

Toward competitive advantages in e-Governance of Balkan countries

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Abstract. Information Communication Technologies (ICT) and Internet have made a great progress and development in the humanity. People are aware about the advantages that information technologies give to their daily activities. Going in that direction, the Governments in many countries had started to use the Information Communication Technologies for their administrative work. The public services for citizens and organisations are beginning to work electronically in order to give more effective and efficient operating. The outcomes of these changes are: greater transparency, saving time and money, faster operating and better management. This world trend of building e-society is aim for the countries on the Balkan. In this paper we will try to make an analysis of e-Government in five neighboring countries on the Balkan Peninsula: The Republic of Macedonia, Albania, Bulgaria, Greece and the Republic of Serbia. For that purpose, we will compare the indicators for predispositions of implementing of the e-Government in these countries. In order to find the competitive advantages, we will make comparison on the influence of the ICT between these five Balkan countries. The results of this analysis, particularly, will help to the countries to decide what to improve and what to maintain for increasing the e-Government performance.

Keywords: Information Communication Technologies (ICT), e-Government, Balkan countries, comparison, competitive advantages

1 Introduction

Emerging of the Information Communication Technologies (ICT) and Internet has made a great progress and development in the humans live and operations. Their benefits are useful for people, organisations and society. Establishing an information society is a world trend active in the recent years. The government in every country is striving to implement the e-Government. In accordance with that, each government planned a policy that included all members to contribute for better development of the country. It is confirmed with the conclusion of the 51-st Session of the United Nations Commission on Social Development, that: “The empowerment and participation of all members of society in social, economic and political life is critical to achieving sustainable development”. The challenge of e-

participation, is how best to employ ICTs to create an enabling environment for individuals and groups to be empowered to participate meaningfully and effectively in governance, policy, service development and delivery processes [1]. E-participation index is an important indicator for detecting the e-Government usage. The pressure of the globalization process imposes the governments to use e-Government.

This paper analyzes five Balkan countries: the Republic of Macedonia, Albania, Bulgaria, Greece and the Republic of Serbia. The interest is concentrated on the predispositions of the e-Government implementation in these countries.

- Section two shortly explains the meaning of the e-Government the electronically provided services for the users in the countries and the benefits of its implementation;

- Section three elaborates some data that represent the e-readiness of the country. The components for the e-Government development as: online services, telecommunication infrastructure and human resources assessed the possibility of the e-Government implementation. The comparison of this index from 2010 to 2014 represents the effort that the Government gives to develop the e-Government;

- Section four presents some other indicators that confirm the ability of the five Balkan countries to implement the e-Government;

- Section five makes comparison of the e-participation of the Balkan countries in order to be identified the path of increasing the usage of e-Government from 2010 to 2014. It will lead to find the competitive advantage of the Balkan countries in the domain of e-Government.

Finally the conclusion briefly summarizes the important points from previous sections.

2 Defining e-Government

Few years ago the e-Government and e-Governance as terms were unknown, but with the help of the ICT and Internet they became a new way of operating and a trend of orientation in the world. In order to have good explanation for these terms some world famous institutions have given some definitions.

- According to the World Bank:
“E-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The results from this are benefits like: less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions” [2].

- According to the European Union:

“E-Government is the use of Information and Communication Technologies in public administrations combined with organisational change and new skills in order to improve public services and democratic processes” [3].

• According to the OECD (Organisation for Economic Co-operation and Development) e-Government is: “The use of ICT’s, and particularly the Internet, as a tool to achieve better government” [3].

From the given definition we can say that e-Government is electronically way of administrative operating in the country and achieving the results of governance through the utilization of the IT. The countries decided to use e-Government, because the governance has become more complex than before. The complexity is expressed in the various expectations of the citizens that are increasing during the time. To become a positive result in managing of all different operations, countries decide to use ICT and Internet, and to become e-Governance. The main purpose of e-Government implementation was the benefit for citizens, than business and society as well. In the Table 1 was listed the services provided for the citizens and for business.

Table 1. Services provided for citizens and for business [4].

