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QUALITY EVALUATION OF E-GOVERNMENT SERVICES – THE CASE OF ALBANIA

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Abstract

Albania has passed a period of three decades in the shift from a centralized to a market economy. In this context, the public sector is confronted by structural changes at the institutional level and the extension and improvement of public services.

Electronic services' quality is a critical issue for the failure or success of e-government objectives. It promotes government efficiency and effectiveness, citizen engagement, and satisfaction. The trend to use electronic services in Albania is similarly driven by efforts to reduce public sector corruption, improve service performance, and reduce costs. The goal of this paper is to evaluate the citizen's perception of the importance and the quality of e-services provision by the e-Albania gateway, as well as obstacles and challenges of the future. Based on the main types of services provided by the e-Albania platform, twelve indicators were considered. The survey took place in Albania (Tirana region), wherein 190 questionnaires are applied. The main reason for this selection is that Tirana is the largest region of the country, with about 50% of the population concentration and the highest number of users of the government electronic platform. The variables used are qualitative variables and were measured according to the Likert scale (1–5 estimation, from 1–strongly disagree to 5–strongly agree). Each of the main variables is explained and measured through the evaluation of three to five explanatory questions. Through the SPSS program, cluster analysis was used to evaluate the main variables.

By analyzing the collected data, it turns out that there is an obvious increase in the number of public services offered, as well as the perception of citizens for the e-services provided by the government platform.

Keywords: e-government, ICT, public services, quality, performance.

1. Introduction

Many developing countries have implemented significant reforms in their economic infrastructure sectors over the past two decades with the aim of improving public sector service delivery.

The use of technology is a major challenge for any government, requiring new ways of organizing service delivery to citizens. Developments in technology, especially Information and Communication Technology (ICT), have impacted both the private and public sectors.

There is a constant doctrinal debate for improving the efficiency and reducing the cost of public services, and e-government is seen as one of the main ways to achieve the governments' goals in this regard. Internet-based technologies not only modify the usual functions of public agencies, but also introduce changes to the relations between government agencies and citizens. By measuring citizens' satisfaction, a government can improve its services, and this will lead to multiple positive effects in terms of governance (Skordoulis, Alasonas and Pekka Economou, 2017, p. 2).

Citizens' perception of public services provision determines the success of governments in accomplishing broader social and political goals, such as trust in government, social inclusion, community well-being, and sustainability. Through its e-services component, e-government is expected to improve public services and, in turn, improve the administration and the well-being of society (Twizeyimana and Andersson, 2019, p. 173).

E-government platforms are designed to provide services and share information to citizens. By providing e-services and sharing information resources, the public service centers can improve government efficiency, reduce administrative costs, and improve public service quality. Electronic government involves the use of information and communication technology (ICT) to provide quality services to citizens by government institutions.

According to Fang (2002, p. 3), e-government is transforming organizations by breaking down organizational boundaries and providing greater access to information, increasing the transparency of public agencies and citizen participation in government, enhancing communications and facilitating democratic processes.

The e-government is now becoming an important part of public sector activities and services in Albania. In parallel with market and technological developments, since the 2000s, the Albanian government has faced the challenges of change related to the provision of public services to its citizens. The process challenged the move from the Weberian bureaucratic 'office' concept to an entirely new way of delivering services.

E-Albania is the only government platform and represents the primary method for citizens, corporations, and public administration personnel to access online public services. The number of services offered through the e-Albania platform, for the year 2020, is 1,021 and the number of users is 758,735 (NISA, 2022).

According to Nurdin, Stockdale and Scheepers (2011, p. 17), e-government as a component of ICT has three main contributions: (1) e-government related to improving the functioning of political power and administrative processes; (2) e-citizens and e-services

based on the relationship among citizens and business activities; (3) expanded concepts including e-society, national participation and citizenship.

E-government is regarded as a potent instrument for government efficiency to lower costs, boost accountability, raise the standard of providing public services, and raise citizen happiness. For that, attention is given to citizen satisfaction with self-services of e-government.

The success of public organizations depends on the relationship between the organization and its customers since customer satisfaction is the main factor for the organization's success (Karsh and Hussein, 2021, p. 12).

The success of the public sector in this area is determined by the analysis of measurements that evaluate how citizens perceive getting public services. The implementation of public electronic services can be perceived as an instance of organizational change through the use of information and communication technology (Lindgren and Jansson, 2013, p. 164).

The objectives of this paper are:

- to analyze the importance of electronic services provided by e-Albania platform;
- to evaluate the quality of e-services from citizens' perception; and
- to identify main obstacles and challenges in the future.

