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PROSPECTS FOR DIGITAL ECONOMY IN SIX COUNTIRES IN SOUTHEAST EUROPE

Abstract

Progress made in storage, processing and transmission of digital allowed merger of the departments of computerization, data telecommunications and audio-video transmission, transforming into a significant sector of the digital economy. Advances in digital economy has realized a significant increase, 1 implementing as an inevitable aspect in many parts of the society as retail, transportation, education, health, social interactions, banking and other elements. The growth of the digital economy is also driven, supported and facilitated throughout wide access to computers and the World Wide Web (Internet). In the world today, information and communication technologies are an integral part of the personal lives of people, businesses and governments, leading to convergence of ICT and the economy. Therefore, the aim of this paper is to consider the prospects of development of Digital economy in the six countries of Southeast Europe i.e. Republic of Macedonia, Slovenia, Serbia, Montenegro, Bosnia and Herzegovina and Croatia. According to this, a research has been conducted, in order to determine the prospects and possibilities for development of digital economy. The research was conducted using the comparison method, where the gathered NRI data

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¹ OECD, *Measuring the digital economy A New Perspective*, OECD Publishing, 2013, p. 22.

(including four main categories and ten subcategories) for the six countries of the Southeast Europe where compared in order to determine the prospects for development of digital economy. The findings of this paper show us that the six European countries taken into consideration trail behind the in the majority of indicators. However, they each excel in different fields for development of the digital economy sector, and with mutual collaboration they could enhance and further increase the development of digital economy in their countries as well as the Southeast Europe region.

Key words: digital economy, economic growth, innovation, technology, NRI index

JEL classification: O32, O33

Introduction

Digitization, which has been taking place for several decades, has affected almost every sector of the economy. The digital transformation started with the first computer revolution in the 60s, enabling task automation and process standardization.² Afterwards followed the second information and communication technology (ICT) revolution, which was all about companies using the Internet as a standard channel of communication and a way of doing business.³ However, during the last two decades, the radical changes that were brought about by ICT, known as the third ICT revolution, have enhanced the full potential of digital revolution introducing the phenomenon of Digital Economy.⁴ It means basically 'Digitization of Everything' and it is based on the latest technological developments such as Cloud Computing, Mobile Computing, Big Data and Internet of Things.

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² Hunt, H.A., and Hunt, T.L. *Clerical Employment and Technological Change: A Review of Recent Trends and Projection*, Report submitted to the National Commission for Employment Policy, W. E. Upjohn Institute, 1986, p. 3.

³ Arul Kamaraj, J. M., *Digital Revolution in Rural India: Keys to the Digital India*, IJBSF, Volume 2, Number 1, 2012, pp. 19-30.

⁴ Kleine, D., and Unwin, T., Technological Revolution, Evolution and New Dependencies: what's new about ICT4D?, *Third World Quarterly*, Vol. 30, No. 5, 2009, pp. 1045-1067.

Digital Economy is not all about the digital technology. It basically refers to how digital ICT technologies are used to promote the existing economy, in a direct way, through the emergence and development of new digital ICT industries, or in an indirect way, through development of new businesses and introducing efficiencies to traditional ones.⁵

To maximize the potential of the digital economy as a driver for innovation, competitiveness and inclusive growth, several topics must be considered, such as infrastructures (technological and institutional); availability of applications and services based on digital technologies and new business models used by individuals, businesses and governments; trust in the reliability and security of online networks, services and applications; and the appropriate skills to make use of ICT and digital processes.

