.
8. Brunnermeier, M., Crockett, A., Goodhart, C.A., Persaud, A. and Shin, H.S., 2009. *The fundamental principles of financial regulation* (Vol. 11). Geneva: ICMB, Internat. Center for Monetary and Banking Studies.
9. Borio, C. and Lowe, P., 2002. Assessing the risk of banking crises. *BIS Quarterly Review*, *7*(1), pp.43-54.
10. Claessens, S. and Forbes, K., 2001. International financial contagion: An overview of the issues and the book. *International financial contagion*, pp.3-17.
11. Čihák, M., Demirgüč-Kunt, A., Feyen, E. and Levine, R., 2013. *Financial development in 205 economies, 1960 to 2010* (No. w18946). National Bureau of Economic Research.
12. Demirgüç-Kunt, A. and Detragiache, E., 1998. The determinants of banking crises in developing and developed countries. *Staff Papers*, *45*(1), pp.81-109.
13. Drehmann, M. and Tarashev, N.A., 2011. Systemic importance: some simple indicators. *BIS Quarterly Review, March*.
14. Indraratna, Y., 2013. Strengthening financial stability indicators in the midst of rapid financial innovation: updates and assessments. *Research Studies*.
15. Jahn, N. and Kick, T., 2012. Determinants of banking system stability: A macro-prudential analysis. *Finance Center Münster, University of Münster*.
16. Kaminsky, G.L. and Reinhart, C.M., 1999. The twin crises: the causes of banking and balance-of-payments problems. *American economic review*, *89*(3), pp.473-500.
17. Khemraj, T. and Pasha, S., 2009. The determinants of non-performing loans: an econometric case study of Guyana.
18. Langrin, B., 2002. *An Early Warning System for the Prevention of Banking Sector Crises in Jamaica*. Bank of Jamaica Working Paper.
19. Orozco, M., 2006. International Flows of Remittances: Cost, competition and financial access in Latin America and the Caribbean—toward an industry scorecard. *Washington, DC: Inter-American Dialogue*.
20. Salas, V. and Saurina, J., 2002. Credit risk in two institutional regimes: Spanish commercial and savings banks. *Journal of Financial Services Research*, *22*(3), pp.203-224.
21. Sundararajan, V., Enoch, C., San Jose, A., Hilbers, P., Krueger, R., Moretti, M. and Slack, G., 2002. *Financial soundness indicators: analytical aspects and country practices* (Vol. 212). Washington, DC: International Monetary Fund.
22. Trpeski, L., 2004. *Macroeconomic stability and structural banking reforms in the Republic of Macedonia*, NBRM.
23. Van den End, J.W., 2006. *Indicator and boundaries of financial stability* (No. 097). Netherlands Central Bank, Research Department.
24. Zhang, J., Jiang, C., Qu, B. and Wang, P., 2013. Market concentration, risk-taking, and bank performance: Evidence from emerging economies. *International Review of Financial Analysis*, *30*, pp.149-157.

APPENDIX

Multiple linear regression model

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	ROE, BANK DEPOSITS TO GDP, INTEREST RATES FOR DEPOSITS, BANK CONCENTRATION[b]	.	Enter

a. Dependent Variable: NPLS
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.990[a]	.981	.975	1.53720215

a. Predictors: (Constant), ROE, BANK DEPOSITS TO GDP, INTEREST RATES FOR DEPOSITS, BANK CONCENTRATION

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	145.073	13.708		10.583	.000
	INTEREST RATES FOR DEPOSITS	1.139	.346	.339	3.288	.006
	BANK CONCENTRATION	-1.340	.176	-.827	-7.599	.000
	BANK DEPOSITS TO GDP	-.985	.071	-1.328	-13.953	.000
	ROE	-.470	.116	-.215	-4.066	.001

a. Dependent Variable: NPLS

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Lerner index, BANK DEPOSITS TO GDP[b]	.	Enter

a. Dependent Variable: CAPITAL ADEQUACY
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.951[a]	.905	.889	1.5989566

a. Predictors: (Constant), Lerner index, BANK DEPOSITS TO GDP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	40.518	3.633		11.152	.000
	BANK DEPOSITS TO GDP	-.390	.038	-1.068	-10.160	.000
	Lerner index	-25.372	9.645	-.277	-2.631	.022

a. Dependent Variable: CAPITAL ADEQUACY

FINANCIAL SECTOR STOCKS REACTION TO COVID-19 EVENTS

Filip Peovski
Teaching and Research Assistant at Faculty of Economics – Skopje, Ss. Cyril and Methodius University in Skopje
peovski@eccf.ukim.edu.mk

Igor Ivanovski
Professor at Faculty of Economics – Skopje, Ss. Cyril and Methodius University in Skopje
igor.ivanovski@eccf.ukim.edu.mk