2. Literature review

The transition to e-government poses continuous challenges in employing increasingly sophisticated web platforms as the gateway to government units, their information and services (Ziemba, Papaj and Descours, 2014, p. 1).

Citizens as users can provide useful information about the quality and adequacy of services and issues with service providers. Developing an online platform plays an important role in achieving customer satisfaction and helps in getting prompt service. An e-government portal facilitates the delivery of efficient e-services and helps citizens and businesses to successfully interact with public institutions. This is also important for evaluating the quality of electronic services.

The e-government service level is the extent to which an e-government platform enhances efficient e-service delivery and assists citizens, businesses and the general public in conducting transactions with the government. The citizens' level of trust in the institution increases when they are informed about the actions and the processes of the government (Alzahrani, Al-Karaghouli and Weerakkody, 2017, p. 173).

Except for the satisfaction dimensions' improvement, new and innovative e-government services need to be developed in order to meet citizens' needs. The full online availability of e-government services seems to be crucial as they positively influence citizens' satisfaction.

Numerous studies point out that e-government transforms the relationship between citizens, businesses and government agencies with the aim of improving the provision of public services, increasing efficiency, accountability and transparency towards citizens.

In response to increasing consumer power many public organizations have sought to move to a more customer centric way of working where the structure, people and processes of the organization are focused on meeting needs and developing long term customer relationships (Gilbert, Balestrini and Littleboy, 2004, p. 286).

E-government is the focal point of information systems-supported reforms to digitize the services and the process of governance across all levels. E-government services in different countries have different levels of service, referring to the habits of using the internet and the expectations of citizens (Ozturan and Surucu, 2019, p. 148).

Citizens' satisfaction is acknowledged as one of the most significant influences for the adoption and implementation of e-government (Weerakkody *et al*., 2016, p. 331). Citizen e-service delivery is an ongoing process that requires measurement techniques to evaluate government performance. Nevertheless, the true benefits of using technology to deliver e-services depend on the direct use of technology, as well as on its application to facilitate governmental innovation.

E-government is a tool which requires rethinking existing processes and changing organizational behavior so as to deliver public services more efficiently (Michael *et al*., 2018, p. 2).

E-government systems influence interested stakeholders such as citizens, businesses, and intermediary parties such as public servants, policy-makers, etc. Among these stakeholders, citizens are the main actors of the services provided by the government. Therefore, their satisfaction plays a critical role in e-government success (Osman *et al*., 2014, p. 243).

The level of citizen interaction has the potential to improve the efficiency of e-government, thereby providing citizens with higher levels of service. The attitudes towards electronic services are significant for all public institutions that serve governments on the larger communication platforms that can impact the perceptions of the wider public.

Using the internet, the governments are able to offer more convenient and faster access to their services and information. Governments attempt to increase effectiveness and efficiency by introducing e-government satisfaction (Alanezi, Kamil and Basri, 2010, p. 1).

E-government enables greater availability of information, greater ability to query and access data, easier interactions between government and citizens. It should be emphasized that the e-government is used to mediate and unite the administrative, social and economic components, to understand the obstacles and opportunities it offers, as well as to promote the participation of citizens in the decision-making processes.

Alzahrani, Al-Karaghouli and Weerakkody (2017, p. 172) distinguished four aspects of public trust in e-government: 'technical factors (systems, services, information quality), institutional factors (agency reputation and past experience), risk factors (performance risks, security, privacy), personal factors (trust, internet experience, education). These factors influence citizens to believe in e-government'.

The use of ICT has not only increased the efficiency and effectiveness of internal work processes, but has also been a means of handling interactions with external users. Implementation of public e-services has an impact on the public sector's work efficiency and is consistent with the principles of public sector administration (Naujikienė and Dzemydienė, 2012, p. 337).

By implementing electronic services and sharing information resources, public service centers improve government efficiency, reduce administrative costs, and improve the quality of public services. ICT can improve the ability of public administration to deliver efficient and effective services fulfilling the superior goals of impartiality, equality and fairness, along with efficient and effective organizational arrangement (Cordella and Tempini, 2015, p. 280).

The use of ICT to provide electronic services by public agencies improves the efficiency of current systems, makes communication between government, citizens and businesses easier and more convenient.

According to the United Nations' e-Government Survey (2022), the implementation of electronic government in developing countries will not only lead to the improvement of institutional capacities, in terms of providing better quality services to users, but also to the reduction of corruption by increasing transparency and accountability to citizens.