In order to help policy makers to evaluate the efficiency of their policies, strategies and actions related to the digital economy, they must introduce proper measurement methodologies, indicators and tools. One of the key indicators of how countries are doing in the digital world is the Network Readiness Index launched by the World Economic Forum in 2001, which evaluates the capacity of countries to leverage the ICT for competitiveness and wellbeing. The networked readiness framework rests on four principles: (1) a high-quality regulatory and business environment is critical in order to fully leverage ICTs and generate impact; (2) ICT readiness—as measured by ICT affordability, skills, and infrastructure—is a precondition to generating impact; (3) fully leveraging ICTs requires a society-wide effort: the government, the business sector, and the population at large each have a critical role to play; (4) ICT use should not be an end in itself. The impact that ICTs actually have on the economy and society is what ultimately matters. The networked readiness framework translates into the NRI, a composite index made up of four main categories (subindexes), 10 subcategories (pillars), and 53 individual indicators distributed across the different pillars. Networked readiness rests on whether a country possesses the drivers necessary for digital technologies to unleash their potential, and

⁵ Hamid, N., and Khalid, F., Entrepreneurship and Innovation in the Digital Economy, *The Lahore Journal of Economics*, No 22, 2016, pp. 273-312.

⁶ Baller, S., Dutta, S., and Lanvin B., *The Global Information Technology Report 2016: Innovating in the Digital Economy*, World Economic Forum and INSEDAD, 2016, p. 33.

on whether these technologies are actually impacting the economy and society.

The drivers are grouped within tree subindexes as follows:⁷

A. Environment subindex (2 pillars)

- 1. Political and regulatory environment (9 indicators)
- 2. Business and innovation environment (9 indicators)

B. Readiness subindex (3 pillars)

- 3. Infrastructure (4 indicators)
- 4. Affordability (3 indicators)
- 5. Skills (4 indicators)

C. Usage subindex (3 pillars)

- 6. Individual usage (7 indicators)
- 7. Business usage (6 indicators)
- 8. Government usage (3 indicators)

Impact is measured as a separate subindex:

D. Impact subindex (2 pillars)

- 9. Economic impacts (4 indicators)
- 10. Social impacts (4 indicators)

NRI is calculated as an arithmetic average of the values of the four subindexes, which are calculated as an arithmetic average of the value of the indicators that belong to the respective subindex. Most of the indicators are measured on a scale of 1-7, where 1 is the worst possible choice (for example, not efficient at all, not developed at all and etc.), whereas 7 represents the best choice (for example, extremely efficient, extremely well-developed and so on). As for indicators whose values are expressed as continuous variables (such as the number of procedures to enforce a contract, number of days to settle a dispute, total tax rate, and etc.), a min-max transformation is performed that once again converts them to values on a scale of 1 to 7.

The Network Readiness Index, the 2016 Report covers 139 economies all around the world including all of the six Southeastern Europe economies. 8

⁷ Ibid, p. 5.

⁸ Ibid.

METHODOLOGY

The research in this article is conducted using both quantitative and qualitative research methods. The quantitative methods are consisted of statistical and data analysis using the data provided by Network Readiness Index necessary for comparison of the development of the digital economy sector. Qualitative method that is used in the research for this article is comparative method. The comparative method is used to compare the development of digital economy in the six countries of Southeast Europe with the beast digital economies in the world. Besides the quantitative methods, other qualitative methods are used in the process of research and conclusion findings, such as: analytical method, method of deduction and method of induction.

KEY FINDINGS

In regards to economies with best NRI index value achievements (Singapore and Finland), which is 6.0, six countries in Southeast Europe covered by this research trail behind by 29.5%, in which the Impact subindex differ the most, with an almost 40% (39.8) lower value of this subindex compared to the respective value of the best economy (Table 1). This trailing of the region in comparison to the best countries is mainly due to the trail of the Number of applications for information and communication technology—related patents filed under the Patent Cooperation Treaty (PCT) per million populations, which amounts to a total of 98%. The Impact subindex also trails due to the E-Participation Index, which for the six southeast European countries lags by 64% from the best value (Table 2).