The 12 services for citizens are as follows:	The 8 services for businesses are as follows:
1. Income taxes: declaration, notification of assessment	1. Social contributions for employees
2. Job search services by labor offices	2. Corporate tax: declaration, notification
3. Social security benefits	3. VAT: declaration, notification
4. Personal documents: passport and driver’s license	4. Registration of a new company
5. Car registration (new, used, imported cars)	5. Submission of data to statistical offices
6. Application for building permission	6. Customs declarations
7. Declaration to the police (e.g. in case of theft)	7. Environment-related permits (including reporting)
8. Public libraries (availability of catalogues, search tools)	8. Public procurement
9. Certificates (birth and marriage): request and delivery	
10. Enrolment in higher education/university	
11. Announcement of moving (change of address)	
12. Health related services (interactive advice on the availability of services in different hospitals)	

All these 20 primary public services are provided electronically for their users. They are separated into two groups where twelve services are for citizens and eight for enterprises. This will help in the development of e-Government in the country, which means that the operations will be finished efficiently and effectively. The benefits for the separately users and the country in general, will be: lower corruption, greater transparency, cost reduction and time saving.

Because of this benefits, countries of our geographical region, the Balkan, actively worked on implementation of e-Government.

3 Comparing e-Readiness of the Balkan countries

The process of implementing the e-Government depends on the e-Readiness of the country.

“E-Government Readiness” here is replacement for the word “e-Government development”.

The term ‘e-Government development’ describes how far governments have actually advanced in this field instead of how ready or able they might be to do so, which was how ‘e-Government readiness’ described national capacity [5].

E-Readiness shows the degree to which a country is prepared to participate in the networked world [6]. E-Readiness depends of electronic services supplied by Government to citizens; of technological and telecommunication infrastructure in the country and of the level of which citizens are using online services offered by the Government. The previous mentioned three components will help us to calculate the E-Government Development Index (EGDI) given in the Table 2. The focus of the research is putted on five neighboring countries on the Balkan: the Republic of Macedonia, Albania, Greece, Bulgaria and Republic of Serbia.

Table 2. E-Government Development Index (EGDI) of five Balkan countries in 2014 [1].

World rank	Country	EGDI	Of which:		
			Online service component	Telecommunication infrastructure component	Human capital component
34	Greece	0.7118	0.6063	0.6549	0.8741
69	Serbia	0.5472	0.3937	0.4681	0.7796
73	Bulgaria	0.5421	0.2362	0.5941	0.7960
84	Albania	0.5046	0.4488	0.3548	0.7100
96	Macedonia	0.4720	0.2441	0.4521	0.7198

According to the Table 2 the biggest e-Governance development index has Greece with 0.7118, and the Republic of Macedonia has the lowest index of 0.4720 compared with the neighboring countries. In the Table 3 we will separately analyze the three components of the EGD index and make ranking of the countries according to their values.

Table 3. Compare and Rank the countries according to the index values of the components of the EGD Index in 2014 [1].

Country	OSI	Country	TII	Country	HCI
Greece	0.6063	Greece	0.6549	Greece	0.8741
Albania	0.4488	Bulgaria	0.5941	Bulgaria	0.7796
Serbia	0.3937	Serbia	0.4681	Serbia	0.7960
Macedonia	0.2441	Macedonia	0.4521	Macedonia	0.7100
Bulgaria	0.2362	Albania	0.3548	Albania	0.7198

In the Table 3 first ranked country in all three indicators is Greece, because its index

values are higher compared with the other countries. The Republic of Serbia and the Republic of Macedonia according to the three index component are constantly ranked on the third and fourth place. The variation here is in Online Services Index (OSI) where Albania and Bulgaria has changed the places. According to the Telecommunication Infrastructure Index (TII) and Human Capital Index (HCI) Bulgaria is on second place compared with the other countries, but in OSI comes on the last fifth place. This low value of OSI maybe is the disadvantage of this country and the Government should pay attention on this area. Bulgaria should put more effort in supplying more electronic services for the citizens. The opposite situation is with Albania. Although, has lower values for TII and HCI that ranks it on the fifth place, with OSI this country comes on second place. This indicates that Albania has competitive advantage in the area of online services that Government offered to the citizens compared with the other three Balkan countries ranked behind it.