Sulejman Ahmedi
Professor at Faculty of Law, University of Tetovo
sulejman.ahmedi@unite.edu.mk

ABSTRACT
Price fluctuations in the financial sector are often of major interest when projecting the general performance and state of the economy. The implications of the COVID-19 pandemic in the sector are analyzed through the event study method. A random sample portfolio of 20 financial sector stocks listed on the NYSE is used and its reaction on 15 different events throughout 2020 is observed. Results indicate that events in the earlier stage of the pandemic exhibit both higher abnormal returns and significance, compared to the ones at the latter stages, with a larger proportion of them being bad news. The financial sector is perceived to react significantly in such cases, usually anticipating them beforehand. As adjustment windows are rarely significant, the market's reaction is deemed as efficient. The general conclusion is that the financial sector stocks react to important COVID-19 news, generating abnormal rather than expected returns.

Keywords: *COVID-19, Efficient Market Hypothesis, event study, financial sector, stock market.*

JEL classification: *G14*

1. INTRODUCTION

The ongoing COVID-19 pandemic is still the main research focal due to its immense importance in converging to one of the biggest economic crises alongside the health one. Societies and economies have not fully recovered yet, with such tendencies being almost unreachable in present times in the less developed economies. Even though this paper assesses the impact of the pandemic, it observes only its particular and selected financial implications. The presence of higher volatility during the first and the second quarter in 2020 was a worldwide phenomenon, with both low and highly developed financial markets showing signs of it. The study aims to estimate how portfolio returns react to a different type of news and to draw a conclusion whether such reactions abide by the pre-existing theory or not.

While perceived as simple, the event study analysis is an important tool in quantifying the impact of specific news, mostly dealing with higher-frequency data. Quarterly and annual datasets are inadequate for this type of analysis. Many papers use such an approach and their implications deserve to be explored further. The efficient market hypothesis plays a central role in portfolio analysis. Academicians consensually state that its implications depend on the size

http://hdl.handle.net/20.500.12188/15879
http://doi.org/10.47063/EBTSF.2021.0023

of the market and its development, mostly supporting the manifestation of a semi-strong efficiency. Stock splits, dividend announcements, mergers and acquisitions, policy changes, etc. are commonly present and analyzed within the literature, with the focus gradually shifting on the impact of the COVID-19 pandemic in the past months. This paper deals with the question of whether the pandemic-related news can act as a significant determinant in the return fluctuation of the financial sector portfolio.

For the measurement of the impact, a random sample portfolio of 20 stocks of companies with a market capitalization in the range between $300M and over $200B is observed. A cumulative window of daily returns throughout 2016-2020 is used, with the first four years used as an estimation period. In 2020 we concentrate on the event windows upon which we conduct the research. Each of the portfolio stocks is listed at the New York Stock Exchange (NYSE) and is equally weighted. While general investment logic implies sectoral diversification of portfolios, the paper focused solely on the financial sector in order to estimate its reactions. Moreover, only companies with significantly large capitalizations are used for the analysis since they are considerably more traded than stocks of small companies, impacting a larger proportion of the total market investors. A more general approach is thus left open for any further researches. An event study analysis is applied for 15 events of high significance in the USA, all of them related to the COVID-19 pandemic. Each of these events is registered as either 'good' or 'bad' with a ratio of 7 to 8, respectively. The reaction of the portfolio return performance is observed, to check for any potential event-induced abnormalities. Each effect is checked through a standard t-test for its statistical significance. General results indicate that events in the earlier stage of the pandemic exhibit both higher abnormal returns and significance, compared to the ones at the latter stages. Roughly, half of the events are significant in the study, with a tendency of them being negative rather than positive. Substantial anticipation of such events is common with mostly insignificant adjustments after the event date, indicating market efficiency in incorporating information into the prices of assets.

The rest of the paper is organized as follows. Section 2 deals with the existing relevant literature related to the topic and its empirical findings. In Sections 3 and 4 the methodological approach of the event study, as well as the research results, are presented and discussed. Finally, a brief conclusion on the topic is provided.

2. LITERATURE REVIEW

Portfolio theory is commonly presented alongside the efficient market hypothesis (EMH) indicating that all the available information is quickly incorporated into security prices, leaving little or no room for additional adjustments (Basu, 1977). Since event study analysis was introduced, testing for the validity of the EMH became more common in academic researches. Stock splits and their impact on return and volatility were first introduced through a market model event study (Fama, et al., 1969). In addition, Fama (1970) however, raises concern about whether a truly efficient market can be achieved. Such a null hypothesis stating a complete reflection of all disposable information seems too rigid to begin with. Theoretical and empirical proofs indicate that the presence of return abnormalities is due to specific corporate events, rather than pure coincidence. Dividing the event period into prior and post-event intervals helps detect security reactions that deviate from the expected returns, thus drawing conclusions on the overall market efficiency. Commonly, when the adjustment period after the event contains non-zero abnormal returns that do not diminish quickly is a clear sign of violating the EMH (Kothari & Warner, 2007). Event studies are often conducted for both short and long event windows, being perceived as more powerful in detecting shocks generated by events.