Table 1: The Networked Readiness Index 2016 and subindexes

				Subindexe	es	
	NRI Value	2016 rank (out of 139)	Environment	Readiness	Usage	Impact
Slovenia	4.8	37	4.4	5.8	4.4	4.3
Macedonia	4.4	46	4.4	5.2	4.2	3.9
Montenegro	4.3	51	4.1	5.3	4.0	3.8
Croatia	4.3	54	4.1	5.3	4.1	3.8
Serbia	4.0	75	3.7	5.2	3.7	3.4
Bosnia and Herzegovina	3.6	97	3.3	5.2	3.2	2.8
Six Southeastern countries Average	4.23		4.0	5.33	3.93	3.67
World Best	4.23		4.0	5.55	3.93	3.07
Value	6.0		6.0	6.6	6.0	6.1
(WBV - Six Southeastern countries Average)/W BV	29.5 %		33.3%	19.2%	34.5%	39.8%

Source: The Global Information | Technology Report 2016, p.16

Note: Singapore and Finland with 6.0 have the highest value of the NRI, Singapore has the highest score in Environment, Usage and Impact subindexes, and Finland realizes the highest score of Readiness subindex.

Source: Adapted by the authors, based on Baller, S., Dutta, S., and Lanvin B., The Global Information Technology Report 2016: Innovating in the Digital Economy, World Economic Forum and INSEDAD, 2016

Table 2 N	Table 2 NRI Indicators in six Southeastern countries, 2016	s in six So	utheaste	ern cou	ntries, 201	9					
		Macedonia	Slovenia	Croatia	Montenegro	Serbia	Bosnia and Hercegovina	Average	(Max - Min)/ Max	World Best Value (WBV)	WBV-Six Southeastern countries /WBV
	1.01 Effectiveness of law-making bodies	4.2	2.9	3.1	3.9	3.4	2.9	3.40	31%	6.3	46%
	1.02 Laws relating to ICTs	4.6	4.6	3.9	4.1	3.6	2.5	3.88	46%	5.9	34%
Political and regulatory environment	1.03 Judicial independence	3.3	3.5	3.2	3.4	2.6	2.9	3.15	76%	6.7	53%
lst pillar	1.04 Efficiency of legal framework in settling disputes	3.9	2.9	2.3	3.5	2.7	2.7	3.00	41%	6.2	52%
	1.05 Efficiency of legal framework in challenging regulations	3.2	3	2.3	3.3	2.6	2.8	2.87	30%	5.8	51%
	1.06 Intellectual property protection	4	4.5	3.6	3.7	3	2.9	3.62	36%	6.3	43%

18 246%	21 83%	150 357%	6.6 29%	5.1 52%	11.3	1 1700%	1 467%
42%	35%	53% 1	27% 6	34% 5	68%	%66	%76
62.33	38.33	685.17	4.72	2.43	24.75	18.00	5.67
65	37	595	4.2	2.3	23.3	29	12
69	36	635	4	1.9	39.7	12	9
78	49	545	4.6	2.8	21.6	10	9
52	38	572	5	2.3	20	12	7
45	32	1160	5.5	2.4	31	9	2
99	38	604	S	2.9	12.9	1	1
1.07 Software piracy rate	1.08 Number of procedures to enforce a contract	1.09 Time required to enforce a contract	2.01 Availability of latest technologies	2.02 Venture capital availability	2.03 Total tax rate	2.04 Time required to start a business	2.05 Number of procedures required to start a business
					Business and innovation environment	2nd pillar	

	6.3 25%			110.2 51%			6.3 38%					5.0			55,954. 91%	30		100 0%			6,887.7			3,214.4	0		701101					
	24%			74%			27%			38%		38%		38%		38%				%69	0,70		1%			%59			%10	2		2007
	4.73			53.63			3.93				0	7.92			5021.40	01.1200		82.66			75 55			180.07	0.001		70.0					
	4.4			22.1			3.3			2.4				4564 1	1.1001		8.66			43	2		350	7:00								
	4.3			58.1			3.4				ć	7.8			5475.	5		8.66			1124	777		13.8	0.01		000					
	4.2			55.3			4.4				ć	3.2			5 0589	0.000		99.5			77			263	0.00		700					
	4.9			61.7			4		2.7		31313	C.1C1C		100			28	8		210.5	C: (17		100									
	5.1			85.2			4.5		2.7		2.7			6.48.3	0.00		,															
	5.5			39.4			4				ć	5.9			2940 3	2000		6.66			418	2		9 92	2.0		,					
2.06 Intensity	of local	competition	2.07 Tertiary	education	enrollment rate	2.08 Quality of	management	schools	2.09	Government	procurement of	advanced	technology	products	3.01 Electricity	production	3.02 Mobile	network	coverage rate	3.03	International	Internet	bandwidth	3.04 Secure	Internet servers	4.01 Prepaid	Included a chilorent					
																		Infrastructure			3rd nillar	mind by										