Citizen satisfaction with e-government services relates to citizens' perceptions of online services' convenience (transactions), information reliability (transparency), and electronic communication (interactivity). E-government involves the relationships between four main groups of actors: government, citizens, businesses, and employees[1].

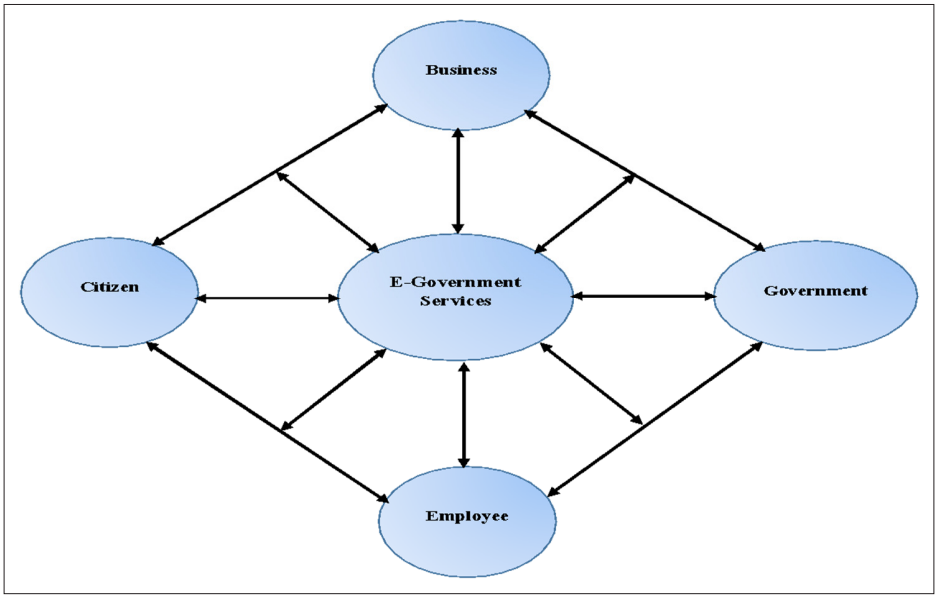

Figure 1: E-government components and interactions

Source: Authors' composition, 2022

1 Electronic transactions and interactions between government form the e-government web of relations and its four major groups of e-government: (1) Government to Citizen (G2C); (2) Government to Business (G2B); (3) Government to Government (G2G); (4) Government to Employees (G2E).

3. Materials and methods

The quality of services in the context of the study is predicted by measuring the perception of citizens in receiving services from the government platform. It is explained through 12 variables measured on a Likert scale that correspond to the categories of the main services offered. These categories are: family; social contributions and pension; health and social protection; education; work; judicial system; my business, permits and licenses; transportation and vehicles; real estate; consular and customs services. Each of the main indicators is explained and measured through the evaluation of three to five main services provided in a certain section.

Another objective of this survey is to analyze the different perceptions of different groups of respondents regarding the use of electronic services. Differences that may occur are: gender (male or female), education (college or secondary), and sector (public or private sector) in which the respondent is employed.

This study used the method of face-to-face interviews with citizens of Tirana, Albania's largest region. As this method is time consuming and costly, we randomly selected approximately 190 citizens/respondents, of whom 179 were considered valid for further analysis.

The constructed questionnaire used for this study is based on United Nations' e-Government Survey, the e-Government Benchmark by the European Commission, and the e-Albania platform by the National Information Society Agency (NISA, 2020).

We did a pre-test with academics to reduce vague questions. Additionally, to assess the clarity and comprehensibility of the variables, we conducted a questionnaire pre-test with a subset of citizens who had recently used the electronic services. The final questionnaire consists of 5 sections: section I, general information about interviewees; section II, data about the importance for use of electronic services by citizens; section III, data about the quality of e-services provided from the e-Albania platform; section IV, data for other additional e-services that are not currently offered by the e-Albania platform; and section V, data about the obstacles to the users through the e-Albania platform. The questionnaire was conducted in the Tirana region and randomly selected citizens were interviewed. This process took about two months. Respondents were asked to rate the importance and quality of electronic services based on a 5-point Likert scale.

The research questions of this study are:

- How do citizens evaluate the importance of electronic services provided through the e-Albania platform?
- What is the citizen's perception on the quality of government services?
- What are the main obstacles related to providing electronic services through the e-Albania platform?

4. Results and discussions

During the last two decades, the development of the public sector in Albania has undergone significant improvements. Furthermore, its development has improved in terms

of citizens' demands and expectations of public services. The government's e-platform e-offers have been supplemented and improved over the years[2].