Several questions arise when taking this methodological approach. Henderson (1990) notes that defining the event date is not as simple as it looks like since the market interest in the event matters higher than the news itself. If the market agents form a relevant expectation for an

event prior to its occurrence, this may lead to choosing an insignificant announcement date. Moreover, the market structure and depth play a major role in price valuation and its relation to the impact of the event. Additionally, the event and estimation windows need to be properly determined as this methodology is highly sensitive to them. Usually, estimation and event windows are separated by a 'gap', ensuring that the model set is not influenced by the event. MacKinlay (1997) highlights this importance since estimating the benchmark model should be free of any abnormalities and unstable volatility.

Studies differ substantially in the used methodology since different problems imply various approaches in grasping the factors of interest. However, they all have one thing in common - making use of the expected return models, varying between purely statistical to general market models. Dyckman et al. (1984) conduct a simulation of different methodological approaches in a daily data event study. Results show that although slightly, the market model is preferred to the mean-adjusted returns model and the market-adjusted returns model when working with a single-day event. While returns can be volatile due to specific events, their significance is not necessarily guaranteed. Empirical evidence points out the overall superiority of abnormal return standardization and using a t-test in hypothesis testing (Armitage, 1995). Our paper follows this approach in the empirical section.

Traditionally the event study literature focuses on questions such as the impact of stock splits, dividend announcements, mergers and other corporate events on stock prices. However, it is not uncommon to consider non-corporate events as important factors. Fama et al. (1969) as well as Nayak and Prabhala (2001) found that stock splits impact stock prices positively. The latter research estimates that 46% of the valuation effects are attributed to the associated dividend information following the announcements of stock splits. Davies and Studnicka (2018) found negative effects on stock prices on the early announcement of Brexit. Even the USA-China trade war has been stated throughout an event study (Egger & Zhu, 2020). A substantial negative impact is assessed for both American and Chinese firms, as well as third-party firms mostly being 'collateral damage' due to global trade integrations.

The global literature quantifying the impact of the coronavirus pandemic grows at fast rates. Researchers and academicians conduct event studies not just on stock markets, but on wider financial implications to firms in almost every sector. He et al. (2020) studied the stock market in China from June 2019 to March 2020. By employing the market model the authors found evidence of the negative impact of the pandemic in the labor-intensive sectors, while the IT industry, education and health sectors reacted positively. Similar conclusions can be drawn by Yan and Qian (2020) for the consumer sector. However, the adverse effects last shortly, mostly due to the quick reactions of Chinese authorities. Alam et al. (2020) studied the lockdown announcement effects for the case of the Indian stock market, which arguably reacted positively. The authors account such movements to the positive expectations of a better public health situation, leading the investors to 'buy the dip'. A rather interesting point is highlighted by Heyden and Heyden (2021). They note that while the US and European stocks do not react significantly to the first registered coronavirus case, they do on the news of the first registered death. Moreover, transparent reactions of central banking institutions helped in calming the markets more than the fiscal authorities.

We focus solely on the financial sector for stocks traded at the NYSE. Our firm belief is that this industry is a relevant indicator of overall economic conditions and reactions, due to its high integration with all economic sectors. While the literature mainly focuses on comparing industries, health-related events and deals with events in the first five months of 2020, we note and quantify the significance of different types of news throughout the whole year. This study serves as a necessary fill-in the pre-existing literature gap on the impact of the pandemic.

3. HYPOTHESES AND RESEARCH METHODOLOGY

This paper deals with the persistent question of whether SARS-CoV-2 related news is a significant source of abnormalities in stock prices. A total sample of 1259 daily observations (only trading days included) is analyzed to check whether the null hypothesis of zero abnormal returns can be rejected for a specific event. We focus on 15 events, out of which 8 are classified as bad ones. Primary data were obtained from the New York Stock Exchange database from 2016 through 2020. The databases of NASDAQ and Yahoo Finance are used as a potential backup in obtaining the necessary data, as well as for the information on different corporations. Data on the 3-month US Treasury Bill as a risk-free rate of return is obtained from the Board of Governors of the Federal Reserve System. The event study analysis deals with the return reactions of a provisional 'purely financial' portfolio consisting of 20 corporations classified with market capitalization varying between $300M and over $200B, all listed for trading on the New York Stock Exchange. According to the classification provided at NASDAQ, we focus on small, medium, large and mega capitalizations of companies. Micro and nano capitalizations are not of interest in this study. The randomization process of the portfolio is done similarly to the process of a stratification sampling, with random 10 companies chosen from the $10B – over $200B capitalization sample, and an additional 10 from the $300M - $10B intervals. To keep the study unbiased and completely randomized, we decide not to disclose information about the stocks incorporated in the study portfolio. The returns of the S&P500 index are used as the market return component in further modeling.