31.07 1 3.8 1 4.3	31.46	35.52	36.6	36.05	16.39	31.18	7%	2.59	1104%
4.03 Internet and telephony sectors competition index 5.01 Quality of the education system 5.02 Quality of math and science 4.3	2 4.1	3.1	3.9	3.1	1.86	3.40	7%	2	%1
and telephony sectors competition index 5.01 Quality of the education system 5.02 Quality of math and science 4.3	4.1	2 3.1	3.9	3.1	1.86	3.40	7%	7	1%
sectors 2 competition index 5.01 Quality of the education system 5.02 Quality of math and science 4.3	4.1	3.1	3.9	3.1	1.86	3.40	7%	2	1%
competition index 5.01 Quality of the education system 5.02 Quality of math and science	4.1	3.1	3.9	3.1	2.4	3.40	41%		
5.01 Quality of the education 3.8 system 5.02 Quality of math and science	4.1	3.1	3.9	3.1	2.4	3.40	41%		
the education 3.8 system 5.02 Quality of math and science	5.3	3.1	3.9	3.1	2.4	3.40	41%		
system 5.02 Quality of math and science	5.3	8.4	4.6	4.4				6.1	44%
5.02 Quality of math and science	5.3	4.8	4.6	4.4					
math and 4.3 science	5.3	8.	4.6	4.4					
science	J.	o ř) F	t F	3.6	7.50	330%	7	30%
					0.0	 	0/76	t.	30/0
education									
5.03 Secondary									
82	110.9	8.66	90.3	94.3	68	94.38	79%	163.1	42%
enrollment rate									
8 20	7 99	00 3	2 86	08.1	5 86	89 80	%0C	0 00	1%
9.77	77.1	77.7	7.6.7	70.1	78.2	76.00	0/7	77.7	0/1
105.5	112.1	104.4	163	122.1	91.3	116.40	44%	233.6	%05
subscriptions									
68.1	71.6	9 89	61	53.5	8 09	20 29	%50	6 80	35%
	0.17	0.50		0.00	0.00	67:50	0/07	7.0.7	
6.03									
70.1	79.8	70.1	54.7	65.6	45	64.22	44%	98.1	35%
computer									

37%	26%	%99	15%	29%	41%	%96	25%
98.5	42.5	141.7	6.7	6.2	9	335.2	6.1
35%	47%	%65	16%	22%	32%	%86	23%
61.98	18.82	48.32	2.67	4.38	3.52	14.40	4.58
50	14.2	27.8	5.2	4.4	3	1.7	4
51.8	15.6	66.4	5.6	3.8	3.1	3.8	4.5
56.6	16.7	31	5.8	4.4	3.6	3.2	4.4
68.4	23	68.5	5.4	4.6	3.3	9.6	4.7
76.8	26.6	46.7	5.8	4.9	4.4	66.7	5.2
68.3	16.8	49.5	6.2	4.2	3.7	1.4	4.7
6.04 Households with Internet access	6.05 Fixed broadband Internet subscriptions	6.06 Mobile broadband Internet subscriptions	6.07 Use of virtual social networks	7.01 Firm-level technology absorption	7.02 Capacity for innovation	7.03 PCT patents applications	7.04 ICT use for business-to- business transactions
					Business usage	7th pillar	