The public agencies provide a variety of digital services to users. Referring to citizens' expectations, the e-Albania platform has improved and increased the number of electronic services for citizens and businesses during the last decade.

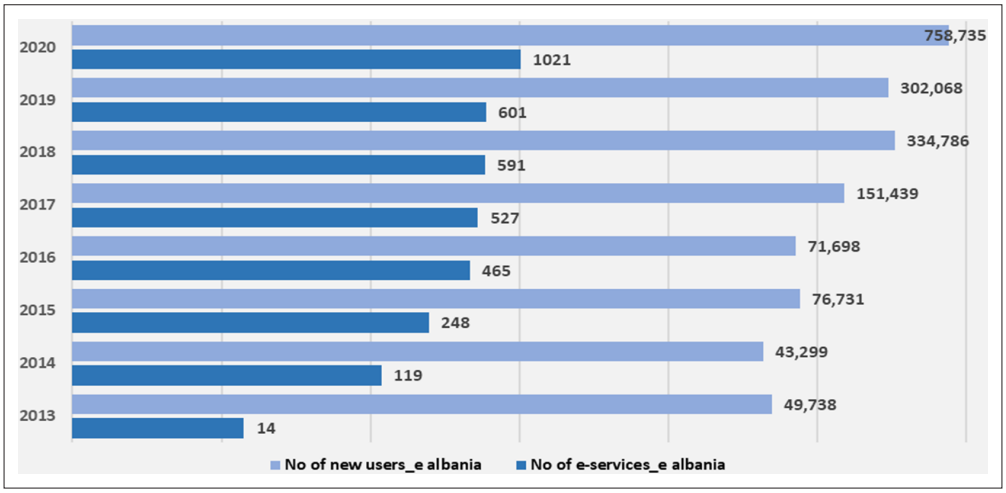

Figure 2: Users and electronic services in Albania

Source: Authors' composition based on data from NISA (2022)

Referring to the above data, the number of services offered by the e-Albania platform, for the year 2013, was 14 and the number of users 49,738, while for the year 2020, the number of services offered was 1,021 and the number of users was 758,735 (NISA, 2022).

Referring to the collected and analyzed data, below are the results obtained from the interviewees for gender structure, age, urban/rural residence, education level, and employment sector.

As shown in Table 1, 50.8% of respondents are male, and 49.2% of them are female. As for their age, the majority of respondents (53.6%) are aged 18–40, 26.8% are aged 40–50, while 19.6% of them are over 50 years old. Regarding the residential area, the majority of respondents (66.5%) live in urban areas and 33.5% in rural areas.

In terms of educational background, it is estimated that about 68.2% of the respondents have higher education (Bachelor's and Master's degrees), 22.9% are with secondary education, and 8.9% are with professional education. Regarding employment, the majority of respondents (60.3%) are employed in the public sector, 17.9% are employed in the

2 In the general context related to the e-Government Development Index data, Albania has made enough steps, from the 114th place, ranked in 2003, to 63rd place in 2022. In terms of the E-Participation Index, from the 123rd place, ranked in 2003, it escalated to 22nd place in 2022 (United Nations, 2022).

Table 1: Characteristics of respondents

No	Characteristics	Frequency	Percentage
I	**Gender**		
a	Female	91	50.8
b	Male	88	49.2
	Total	**179**	**100.0**
II	**Age**		
a	18-28	67	37.4
b	29-39	29	16.2
c	40-50	48	26.8
d	51-60	32	17.9
e	Over 60	3	1.7
	Total	**179**	**100.0**
III	**Residence**		
a	Urban area	119	66.5
b	Rural area	60	33.5
	Total	**179**	**100.0**
IV	**Education**	**0**	
a	Secondary education	41	22.9
b	Professional education	16	8.9
c	Higher education	122	68.2
	Total	**179**	**100.0**
V	**Employment**		
a	Public sector	32	17.9
b	Private sector	108	60.3
c	Unemployed	39	21.8
	Total	**179**	**100.0**

Source: Authors' results, 2022

private sector, and 21.8% are unemployed. Referring to the data, it results that 77% of the interviewees who live in the urban area and 50% who live in the rural area, have higher education. According to the employment sector, results show that 65.6% of those employed in the public sector and 61.6% of those employed in the private sector, have higher education.

Referring to the data on the level of familiarity with digital services/ online platforms, it results that the interviewees/ employees in the public sector evaluate maximally, very much, and averagely, respectively with 9%, 44%, and 41%; employees in the private sector evaluate respectively with 17%, 31%, and 47%; students evaluate respectively with 14%, 43%, and 43%; and unemployed, respectively with 6%, 47%, and 34%.