3.1. Empirical background of the event study

Event studies of stock market reactions are based on returns and their potential abnormalities i.e. deviations from the expectations. We begin off with calculating the individual stock returns as:

$$r_{it} = \frac{p_t - p_{t-1}}{p_{t-1}} * 100 \tag{1}$$

The aggregate portfolio return is a simple average, having in mind the proposed equal weights of each stock included:

$$R_t = \frac{1}{N} * \sum_{i=1}^{N} \sum_{t=0}^{T} r_{it} \tag{2}$$

The notations r_{it} and R_t indicate the rates of return of an individual stock and the portfolio, respectively, p is the price of a given stock, with $i = 1,2,3, \dots, N$ as a stock notation in the period $t = 1,2,3, \dots, T$. However, due to the specific nature of the analysis, we are interested only in the abnormal returns. Such terminology is used for the proportion of the return differing from its expected return. The following relationship consisting of expected i.e. observed and unobserved components is present:

$$R_t = E(R_t) + \epsilon_t \tag{3}$$

The expected return is a component that comes naturally, depending on a pre-specified model of the relationship between the share itself and perhaps the overall market. The error term is responsible for the abnormalities in price movements, creating a return conditional to a set of public and insider information $R_t = [r_t|\Omega_t]$. Abnormal returns are consequently the difference term:

$$AR_t = R_t - E(R_t) \tag{4}$$

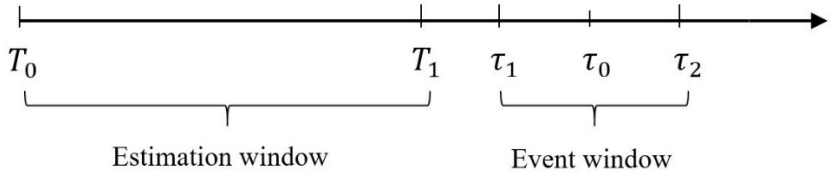
The literature proposes a vast number of approaches in modeling the expected return of a single stock, or even a portfolio. The constant mean return treats the average rate of return in the estimation window as the expected rate, while the market model includes the interaction

between a stock's performance and the overall market. Three-factor models can also be employed, as well as linear regressions but in this research, the Capital Asset Pricing Model is taken as the fundament for obtaining the expected returns of each stock of interest in our portfolio. The following equation deals with this problem:

$$E(R_{it}) = R_{f,t} + \beta_i(R_{m,t} - R_{f,t}) \quad (5)$$

The expected return of a stock is calculated with the likes of the market risk premium ($R_{m,t} - R_{f,t}$), the risk-free rate of return which in our case it's the 3-month US Treasury bill and the stock's beta parameter, measuring the volatility relative to the overall market. It can be obtained through simple OLS regression, where the dependent variable is the respective stock, while a given market index (in our case the S&P500) is the independent variable.

Figure 1: Event study timeline



(Source: Authors' work)

As testing for portfolio reactions to specific events makes little sense to be analyzed on daily basis around the event date, cumulative abnormal returns (CAR) are thus calculated. With them, we can observe the cumulative effect in an event window segregated into four different segments: anticipation, event, adjustment and total event window. The cumulative abnormal returns are adequate for short-term analysis rather than their BHAR (buy and hold abnormal returns) counterpart which is more suitable for longer event windows. CARs are calculated as:

$$CAR_{(\tau,\tau')} = \sum_{i=\tau}^{\tau'} AR_i \quad \forall \tau, \tau' \epsilon N \quad (6)$$

For this specific research for all 15 events of interest, a [-10, 5] event window is used, except for the first event which studies the [-5, 5] window in order not to overlap the estimation and the event periods. As generated results can be biased in direct interpretation, a standardized Student's t-test is employed when checking the statistical significance of the estimates. The standard deviation of the abnormal returns is calculated based on the estimation window ranging T_0 to T_1, to further reject the null hypotheses stated as statistical equalization to zero of the abnormal returns:

$$\begin{gathered} H_0: AR_t = 0 \\ H_1: AR_t \neq 0 \\ H_0: CAR_{\tau,\tau'} = 0 \\ H_1: CAR_{\tau,\tau'} \neq 0 \end{gathered} \quad (7)$$

The test statistics for the significance of the abnormal returns on the event day τ_0 are consequently calculated in the following principle according to Khotari and Warner (2007):

$$SAR_{\tau_0} = \frac{AR_{\tau_0}}{\sigma_{AR}} \quad (8)$$

While the significance of a particular sub-event window as:

$$SCAR_{(\tau,\tau')} = \frac{CAR_{(t,\tau)}}{\sqrt{|(\tau - \tau' + 1)|}\sigma_{AR}} \quad (9)$$

With $\tau \; and \; \tau'$ indicating the lower and the upper bound of the interval of interest.