7.05 Business-										
to-consumer Internet use	4.3	8.	4.3	4.1	4	4	4.25	17%	6.4	34%
7.06 Extent of		,	,	,	,	ć	,	7000	t	7007
gu	7.7	4	5.5	3.0	n	6.7	5.42	0%97	5.7	40%
8.01										
Importance of										
ICTs to	8 4	3.5	3.4	4 3	3.2	26	3 63	46%	6.1	40%
government	o F	J., J	t.o	ì	4:0	0.1	50:0	200	1.0	è
the										
future										
8.02										
Government	20	77	77.0	64.0	000	000	0,0	/022		710/
Online Service	0.24	0.45	0.40	0.35	65.0	0.28	0.39	92%	-	0170
Index										
8.03										
Government	4.9	3.8	3.4	4.1	3.3	2.3	3.63	53%	6.2	41%
success in ICT										
promotion										
9.01 Impact of										
uc	4.7	4.5	4.3	4.3	3.9	3.6	4.22	23%	5.9	29%
business models										
9.02 PCT ICT										
patent	0.1	13	2	8.0	1.9	0.3	3.02	%66	153.1	%86
tions										
9.03 Impact of										
ICTs on	4 3	4 4	4 3	3.7	3.4	3.1	3 87	30%	8	33%
ational)	•	<u>:</u>			:))	
models										

45%	32%	29%	38%	64%
62.3	6.2	6.5	6.1	1
37%	30%	32%	46%	63%
34.00	4.22	4.60	3.78	0.36
n/a	3.5	3.9	2.6	0.24
29.1	3.6	3.9	3.5	0.41
37.2	3.9	4.3	4.2	0.59
35.7	4.3	4.6	3.6	0.33
41.7	5	5.7	4	0.39
26.3	S	5.2	4.8	0.22
9.04 Share of workforce employed in knowledge- intensive activities (%)	10.01 Impact of ICTs on access to basic services	10.02 Internet access in schools	10.03 ICT use and government efficiency	10.04 E- Participation Index
		Social impacts	10th pillar	

Source: Calculated by the authors, based on Baller, S., Dutta, S., and Lanvin B., The Global Information Technology Report 2016: Innovating in the Digital Economy, World Economic Forum and INSEDAD, 2016.

This indicates that the region overall should pay much more attention as to what is the broader economic and social impact that is gained from the use of ICT in the economies of the region. More specifically, this indicates, on the one hand, that the impact of ICT on competitiveness through the application of technological and non-technological innovations in the countries of the region is still very low, and on the other hand, that the role that ICT plays on the overall social progress is far from what it can be, and that there is much room for improvement in all six Southeastern European countries.

The lowest trail of the Southeastern European region behind the best economies can be seen in the Readiness Sub index, according to which the Southeastern European region countries trail behind by 19.2%. This shows that the region has established a relatively good infrastructure, and other factors for the support and development of ICT, such as ICT availability and skills of the population to efficiently and effectively use ICT.

However, with this index as well, there are some indicators where the six Southeastern European countries trail quite a bit behind the best economies. Such is the situation with the production of electricity in kWh per capita, which is just 9% of the highest value that Iceland has, the number of secure Internet servers and International Internet bandwidth in kb/s per Internet user, which are just 5.6% and 1.1% of the highest value of the relevant indicators, which Iceland and Luxemburg have.

The situation of the six Southeastern European countries according to the value of the Environment Subindex and Usage Subindex is much less satisfactory, which in the entire region lag behind the best economies by 33.3% and 34.5%. This difference of the Environment Subindex value suggests that the degree of the market conditions and the regulatory framework are suitable for supporting entrepreneurship, innovation and ICT development. The low level of the Usage Subindex compared to economies with the highest values of this subindex indicates that in the six countries in the Southeastern Europe region there is much room for improving the level of adopting and using ICT by all stakeholders in society: government, businesses and citizens.

This means that even though there are preconditions for innovative and efficient ICT application and development in countries of the Southeastern European region, the level of ICT usage is low due to a poor political and regulatory environment, as well as poor business and

innovation environment, and this results with a weak ICT impact on the overall social-economic wellbeing of the region.

