E-GOVERNMENT IN CROATIA – CITIZEN ADOPTION AND USAGE

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Abstract- Digital technologies development and application change every area of human living and activities. Intensive usage of ICT technology becomes key factor that strongly influence and change different business sectors, and develop new relationships on the market and among the business partners, and new business models as well. Business organization must adapt to the changing customer expectations and wishes, and on the other side carefully track technology and ICT development trends. The company ICT, organizational and production infrastructure must be properly planned and organized to enable necessary fast adaptation to customer, market and technology changes. The ICT development changes is not limited on single organization, it crosses organization borders and changes every aspect of communication between partners, clients and government institutions and administrative organizations as well. The aim of this paper to analyse E-government usage and acceptance in Croatia. The results of research shows the satisfaction with offered e-government services are still rather low, since only 36 percent of 3268 respondents were satisfied with the way in which the competent authority solved user request by e-government service. Even 21 percent of respondents concluded that their administrative request is impossible to solve over Internet. EU Digital Economy and Society Index Report 2018 Digital Public Services (DESI) shows that Croatia is slowly developing e-government infrastructure and the present level of e-government services are one of the worst in EU countries. Internet and fixed telephony services in Croatia are evaluated in DESI report as one of the worst and most expensive among all other EU countries. Since the average salary in Croatia is among the lowest among EU countries this situation requires adequate government attention. Thus improving e-government adoption and citizen satisfaction is not simple and requires constant monitoring and analysis.

Index Terms- e- government adoption, Croatia, Internet, public services

I. INTRODUCTION

Simple repetitive, large, time-consuming business and administrative processes was ideal tasks for first ICT solutions. Positive effects of ICT applications in this processes spreads fast thru all levels of organizations and crosses over companies borders, causes rapid and deep changes in whole society. Very soon ICT become one of the key factors that cause deep and dynamic changes in government institutions as well. But fast ICT technology development, just to mention some of them like Internet, Web 2.0, mobile computers, smart phones, Internet of things and social networks causes even larger changes. Internet as bidirectional communication channel enables users to express and share interests, opinions, attitudes, impressions, emotions and to participate not only as individuals but as groups in all forms of communication. In the same time internet enables simple device integration, exchanges of data between different participants and developing completely new application and services based on digitalization and standardization, enabling development of new business and social models namely e-business, e-cities, e-government.

E-government is related to development and usage of Internet based application-enabling user's communication and performing administrative tasks or tasks related to the government operations. Number of different activities can be performed but usually it can fit into several mostly used categories namely administrative services, information related to government sources or procedure, and conditions of different participants. [14]

E-government goal is to enable digital communication and dialog between different stakeholders. This is not only citizens, but different business and local government organizations as well. The goal of these efforts is oriented not only towards simple information delivery to the parties involved in communication procedures, but involving parties in e-participation. Development of internet as standard communication platform enables development vast of different possibilities and business applications models. Using the new business models that enable fast simple and productive communication in business soon find the way to be applied in government processes and structures. As of 2014, all UN Member States had national e-government websites, up from only 98 percent two years prior [9]. Publication of information such as regulatory services becomes usually e-government activity. Beside information delivery, e-government enables posing questions to the administrative bodies, or solve different problems. More complicated are filing different forms like tax returns, personal document request or grants. Internet is used as widely accepted interface, which are familiar and well-known media for developing not only communication but also participation of citizen and online involvement. The internet as democratic media available to wide public enables that on-line content can be distributed and

accessible to different groups requiring just basic technology skill. Development of different interfaces enables wide ability of communication possibilities, and this development enables different vulnerable, handicapped, young, old, refugees groups, individuals with limited capability and possibility to communicate.

E-participation leaders in 2014 were the Netherlands, the Republic of Korea and Uruguay. In 2016, the United Kingdom ranked first in the global E-Government Development Index (EGDI) ranking with a near perfect score of 0.92 [1]. In December 2014,

Americans that uses internet increased to 74 percent in December 2014, and they mostly visited government web site with weather information, transportation and data related with crime. The focal point of interest among government portal users were also open government data, education, and health. According to 56 percent of U.S. adults, government data sharing will allow journalists to cover government activities more thoroughly but only five percent believe OGD sharing to be effective on a federal level. As of the fourth quarter of 2016, e-government sites in the United States scored a customer satisfaction rating of 75.3 index points on a scale of 0 to 100 points. The highest-rated U.S. e-government websites included Medicare Prescription Plan Costs and SSA Retirement Estimator [1].

All UN member states have e-government web pages by the year 2014 [8] they are seeking to promote interaction and involvement between government and government stakeholders by improving different sub-strategies. In this sense, they are adopting and applying several instruments (e.g. e-democracy) and use available ICT tools, eg. internet and media [15].

II. E-GOVERNMENT ADOPTION

The number of different definitions exists for the adoption of e-government. Simply it is intention or "willingness" of different parties including citizens to involve in communication to e-Government to ask for services from the government. E-government adoption factors is not only technology related but consider usage of e-government services, such as compatibility, usefulness, trustworthiness, perceived risk, Internet safety, relative advantage, ease of and citizen's trust. E-government adoption study support IT practitioners in the public field. It should improve management and use of information technologies that serves to improve decision-making and revitalize adoption of e-government [15].