4. RESULTS AND DISCUSSION

Before the creation of the standardized event study table, we need to carefully study the overall changes in our portfolio to get prior knowledge where possible abnormalities are concentrated throughout 2020. Table 2 shows the portfolio return heat map for the entire sample period from 2016 to 2020, by transforming daily returns into monthly by simply averaging them. In 2020 there are evident outliers in the first quarter, and partly in the second and fourth, implying that the most significant COVID-19 related news should perhaps be concentrated there.

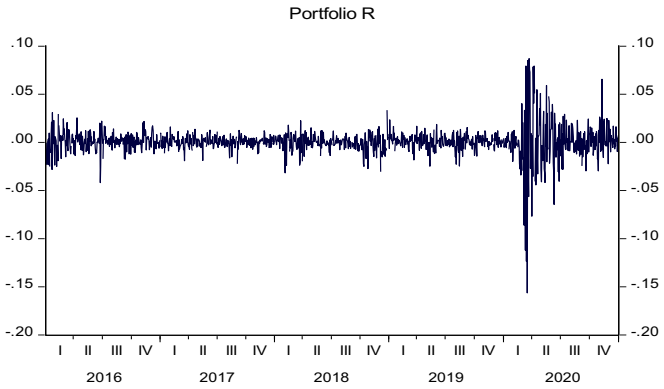
Table 1: Portfolio return heat map, averaged monthly returns (2016-2020)

Year/ Month	1	2	3	4	5	6	7	8	9	10	11	12
2016												
2017												
2018												
2019												
2020												

(Source: Authors' calculations)

The line graph of portfolio returns also confirms the increased volatility in 2020, which makes the chosen estimation window of 2016-2019 justified. Returns vary between 8.71% and -15.63% with a standard deviation of 1.46%. Descriptive statistics indicate that the distribution is non-normal and leptokurtic, which is expected for financial data series.

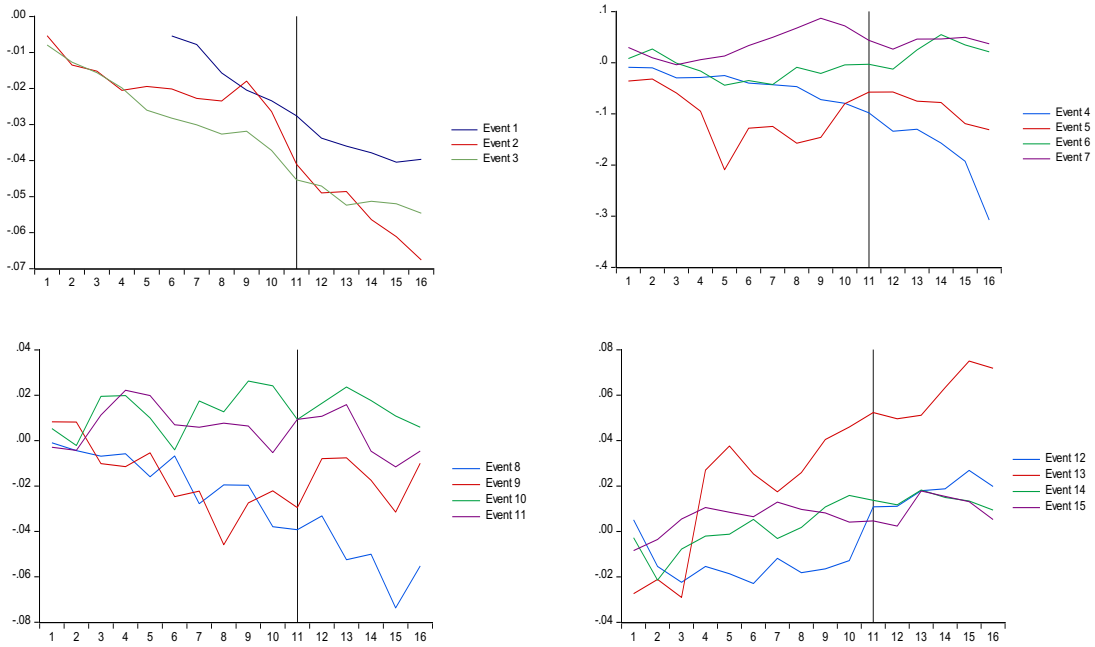
Figure 2: Daily portfolio returns (2016-2020)



(Source: Authors' calculations)

In the process of event analysis, we ought to analyze the cumulative abnormal returns of our 20-stock financial portfolio for each event date. Figures 3 to 6 illustrate this category. Most of the CARs follow a general tendency in the event window, with the event itself creating an additional positive or negative reaction to the returns. There is no clear signal of a shift in abnormal returns, meaning that on average CARs for pre and post-event windows remain with the same sign. However, quantifying the abnormal returns goes alongside testing for their significance as previously stated. Specific events and their dates of announcements are given in detail in Table 2, alongside the estimates of the event study.