Regarding the data on the frequency of use of the e-Albania platform according to the employment sectors, it results that 63% of the interviewees/ employees in the public sector, 47% of employees in the private sector, 57% of students and 31% of unemployed are regular users of the e-Albania platform.

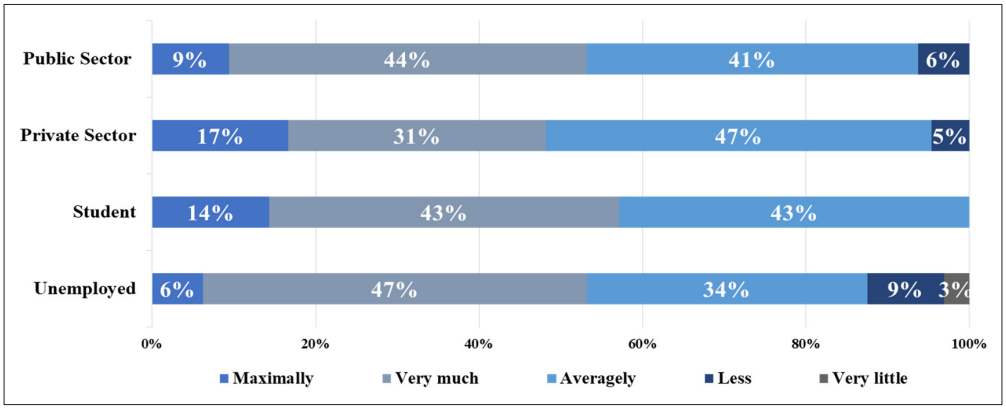

Figure 3: The level of familiarity of the respondents with digital services/ online platforms

Source: Authors' results, 2022.

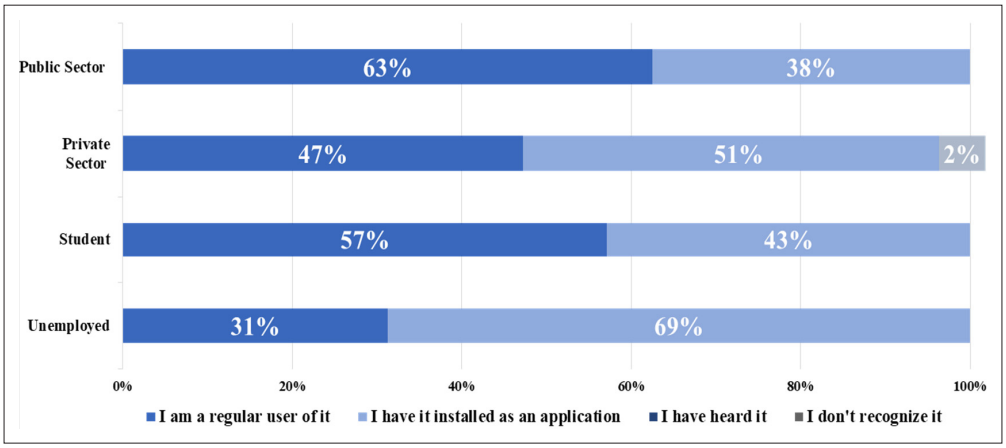

Figure 4: The use of the e-Albania platform by interviewees according to the employment sector

Source: Authors' results, 2022

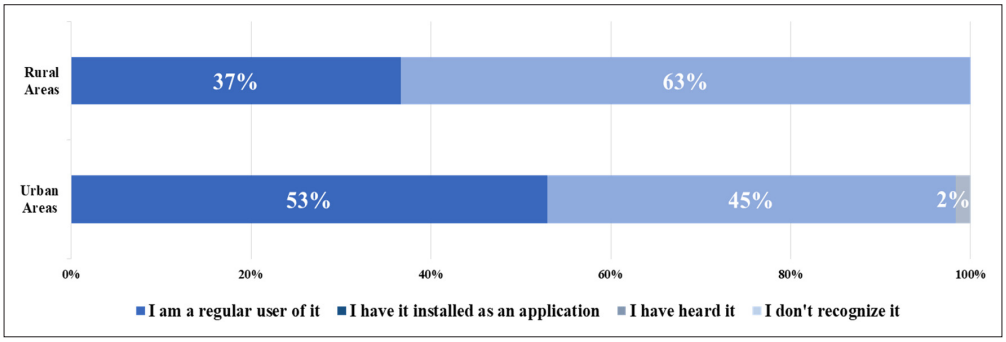

Figure 5. The frequency of use of the e-Albania platform according to the residential area

Source: Authors' results, 2022

Referring to data on the frequency of use of the e-Albania platform according to the residential area, it turns out that 37% of the interviewees in the rural area, and 53% in the urban area, are regular users of the e-Albania platform.