SIX SOUTHEASTERN EUROPEAN COUNTRIES ACCORDING TO NRI

Slovenia is the best ranked country of the six Southeastern European countries, ranking at 37, with an index value of 4.8. Slovenia is the best in the region according to all subindexes, whereas according to the 10 pillars, it is the best in six, second best in 2 (according to Political and regulatory environment and Business and innovation environment it is in second place immediately after Macedonia), and in other 2 (Affordability and Government usage) it is in third place (Figure 1).

Slovenia is the best ranked in the region especially in terms of the following indicators: Mobile network coverage rate, Internet and telephony sectors competition index, Adult literacy rate, Internet access in schools, Use of virtual social networks, and ICT use for business-to-business transactions.

There is most room for improvement for Slovenia in relation to the indicators referring to Prepaid mobile cellular tariffs, Fixed broadband Internet tariffs, Time required to enforce a contract, and Time required to start a business.

According to DigitAgenda 2016 adopted by the Chamber of Commerce and Industry of Slovenia, Slovenia has embarked on recovering the lost 5 places on the NRI list until 2018.

Macedonia is second among the six Southeastern European countries according to the value of NRI, which is 4.4, according to which it ranks 46th in the world. According to individual subindexes, Macedonia is in the first place among six Southeastern European countries in two of them (Political and regulatory environment and Business and innovation environment). It is worth mentioning that Macedonia, according to 3 indicators, is the best ranked in the world, in particular according to: Time required for starting a business, Number of procedures required to start a business and Internet and telephony sectors competition index. Moreover, Macedonia shows particular results according to the values of the following indicators: Mobile network coverage rate, Adult literacy rate, Use of virtual social networks, Intensity of local competition and Total tax rate

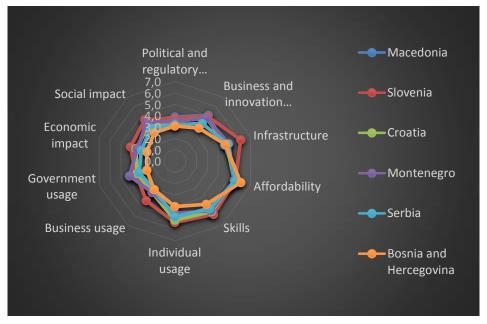


Figure 1 NRI Subindexes in six Southeastern European, 2016

Source: Adapted by the authors, based on Baller, S., Dutta, S., and Lanvin B., The Global Information Technology Report 2016: Innovating in the Digital Economy, World Economic Forum and INSEDAD, 2016.

Macedonia shows poor results according to Monthly subscription charge for fixed (wired) broadband Internet service; Average per-minute cost of different types of mobile cellular calls; Number of days to settle a dispute, counted from the moment the plaintiff decides to file the lawsuit in court until payment and Unlicensed software units as a percentage of total software units installed.

Both **Montenegro and Croatia** have the same NRI value of 4.3 and rank in the 51 and 54 places in the world. According to the results, we can see that the competitive advantages of **Croatia** are: percentage of households that own a computer, percentage of families with Internet access, Internet usage by individuals, Percentage of total enrollment in secondary education, Percentage of total enrollment in third cycle of higher education and security of Internet servers.

On the other hand, competitive disadvantages of **Croatia** are: Efficiency of legal framework in settling disputes, Efficiency of legal framework in challenging regulations, Government procurement of

advanced technology products and Capacity for innovation. A conclusion can be made that Croatia is not sufficiently using the developed existing ICT infrastructure because of failure to implement the necessary reforms. In the government programs a clear vision for ICT has not been noticed for quite some time, and digitalization of the public administration is being slowly implemented, but there is also lack of quality services for the business sector

Montenegro according to the Government usage pillar with a value of 4.2 ranks the best among the six Southeastern European countries. It has best results according to the Level of competition index for Internet services, international long distance services and mobile telephone services, Percentage of total population covered by a mobile network signal and Adult literacy rate, and partly according to the Use of virtual social networks. Montenegro has the worst performances in regards to the best values of the indicators on the list for 2016 according to Fixed broadband Internet tariffs, Prepaid mobile cellular tariffs, Time required to start a business, Number of procedures required to start a business, Software piracy rate, Time required to enforce a contract and Number of procedures to enforce a contract.