Figures 3, 4, 5 and 6: CAR by event windows (vertical line indicating the event date)



(Source: Authors' calculations)

A little to no impact had the announcement of the World Health Organization about detecting a new type of coronavirus in Southern China, as then almost no attention was given to the potential hazard that followed. Significant and negative CAR for the anticipation window is estimated at -2.34% at the 5% level. We believe that this might account for possible insider trading or investment decisions unrelated to the topic of this paper, with the latter being more likely the case.

Even though a significance at the 10% level, the estimated abnormal return of the second event (first US COVID case) is -0.815% showing that the market reacted negatively. Moreover, the cumulative abnormal return for the prior 10-day window is significant at 5% signaling that investors anticipated such an event. The global spread of coronavirus was a matter of time before reaching the USA and such an event seemed logical and imminent to happen.

On February 3, 2020, the USA declared a national health emergency with the number of cases steadily growing and due to the Chinese experience with the virus at that point. The adverse reaction of the financial sector was accompanied by both significant anticipation and adjustment windows. The presence of non-zero and significant abnormal returns in the post-event timeline of 5 days signals a violation of the EMH. The information did not incorporate completely into the prices of the proposed portfolio with the occurrence of the event. Investor decisions signal that the event itself did not value the assets appropriately and a further downward correction was expected.

Once the WHO declared the SARS-CoV-2 virus a global pandemic, markets started to crumble. The announcement devalued the financial portfolio by roughly 2% more than its expected value at that point. The event window for March 11th shows significance at 1% for each sub-interval. This large drop in the stock prices before the event date was expected since the global spread showed signs of a pandemic weeks before. Investors reacted accordingly and signaled a further plummeting. However, highly interesting is the post-event adjustment period. In just five days after the event the financial sector companies loss almost 21% relative to the expectation. This confirms an inefficient market at the point in incorporating all disposable public and historical information in the prices of the assets and a clear undervaluation of the event itself in the prior

period. Moreover, a large proportion of investor decisions can be accounted for purely behavioral factors. Small investors usually follow large investor decisions in such events and are prone to decisions based on the general perspective of an occurrence. Expectations of worsened economic conditions at that point grew exponentially, justifying the investors' reactions.

Up until the end of March, no potentially good news came out in public. The introduction of the CARES act of the US government proved otherwise. Amounting $2.2 trillion it was introduced as a national economic stimulus in fighting the rapid drop in economic activity and everyday growth of unemployment. This event proved to be especially significant and created a positive environment for re-investment and economic recovery. As the financial sector depend ultimately on the condition and performance of the real sector and financial power of the households, the growth in abnormal returns on the event date is expected since it is positive news. However, both anticipation and adjustment periods defy the theoretical expectations. As the CARs are negative for the adjustment period they imply market overreaction on the given news. The worsening health environment and overall skepticism for going back to normal played their part. While most firms and businesses operated at the margins of rentability, no signs of the soon-to-come lifting of restrictions did their own thing in ensuring negative returns. Nevertheless, it is worth noting that positive market movements happened in the following period. This leads us to a conclusion that perhaps the especially short post-event window is the reason why good news such as passing the CARES act led to negative adjustments afterward.

An interesting phenomenon is observed in the set of vaccine-related events. None of them appears to be significant besides the news that Moderna entered Phase 3 in clinical trials parallel with reaching a deal with the US Government of its future distribution and the announcement of the National vaccine distribution plan. The prior event led to significant and negative abnormal returns. Even though it defies common logic, a general skepticism of the pace and efficacy in vaccine development probably is the main cause for such a result. The financial sector portfolio however steadily regained positive momentum afterward, generating a 1.5% abnormal return on the latter event, statistically significant at 1%.

The financial sector stocks did not experience substantial negative returns when announcing that the US President and the First Lady were infected with the coronavirus. Moreover, we must note that the overall insignificance in events that followed in the second half of 2020 may be due to the following reasons. Firstly the estimation window ends on December 31, 2019, and thus a substantially large gap exists between the estimation and event windows. Even though this was deliberately done to prevent drastic changes in the estimated CAPM model which should have incorporated the large fluctuations in the first quarter of 2020, we are aware of the restriction that it may pose to the analysis. Additionally, as health experts and society understood the nature of the virus more, investor reactions became less drastic and markets eventually started to return to the pre-pandemic levels. The financial sector regained momentum and investor confidence substantially grew. The overall event study proved that markets have adjusted inefficiently in the moment of big events of non-corporate character. The efficient market hypothesis was violated in the case of the financial sector portfolio during the beginning of the pandemic, with investors mostly anticipating and reacting accordingly to later events.