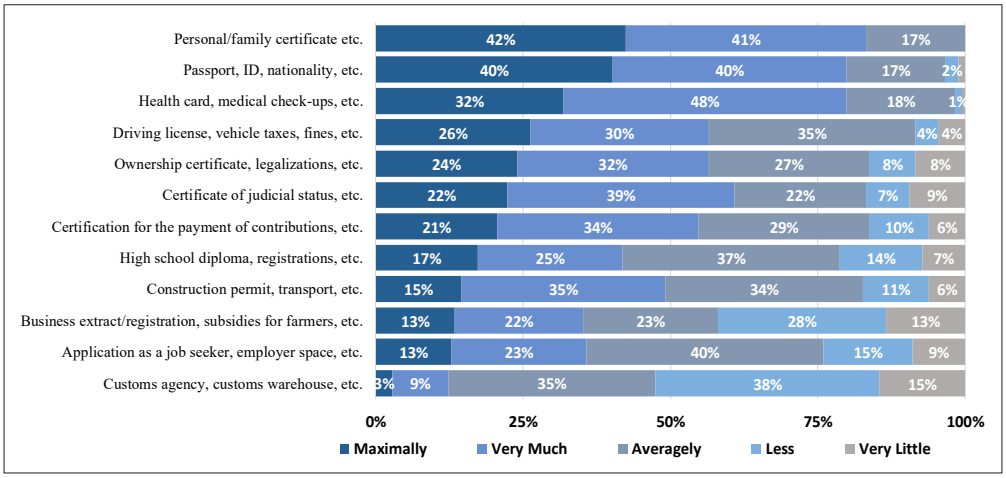

Figure 6: The importance of electronic services provided by the e-Albania platform

Source: Authors' results, 2022

Regarding the importance of the e-services offered by the e-Albania platform, it turns out that the interviewees evaluate (maximally and very important) the application for personal/family certificates respectively with 42% and 41%; application for passport and ID card respectively with 40%; health care, medical check-ups respectively with 32% and 48%; driving license, vehicle taxes, fines respectively with 26% and 30%; ownership certificate, legalizations respectively with 24% and 32%; certificate of judicial status respectively with 22% and 39%; certification for the payment of contributions respectively with 21% and 34%; high school diploma respectively with 17% and 25%; construction permit, transport respectively with 15% and 35%; business extract/registration, subsidies for farmers respectively with 13% and 22%; application as a job seeker respectively with 13% and 23%; customs agency respectively with 3% and 9%.

According to the interviewees, less and very little important services are considered business extract/registration, subsidies for farmers respectively with 28% and 13%; and customs agency respectively with 38% and 15%.

Regarding the quality of the e-services offered by the e-Albania platform, it turns out that the interviewees evaluate (very good and good): application for personal/family certificate respectively with 54% and 35%; certificate of judicial status respectively with 33% and 35%; health care, medical check-ups respectively with 30% and 43%; application for passport and ID card respectively with 24% and 50%; driving license, vehicle taxes, fines respectively with 23% and 47%; ownership certificate, legalizations respectively with 19% and 28%; certification for the payment of contributions respectively with 16 % and 39%;

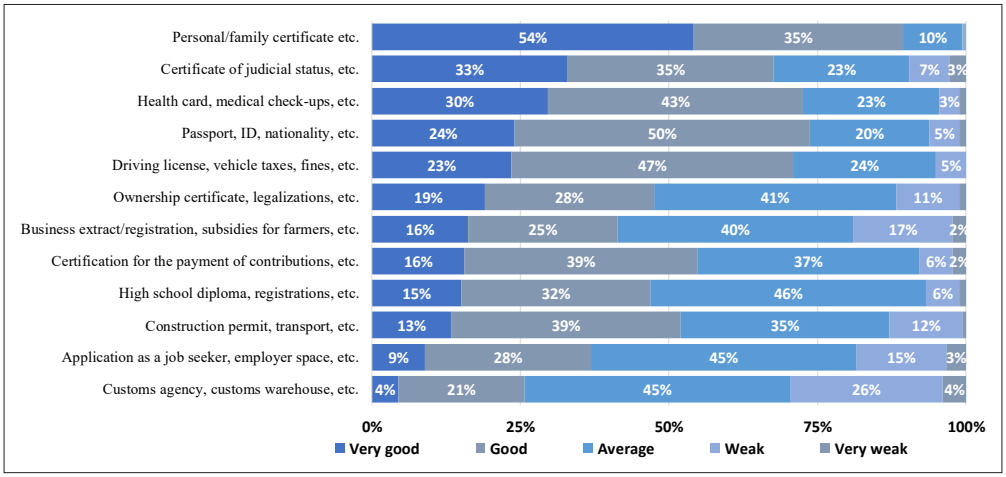

Figure 7: Assessment of the quality of electronic services provided by the e-Albania platform