Serbia has an NRI of 4.0 and is in the second-last place in the world. According to the data presented in Table 2, we can see that policy intervention through investments, smart regulation, and other stimulating measures can increase the impact of ICT over the development and growth of Serbia. More specifically, areas in which there should be an improvement of the situation are: Political and regulatory environment (especially in the indicators: Judicial independence, legal framework for settling disputes, legal framework for challenging regulations and intellectual property protection), Internet infrastructure (Internet bandwidth, secure Internet servers), venture capital availability, capacity for innovation and patent applications, business and government usage of ICTs, and general e-participation in social life.

Bosnia and Herzegovina with an NRI value of 3.6 ranks 97 in the world and is in the last place among the six Southeastern European countries, where it trails behind according to all subindexes, and in 8 pillars is in the last place, according to the Infrastructure pillar it is the second-last, while according to the Affordability pillar it is the best within the framework of the six Southeastern European countries. Bosnia and Herzegovina lags behind the best values of indicators for 2016 mostly in the following areas: Time required to start a business, Prepaid

mobile cellular tariffs, Number of procedures required to start a business, Fixed broadband Internet tariffs, Time required to enforce a contract, Software piracy rate and Total tax rate, while the Bosnian economy shows best indicators in regards to the application and impact of ICT in the Mobile network coverage rate, Adult literacy rate and Internet and telephony sectors competition index.

In Table 2, the "(Max-Min)/Max" column shows the differences between the value of the indicator among the six Southeastern European countries, shown through a Green-Yellow color scale, whereas the spectrum of colors with the lightest shades of yellow show the lowest differences, and the light to darker shades of green the greatest differences. The biggest differences in the indicators among the six Southeastern European countries are noted in the: Time required to start a business, PCT ICT patent applications, PCT patents applications, Secure Internet servers and Number of procedures required to start a business. It is precisely in these indicators that we see that in the Southeastern European region the countries can identify and exchange experiences with one another so that they may drastically improve the situation with certain NRI indicators in average for the entire region.

Conclusions

Digital technology can contribute to higher growth and sustainable prosperity of countries; therefore the countries should increase their awareness of the need for the development of the digital economy. Through appropriate strategic development of the digital economy can come to address the key challenges such as unemployment and inequality and abolishing poverty. Economic growth and technology are inextricably linked. The development of the digital economy is preceded by the development of smart infrastructure and Internet technology itself. Through investments in technology, businesses are looking for new ways to reduce costs and encourage innovation in order to increase the opportunities for achieving sustained economic growth.

According to the findings based on the data of NRI index the six Southeastern European countries trail behind the economies with the highest NRI score such as Singapore and Finland. The largest gap in the comparison between the countries of the region and other world countries with the best results according to the NRI index can be seen in the Impact

subindex. Countries in the region realize low results in the Number of applications for information and communication technology—related patents filed under the Patent Cooperation Treaty (PCT) per million populations and E-participation, which further leads to low impact of the ICT on society and overall economic progress. Nevertheless, the six Southeastern European countries show the best score in the Readiness subindex according to the NRI data. This refers to the relatively good smart infrastructure and other factors that contribute to the process of digitalizing the economy and society. However, the countries of the region realize relatively low scores in the other two subindexes referring to Environment and Usage subindexes, mainly due to poor political and regulatory environment.

The comparison between the six Southeastern European countries shows that Slovenia has the best score in the overall Network readiness index. Republic of Macedonia trails Slovenia as the second best from the six Southeastern European countries, on the other side the lowest score is realized by Bosnia and Herzegovina. However, the research showed that different six Southeastern European countries realize high scores on different fields i.e. subindexes concerning the NRI. Considering the region this could mean that every country has its own competitive advantages when it comes to prospects of the digital economy. These differences between the six Southeastern European countries show different approaches in development of the digital economy sectors. Strategically managed and with mutual exchange of good practices concerning the development of digital economy, the six Southeastern European countries could improve their overall scores on the NRI index and could benefit in the process of further development of the digital economy.

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