Table 2: Cumulative abnormal returns of the research portfolio by events, 2020

Date	Event	News	CAR (in %)		t-stat.
January 9, 2020	WHO officially detects coronavirus pneumonia [-5, 5]	*Bad*	*Event*	-0.420	-0.864
			Anticipation	-2.338**	-2.152
			Adjustment	-1.205	-1.109
			Total	-3.963***	-2.459
January 21, 2020	First US case and confirmed human transmission [-10, 5]	*Bad*	*Event*	-0.815*	-1.678
			Anticipation	-3.719**	-2.420
			Adjustment	-0.927	-0.853
			Total	-5.461***	-2.809
February 3, 2020	US public health emergency [-10, 5]	*Bad*	*Event*	-1.460***	-3.004
			Anticipation	-2.639*	-1.718
			Adjustment	-0.532**	-2.447
			Total	-6.757***	-3.476
March 11, 2020	WHO declares COVID-19 a pandemic [-10, 5]	*Bad*	*Event*	-1.862***	-3.832
			Anticipation	-7.941***	-5.168
			Adjustment	-20.928***	-19.260
			Total	-30.731***	-15.810
March 26, 2021	The Senate passes the CARES act [-10, 5]	*Good*	*Event*	2.272***	4.676
			Anticipation	-8.010***	-5.212
			Adjustment	-7.370***	-6.783
			Total	-13.108***	-6.744
May 21, 2020	The US Government and AstraZeneca vaccine deal [-10, 5]	*Good*	*Event*	0.116	0.238
			Anticipation	-0.427	-0.278
			Adjustment	2.438**	2.243
			Total	2.126	1.094
June 10, 2020	USA surpasses 2 million coronavirus cases [-10, 5]	*Bad*	*Event*	-2.828***	-5.820
			Anticipation	7.196***	4.683
			Adjustment	-0.668	-0.615
			Total	3.700*	1.904
July 2, 2020	Delayed 'reopening' of the economy [-10, 5]	*Bad*	*Event*	-0.131	-0.270
			Anticipation	-3.793**	-2.468
			Adjustment	-1.601	-1.473
			Total	-5.525***	-2.842
July 14, 2020	Moderna vaccine – good signs of efficacy in early trial [-10, 5]	*Good*	*Event*	-0.743	-1.529
			Anticipation	-2.221	-1.439
			Adjustment	1.959*	1.803
			Total	-0.995	-0.512
July 27, 2020	Moderna enters phase 3 – a $472M deal with the US Government [-10, 5]	*Good*	*Event*	-1.480***	-3.046
			Anticipation	2.414	1.571
			Adjustment	-0.343	-0.315
			Total	0.591	0.304
September 16, 2020	National vaccine distribution plan [-10, 5]	*Good*	*Event*	1.468***	3.021
			Anticipation	-0.528	-0.344
			Adjustment	-1.399**	-1.288
			Total	-0.460*	-0.236
October 2, 2020	President Trump and the First Lady tested positive – Trump immediate hospitalization [-10, 5]	*Bad*	*Event*	1.468***	4.872
			Anticipation	-1.280	-0.833
			Adjustment	0.892	0.821
			Total	1.979	1.018
November 18, 2020	Pfizer vaccine 95% efficacy [-10, 5]	*Good*	*Event*	0.642	1.320
			Anticipation	4.596***	2.991
			Adjustment	1.948*	1.793
			Total	7.186***	3.697
December 11, 2020	FDA approves shipments of the Pfizer vaccine [-10, 5]	*Good*	*Event*	-0.210	-0.432
			Anticipation	1.583	1.030
			Adjustment	-0.432	-0.397
			Total	0.941	0.484
December 21, 2020	New highly infectious 'alpha' strain discovered (UK variant) [-10, 5]	*Bad*	*Event*	0.051	0.105
			Anticipation	0.413	0.268
			Adjustment	0.058	0.053
			Total	0.521	0.268

****/**/* indicate .01, .05 and .1 statistical significance, respectively.*

(Source: Authors' calculations)

5. CONCLUSION

The event study analysis proves to be of immense importance in determining significance in market and portfolio reactions to events. As the COVID-19 pandemic made security investment turbulent, assessing its effect was necessary.

A random sample of financial sector stocks was used to create a portfolio upon which we test for the presence of abnormalities in its returns, given a set of 15 events. The news distribution is almost equal with 8 bad and 7 good news related to the US case of the pandemic. General results indicate that the highest significance of events is estimated in the first quarter of the year. The possibility of insider trading prior to announcements is possible and yet unlikely. In periods of the high volatility of prices, adjustment period significance indicates a violation of the semi-strong efficient market hypothesis. The event reaction in bad news was mostly undervalued leading to a further downward correction of prices. Vaccine-related news are estimated as insignificant, defying our hypotheses and expectations before the research.