Source: Authors' results, 2022

business extract/registration, subsidies for farmers respectively with 16% and 25%; high school diploma respectively with 15% and 32%; construction permit, transport respectively with 13% and 39%; application as a job seeker respectively with 9% and 28%; customs agency respectively with 4% and 21%.

The interviewees evaluate the quality of the e-services (weak and very weak): application as a job seeker respectively with 15% and 3%; customs agency respectively with 26% and 4%.

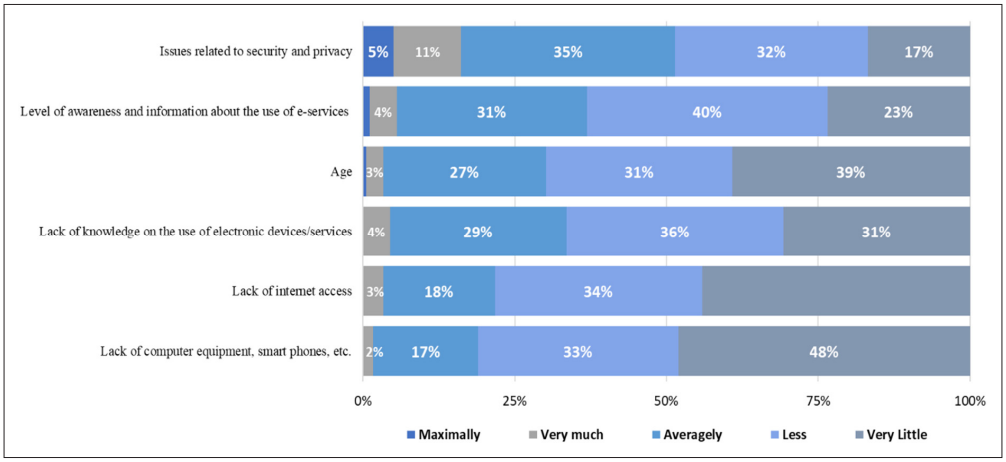

Figure 8: The main obstacles in providing e-services through the e-Albania platform

Source: Authors' results, 2022

From the analysis of data related to the main obstacles/ problems in using/ providing electronic services through the e-Albania platform, it turns out that the interviewees evaluate (maximally, very much, and averagely) issues related to security and privacy, respectively with 5%, 11%, and 35%. They evaluate (very much and averagely): the level of awareness and information about the use of e-services respectively with 4% and 31%; lack of knowledge on the use of electronic devices/services, respectively with 4% and 29%; age, respectively with 3% and 27%; lack of internet access respectively with 3% and 18%, and lack of computer equipment, smartphones, respectively with 2% and 17%.

5. Data analysis and findings

Through the data obtained we analyzed the characteristics of respondents (see Table 1), grouped by gender (male or female), age, residence (urban and rural areas), education (higher, secondary and professional), and sector where the interviewee is employed (public or private sector).

Referring to the data discussed in the previous section (see Figure 3), the interviewees evaluate over 90% the level of familiarity with digital services/ online platforms. Referring to the data related to the use of the e-Albania platform (see Figures 4 and 5), it results that 63% of the interviewees/employees in the public sector, 47% of employees in the private sector, 57% of students and 31% of unemployed are regular users of the e-Albania platform, while according to the residential area, it turns out that 37% of the interviewees in the rural area and 53% in the urban area, are regular users of the e-Albania platform.

Regarding the importance of the e-services offered by the e-Albania platform, it turns out that the interviewees evaluate (maximally and very important) services as the following: application for personal/family certificates; application for passport and ID card; health care, medical check-ups; driving license, vehicle taxes, fines; ownership certificate, legalizations; certificate of judicial status; certification for the payment of contributions; high school diploma; construction permit, transport. While from the interviewees, less and very little important services are: business extract/registration, subsidies for farmers; application as a job seeker; and customs agency.

Regarding the quality of the e-services offered by the e-Albania platform, it turns out that the interviewees evaluate (very good and good) services as below: application for personal/family certificate; certificate of judicial status; health care, medical check-ups; application for passport and ID card; driving license, vehicle taxes; ownership certificate, legalizations; certification for the payment of contributions; business extract/registration, subsidies for farmers; high school diploma respectively; construction permit, transport.