How much effort this five countries give to be ranked higher on the world level is elaborated in Table 4. There is a comparison of the EGDI index from the survey in 2010 and 2014. Given values will place the countries in the world rank.

Table 4. Comparing the EGDI and world rank of the Balkan countries in 2010 and 2014 [1], [5].

World rank, 2010	Country	EGDI, 2010	EGDI, 2014	Country	World rank, 2014
41	Greece	0.5708	0.7118	Greece	34
44	Bulgaria	0.5590	0.5421	Bulgaria	73
52	Macedonia	0.5261	0.4720	Macedonia	96
81	Serbia	0.4585	0.5472	Serbia	69
85	Albania	0.4519	0.5046	Albania	84

The data in Table 4 depicts the competitive advantages of these five countries in e-Government. Comparing the values of EGDI there is a world rank of each country in 2010 and 2014. Normally, the expectations of the countries are to improve their EGDI for the given period of time, from 2010 to 2014. But, also, there are countries that have worsened this index and with that the world rank. Greece has the best rank from all countries according to the EGDI. The Index value was improved and on world level has climbed from 41 to 34-th place. The Republic of Serbia has improved the value of the index and has made the grater moving from 81 to 69-th place with difference of 11 places. Albania has improved the index and changes the world rank for one place from 85 to 84-th place. Bulgaria is country with worst EGDI in 2014 which is different than in 2010. Because of that its world rank fell from 44-th place in 2010 to 73 place in 2014. The worsted results are in the Republic of Macedonia where the fallen value of the index results with fallen down of the world rank from 52 to 96-th, with difference of 44 places. Thus, we can say that Greece has the competitive advantages in predispositions of implementing and governance the e-Government than the other Balkan countries.

4 Predispositions of the countries for e-Government

To complete the frame of this research we will elaborate the size of the countries and the population. The biggest country is Greece with 131,957 km² and population of 10,815,197. Next is Bulgaria with 110,994 km² and 7,364,570 citizens. Third in the row is the Republic of Serbia - 77,474 km² with estimate population of 7,209,764. Albania is smaller country and has 28,748 km² and 2,821,977 citizens. The Republic of Macedonia is the smallest country from all and has 25.713 km² and population of 2,022,547.

As we point that the complexity of managing the public administration is increasing with the number of people and their needs, easy can be concluded that Greece will have the biggest problem, because it is the biggest country with the most people of all other Balkan countries. This indicates that Greece necessary must implement e-Government to enable government service to citizens in a more timely, efficient and cost effective way. The same situation is in Bulgaria and the Republic of Serbia, where the size of the country and the number of people lead to importance of e-Government implementation. But for the smallest countries as Albania and the Republic of Macedonia is also important the e-Government implementation, because of the benefits in the governance in the countries. In small countries it is very hard to find system that works according to the principles as: transparency; quick, cheap and effective; efficiency and simplicity; collaboration and standardization [4].

To enable these principles in the countries we will make analysis of the predispositions of the countries for e-Government. First and most important is the connection of the people on Internet. On this global world network, people should be connected in order to get the online public services. The Internet subscribers in percent from 2005 to 2014 for each country are presented in Fig. 1.

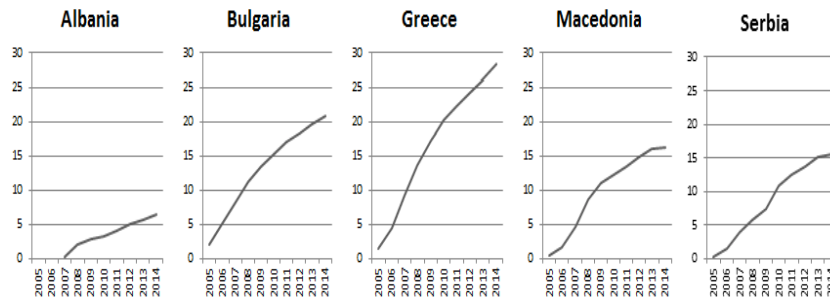


Fig. 1. Fixed broadband Internet subscribers (per 100 people) in %, from 2005 to 2014 [7].