E-Government adoption is a multi-dimensional construct, and covers services of E-Government (website, application), and stakeholders (citizens, businesses) [13]. E-Government should by different services increase users trust, and to decrease consideration about losing any business or private data. Governments need to measure citizen usage of the website and citizens satisfaction with existing e-services, because this can be good base for improving existing e-services and increase recurrent usage.

III. E-GOVERNMENT SERVICES IN CROATIA

"Digital Economy and Society Index (DESI) is a composite index that summarises relevant indicators on Europe's digital performance and tracks the progress of EU Member States in digital competitiveness" [3]. Croatia is according to latest data among the least developed EU countries (Figure 1. Digital Economy and Society Index (DESI)).

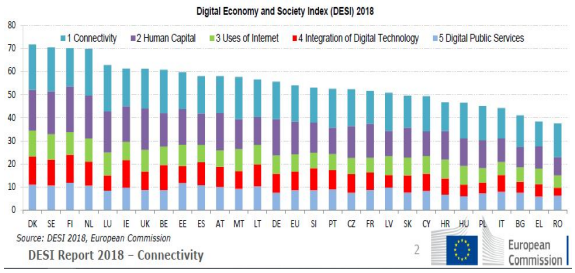


Figure 1. Digital Economy and Society Index (DESI), [3]

The most developed digital economies in the EU are Denmark, Sweden, Finland and the Netherlands. They are followed by Luxembourg, Estonia, the UK and Ireland. Croatia, Hungary, Romania, Greece, Bulgaria and Italy have the lowest scores on the index.

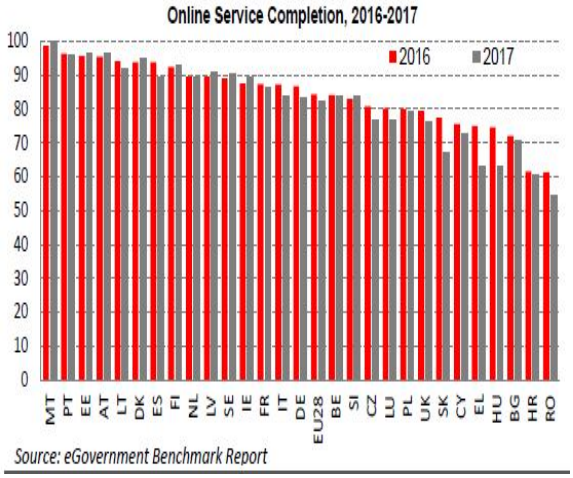


Figure 2. Digital on-line service completion, Digital Economy and Society Index (DESI) [4]

The provision of government services online is progressing, especially in Member States that are lagging behind. Online service completion refers to the share of administrative steps related to major life events (birth of a child, new residence, etc.) that can be done online [4]. The countries that perform the best are Malta, Portugal, Estonia, Austria, Lithuania, Denmark, Spain and Finland with over 90 points (out of 100). However, Romania, Croatia, Bulgaria and Hungary have low scores [4].

Croatia is far below EU average but it is important to notice that this indicator is declining in 2017. The use of inter-connected registers so users can avoid having

to re-submit data is not yet widespread [4]. Pre-filled forms are available, but in the majority of Member States, the amount of data available in public services' online forms is not satisfactory and Croatia did not show any progress during last 2 years (Figure 3.)

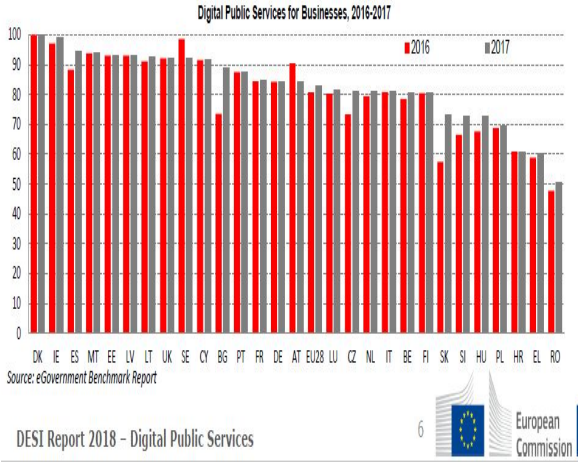


Figure 3. Digital public services for businesses, Digital Economy and Society Index (DESI) [5],

Many e-services are currently available in Croatia, and the latest offered service dating from 31. January 2018 is e-new-born that enables parents to register new-born babies as the currently most complicate implementation of e-government solution integrating systems of Ministry of Public Administration, Ministry of Interior, and Croatian Health Insurance Found [11].

All the services offered in Croatia can be divided into "different sections: Legal state and security (8), Family and living (2), Education and training (3), Traffic and vehicles (2), Free time (1), Finance and taxes (3), Health (5), Labour (7), Business (4), Housing and environment (2)"[4].

E-government in Croatia offers numerous of services thru several portals, Central Salary System, eCitizen, State administration portal and HITRO.HR portal.