While the study focuses only on the financial sector, due to its high integration with all sectors in the economy a general conclusion can be drawn that the COVID-19 related events significantly distorted market conditions.

REFERENCES

Alam, M. N., Alam, M. S. & Chavali, K., 2020. Stock Market Response during COVID-19 Lockdown Period in India: An Event Study. Journal of Asian Finance, Economics and Business, 7(7), pp. 131-137.

Armitage, S., 1995. Event Study Methods and Evidence on Their Performace. Journal of Economic Surveys, 9(1), pp. 25-52.

Basu, S., 1977. Investment Performance of Common Stocks in Relation to Their Price-Earnings Ratios: A Test of the Efficient Market Hypothesis. The Journal of Finance, 32(3), pp. 663-682.

Davies, R. B. & Studnicka, Z., 2018. The heterogeneous impact of Brexit: Early indications from the FTSE. European Economic Review, Volume 110, pp. 1-17.

Dyckman, T., Philbrick, D. & Stephan, J., 1984. A Comparison of Event Study Methodologies Using Daily Stock Returns: A Simulation Approach. Journal of Accounting Research, Volume 22, pp. 1-30.

Egger, P. H. & Zhu, J., 2020. The U.S.-China Trade War: An Event Study of Stock-Market Responses. Economic Policy, 35(103), pp. 519-559.

Fama, E., 1970. Efficient Capital Markets: A Review of Theory and Empirical Work. The Journal of Finance, 25(2), pp. 383-417.

Fama, E. F., Fisher, L., Jensen, M. C. & Roll, R., 1969. The Adjustment of Stock Prices to New Information. International Economic Review, 10(1), pp. 1-21.

Henderson, G. V., 1990. Problems and Solutions in Conducting Event Studies. The Journal of Risk and Insurance, 57(2), pp. 282-306.

He, P., Sun, Y., Zhang, Y. & Li, T., 2020. COVID–19's Impact on Stock Prices Across Different Sectors - An Event Study Based on the Chinese Stock Market. Emerging Markets Finance and Trade, 56(10), pp. 2198-2212.

Heyden, K. J. & Heyden, T., 2021. Market reactions to the arrival and containment of COVID-19: An event study. Finance Research Letters, Volume 38, p. 101745.

Kothari, S. P. & Warner, J. B., 2007. Econometrics of Event Studies. In: B. Espen Eckbo, ed. Handbook of Corporate Finance. Amsterdam: North-Holland, Elsevier, pp. 3-36.

MacKinlay, C. A., 1997. Event studies in economics and finance. Journal of Economic Literature, 35(1), pp. 13-39.

Nayak, S. & Prabhala, N. R., 2001. Disentangling the Dividend Information in Splits: A Decomposition Using Conditional Event-Study Methods. The Review of Financial Studies, 14(4), pp. 1083-1116.
Yan, L. & Qian, Y., 2020. The Impact of COVID-19 on the Chinese Stock Market: An Event Study Based on the Consumer Industry. Asian Economics Letters, 1(3), pp. 1-5.

DISRUPTIVE TECHNOLOGIES FOR ACCOUNTING OF THE FUTURE

Atanasko Atanasovski
Faculty of Economics-Skopje , Ss Cyril and Methodius University
atanasko.atanasovski@eccf.ukim.edu.mk

Todor Tocev
Faculty of Economics-Skopje , Ss Cyril and Methodius University
todor.tocev@eccf.ukim.edu.mk

ABSTRACT
Disruptive technologies in accounting represent a new evolutionary phase of accounting impacted by emerging technologies that are part of industrial revolution 4.0. The relevance of emerging technologies, their potential and the opportunities they offer for the accounting profession attract both academia and professionals with accelerated research efforts. Academia and scientific researchers must research and provide an appropriate theoretical basis to help practitioners better adapt and increase their awareness and trust in technology. This paper provides early quantitative research data on publication trends related to most disruptive technologies in accounting such as big data, data analytics, cloud, artificial intelligence and blockchain. We identified these five emerging technologies through literature review and elaborated in detail how they can change and advance the accounting profession. The research was conducted using bibliometric analysis to examine the level of coverage of each of the technologies in the period from 2016 to 2020 by analyzing the published articles by the Big Four accounting firms, professional accounting associations and institutions and high-ranking academic journals. The purpose of the research was to identify a potential gap in research preferences related to selected technologies between academia and development professionals and experts in the field. The findings highlight that there are no significant discrepancies or different views of academia and practitioners. It is a positive result indicating that academia and scientific researchers exploit in the same direction as practitioners, thus providing support for adaptation and alignment to technology trends.

Keywords: *big data, blockchain, accounting, emerging technologies, cloud*

JEL classification: *M15, M41, O33*

http://hdl.handle.net/20.500.12188/15936
http://doi.org/10.47063/EBTSF.2021.0024