The number of internet subscribers is increasing from year to year, during this period of 10 years. The biggest percent of internet subscribers is in Greece. In 2005 it was 1.45%, but in 2014 it is 28.36%. Next is Bulgaria with 2.15% in 2005 and 20.74% in 2014. The Republic of Macedonia has 0.60% in 2005 which increase to 16.19% in

2014. The Republic of Serbia has 0.41% in 2005 and 15.57% in 2014. The lowest percent from all countries has Albania with 0.01% in 2005 and just 6.57% in 2014, which puts it on last place in the row.

The important indicator is the number of people in the countries represented by the citizens. The citizens conditioned the number of potential Internet users and end users of e-Government services. The internet users in percent for all five countries for the period of 15 years, from 2000 to 2014 are presented in Fig. 2.

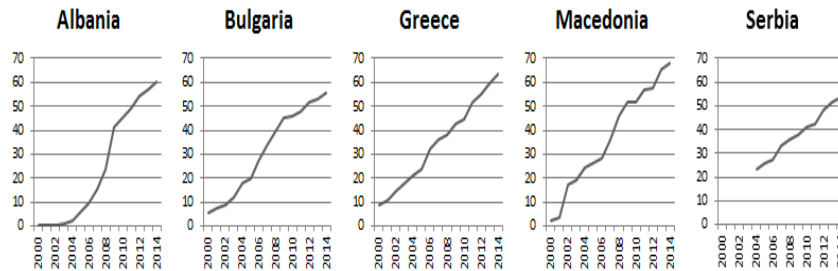


Fig. 2. Internet users (per 100 people) in %, from 2000 to 2014 [8].

The number of internet users is continuously increasing through the years, in all Balkan countries. The biggest number of internet users is in the Republic of Macedonia, where there is rapid increase in the number of internet users. In 2000 the Republic of Macedonia has 2.5% of internet users and in 2014 that percent increases to 68.1, which is the biggest difference compared with the neighbors. Also, in Albania the percent of internet users in 2000 was very small, just 0.1%, but it increased to 60.1% in 2014. In Greece this percent is constant without some drastic changes. In 2000 Greece has the biggest percent of all countries, 9.1, and in 2014 it is 63.2%. Bulgaria in 2000 has 5.4% of internet users and in 2014, 55.5%. The Republic of Serbia has started with 23.5% in 2004, and in 2014 has the lowest percent from all countries, 53.5. These data allowed us to say that people are willing to use ICT and Internet according to their literacy, knowledge and skills.

5 Competitive advantages in e-participation

Analyzing the people is important because of the dependency of the people with the e-participation index. The area of online services that opens up channels for online participation in public affairs is termed 'e-participation'. The e-participation index is indicative on how governments create an environment in which citizens can be more active and supportive of their governments. The e-participation index (EPI) is derived by focusing on the use of online services to facilitate provision of information by governments to citizens ("e-information sharing"), interaction with stakeholders ("e-consultation") and engagement in decision-making processes ("e-decision making")

[1], [5].

Table 5 presents the e-participation index of the Balkan countries for survey in 2014.

Table 5. E-Participation Index (EPI) of five Balkan countries in 2014 [1].

World rank	Country	EPI
17	Greece	0.8039
59	Albania	0.5294
81	Serbia	0.4118
122	Bulgaria	0.2549
134	Macedonia	0.2157

E-Participation index has maximum value of 1, but the Balkan countries are below that value. There are analyzed 192 countries in the world where Greece was ranked on the 17-th place with higher value of EPI than the other Balkan countries. On 59-th place was Albania and the Republic of Serbia on 81-st. Bulgaria has 122-nd world rank and last is the Republic of Macedonia on 134-th place in the world. Greece e-participation index is 0.8039 as higher, and the Republic of Macedonia has the lowest e-participation index of 0.2157.

The E-Government survey deals with the three levels of e-participation (e-information/e-consultation/e-decision-making). The results of that survey will enable the process of engaging citizens through ICTs in Government policy in order to make public administration that is participatory, inclusive and collaborative. For that purpose in Table 6 is compared the e-participation index values for 2010 and 2014 for all five Balkan countries. The result will present how much the countries are working to get better results for the period of five years.