'HITRO.HR' is Government portal with the goal to facilitate communication with citizens, businesses and Government administration. It serves as a one-stop shop and enables citizens and businesses to quick and simple access all needed information, data and services on just one location. The idea is to improve service levels by increasing the speed, efficiency, flexibility and increasing transparency of public administration. With smart cards and digital signatures, citizens have access to the following services:

- 'How to start a limited liability company'; 'How to start a craft business': entrepreneurs are able to carry out online the process of business creation.
- 'eREGOS' (Central Registry of Insured Persons): registered users are able to submit electronically the R-Sm form (the insured person's specification based on calculated and paid compulsory contributions for pension fund insurance).
- 'eTax': taxpayers (legal and natural entities) are able to submit electronically tax returns and forms.
- 'eVAT': citizens are able to perform VAT (value-added tax) payments online.
- 'ePension': employers and taxpayers (legal and natural entities) are able to register online for pension insurance [6].

IV. E-GOVERNMENT SERVICES IN CROATIA – CITIZEN ACCEPTANCE RESEARCH

At the end of 2014 and the beginning of 2015, survey on citizens' satisfaction with electronic services and information in public were performed. The intention of the survey was to analyse e-services that citizens wish to have online, and how they perceive e-government in Croatia and to identify behaviour and needs related to solving administrative issues online [10]. The sample included 5100 Croatian citizens, and results relates only to the 3268 respondents who answered on all the questions, and 64 of them were male and 36 percent female (Table 1).

The largest number of the respondents were between 25-34 old 33.8 percent and 35 - 44 old 27.3 percent, and 52.3 percent has high education degree, while 10.3 percent has postgraduate degree. Almost 63 percent of respondents evaluate own information technology skill as advanced and they belonged in 25-34 age group. Respondents mostly searched e-government services for information related to health services (10.4 percent) and personal documents (12.4 percent).

Table 1. Structure of respondents according to age [10]

Age	Female		Male		Total	
	Number	%	Number	%	Number	%
<18	2	22,2 %	7	77,8 %	9	0,3%
18-24	113	35,9 %	202	64,1 %	315	9,6%
25-34	417	37,7 %	688	62,3 %	1105	33,8 %
35-44	306	34,3 %	585	65,7 %	891	27,3 %
45-54	188	35,9 %	335	64,1 %	523	16,0 %
55-64	126	37,1 %	214	62,9 %	340	10,4 %
65-74	13	17,1 %	63	82,9 %	76	2,3%
>75	2	22,2 %	7	77,8 %	9	0,3%
total	1167	35,7 %	2101	64,3 %	3268	100,0 %

They consider that most important public services and information that should be available online include finances, taxes, and health.

Experiences of respondents in interaction with public administration is modest since only 36 percent of respondents declared that their request was

completely solved by public authority, while 21 percent find that their request is impossible to solve over e-government service, 7 percent did not get any response on their request. For 10.6 percent the procedure and instruction was too complicate and not clearly understandable, and 10.3 percent of respondent was not satisfied with the length of procedure. The majority of respondents (86.7 percent) will use e-public services in future[10].

As the perceived limitations in using e-services the majority of respondents stress small number of available services 24.9 percent, that after all, they still have to go to the competent office 19.6 percent, lack of service they are interested in 18,7 percent, lack of information 10.2 percent and uncertainty if their case will be solved successfully 10 percent [10].

CONCLUSION

Technology development especially ICT segment forces enormous and deep changes in our environment and living habits. Mobile technology and smartphones enabled development of number of services and pressure development of E-government services as well. Technology infrastructure of modern society and contemporary government require development of new level of operations and efficiency of public administration. Time consuming procedures and tedious long time waiting for simple administrative tasks becomes generally unacceptable not only for citizens but for business as well. User's information technology skill and their experiences in IT technology usage are developing constantly and business and user's expectations of e-government and public services grow. The ICT public infrastructure becomes one of the most important determinant not only for smart city development but for smart and intelligent society as well. The lack of public and e-government services can significantly influence competitiveness of a city, region and state and decline their development perspective. Croatia is still mostly behind main e-government development processes. The limited availability of fast internet connections, and very high price of this connection in comparison with other EU countries and with average citizen salary, limits user's possibility to use e-government and public services. It is questionable is there any use to develop services which usage citizens cannot afford. Just to mention that the largest part of Croatian GDP comes from tourism, and present tourist expect good quality of ICT infrastructure on destination that enables usage of mobile and other services which becomes guests everyday necessity and habit.

The Croatian Government strategy deals with some important issues related with e-government. Electronic identity card (eID) with an identity certificate, which is also a credential of the highest level, the Ministry of the Interior enabled access to all electronic services [7].

The result of this research should direct future e-government efforts and development to develop not only future services but to integrate existing one, to establish better information flow between users, and to promote existent services thru different media and to promote their usage offering lower prices for their usage in comparison with usual one. E-government acceptance and usage poses lot of questions, there is lot of obstacles, and opportunities, which influence on public and e-government service acceptance. We hopped that this paper pointed on some of them on Croatian example and this can be useful example for other countries as well.

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