Table 6. Comparing the EPI and world rank of the Balkan countries in 2010 and 2014 [1], [5].

World rank, 2010	Country	EPI, 2010	EPI, 2014	Country	World rank, 2014
39	Bulgaria	0.3000	0.2549	Bulgaria	122
48	Greece	0.2571	0.8039	Greece	17
55	Macedonia	0.2143	0.2157	Macedonia	134
86	Albania	0.1286	0.5294	Albania	59
135	Serbia	0.0429	0.4118	Serbia	81

According to the Table 6 in 2010 the highest EPI has Bulgaria, 0.3000 which placed it on 39-th place in the world, but in 2014 the value of EPI has decreased to 0.2549 and put it on the 122 place. This is country with the most negative development from all Balkan countries, because of the downward world rank of 83 places. Similar situation is with the Republic of Macedonia. The EPI for 2010 was 0.2143 and for 2014 is 0.2157. There is no decreasing, but the increasing is very small. The negative consequences here are analyzed through the downward world ranking from 55-th place in 2010 to 134 place in 2014 with negative of 79 places. This situation happens

because of the competitive advantages of the other countries. More precisely, every country wants to progress on world level. Because of the biggest progressing of the other Balkan countries in our case the Republic of Macedonia looks like it has negative. The competitive advantages of the other Balkan countries seem as a regressing sign for the Republic of Macedonia. The Republic of Serbia has lowest EPI in 2010, 0.0429 and a big progress to the 2014 for EPI value of 0.4118. As last country from all Balkan countries the Republic of Serbia in 2010 was on 135-th place, in 2014 was climbed on 81-st place with progressing of 54-th place on world level. Albania has increasing the standings from 86-th place in 2010 to 59 place in 2014 with positive difference of 27-th places. Its EPI value in 2010 was 0.1286 and in 2014 has increased to 0.5294. This county seems that has worked harder to achieve these results. The biggest increasing in the EPI value is for Greece. Its value in 2010 was 0.2571 and in 2014 it drastically increased to 0.8039, which gives this country more competitive advantage and increase of the world ranking for 31-st place, from 48-th place in 2010 to 17-th place in 2014.

This assessment of e-participation in e-Government is important because of the different perspectives of measurement: administrative, social and technical. The administrative side may be represented by organizational frameworks and channels. The social dimension should consider e-participation levels such as e-information, e-consultation and e-decision-making. The technical perspective of e-participation considers specific citizen engagement technologies present in the field of open data, social media, wireless and mobile communications and dedicated web sites [1].

6 Conclusion

The appearance of Information Communication Technology (ICT) and the Internet led to huge changes in working process of peoples and business. Every country has taken significant actions to develop the concept of e-Government, as strategies and action plans. Countries in transitions and developing countries have problem with transparency and corruption. Implementation of this system is possible way of solving of these problems. E-Government application means using unified rules in the system in every country that contributes to significant development in the countries and the world economy. The benefits of e-Government leads to standardization, simplicity, time savings and effectiveness, cost reduction and efficiency. In this context, it is more than necessary to analyze the e-readiness in the country, that present the e-Government development index. The components that comprise in this index are: online services, telecommunication infrastructure and human capital. To be ensured these components, countries need to invest in new sophisticated technology and peoples IT knowledge. The Internet connection and its users are important for providing e-Government services. The reflection of this system is seen in the simplification of the e-Governance. E-participation index is a relevant indicator that measure and consider perspectives in the area of e-information, e-consultation and e-decision-making.

The presented information in this paper confirms the conclusion that not all five Balkan countries elaborated here have the same rate of using e-Government. The most competitive advantage in this area has Greece, followed by Albania, the Republic of Serbia, Bulgaria and the Republic of Macedonia. The reasons for that are in the possibilities for adaptation and reaction on the pressure of the world trend of implementation of e-Government. Compared with the same indexes in 2010, it can be noticed that according to that improvement the ratio of the coefficient is higher in Albania than in other Balkan counties. That proves that the dedication and effort for implementation of e-Government is different from country to country. However, although there are differences in the speed of implementation of this electronic system the most important is that all Balkan countries underpin this process and work in aim to implement e-Government and get the benefits of e-Governance.

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