The interviewees evaluate as weak and very weak the following e-services: application as a job seeker, and customs agency.

Referring to the data analysis, for the main obstacles/ problems in using/ providing electronic services through the e-Albania platform, it turns out that the interviewees evaluate (maximally; very much; and averagely): issues related to security and privacy; level of awareness and information about the use of e-services; lack of knowledge on the use of

electronic devices/ services; age; lack of internet access; and lack of computer equipment, smartphones.

It is estimated that there is an obvious difference in the use of electronic services. Rural areas have a low use of digital services. We think that this level is determined not simply by the lack of infrastructure, but also, to a certain extent, by the level of skills and knowledge in the use of digital technologies.

The findings and results in this paper show that it is important to solve the problems facing the implementation of e-government and to understand this relationship in order to offer the best solutions in the future.

6. Conclusions

Through this study there has been analyzed the importance of services used by citizens through the e-Albania platform, the quality of electronic services provided by the electronic government platform, as well as obstacles and challenges for the future related to the use of electronic services in Albania.

Referring to the level of use according to the urban/rural residence, it results that there is an obvious difference in the use of electronic services. We think that this is mostly related to the lack of infrastructure and internet access for residents in rural areas.

Regarding the results, the most important services estimated by respondents are: service on personal/family certificates; application for passport and ID card; health care service; driving license; and ownership services.

Regarding the quality of the e-services offered by the e-Albania platform, it results that the top rated services are: services on personal/family certificate; certificate of judicial status; health care services; application for passport and ID card; driving license, vehicle taxes and fines.

Based on data analysis regarding the perception on using electronic services it results that there are issues related to security and privacy; level of awareness and information about the use of e-services; lack of internet access; and lack of digital devices.

The challenges in the future for the government and public agencies should be concentrated on increasing the quality and security in the provision of electronic services in accordance with the needs and expectations of citizens.

As for the limitations and scope for future studies, future research will focus on a more in-depth analysis, exploring by a larger number of respondents and a more diverse sample, the above indicators related to improving the digital public services delivered through the government platform e-Albania.

References:

1. Alanezi, M.A., Kamil, A. and Basri, S., 'A Proposed Instrument Dimensions for Measuring E-Government Service Quality', 2010, *International Journal of U- and E-Service, Science and Technology*, vol. 3, no. 4, pp. 1–18.

2. Alzahrani, L., Al-Karaghouli, W. and Weerakkody, V., 'Analysing the Critical Factors Influencing Trust in e-Government Adoption from Citizens' Perspective: A Systematic Review and a Conceptual Framework', 2017, *International Business Review*, vol. 26, no. 1, pp. 164–175.
3. Cordella, A. and Tempini, N., 'E-government and Organizational Change: Reappraising the Role of ICT and Bureaucracy in Public Service Delivery', 2015, *Government Information Quarterly*, vol. 32, no. 3, pp. 279–286.
4. Fang, Z., 'E-Government in Digital Era: Concept, Practice and Development', 2002, *International Journal of the Computer*, vol. 10, no. 2, pp. 1–22.
5. Gilbert, D., Balestrini, P. and Littleboy, D., 'Barriers and Benefits in the Adoption of E-Government', 2004, *International Journal of Public Sector Management*, vol. 17, no. 4, pp. 286–301.
6. Karsh, S.M.A. and Hussein, B.H., 'Analysis of Citizens' Satisfaction (Acceptance & Needs) with E-Government Public Services', 2021, *International Journal of Academic Information Systems Research*, vol. 5, no. 11, pp. 9–24.
7. Lindgren, I. and Jansson, G., 'Electronic Services in the Public Sector: A Conceptual Framework', 2013, *Government Information Quarterly*, vol. 30, no. 2, pp. 163–172.
8. Michael, P., Dimitriou, S., Glyptis, L. and Zarifis, A., 'e-Government Implementation Challenges in Developing Countries: The Project Manager's Perspective', 2018, *International Journal of Public Administration and Management Research*, vol. 4, no. 3, pp. 1–17.
9. National Information Society Agency [of Albania] (NISA), 'Annual Report', 2022.
10. Naujikienė, R. and Dzemydienė, D., 'Evaluation of Public E-Services and Information Technology Accessibility in Different Social Groups', 2012, *Social Technologies*, vol. 2, no. 2, pp. 335–348.
11. Nurdin, N., Stockdale, R. and Scheepers, H., 'Understanding Organizational Barriers Influencing Local Electronic Government Adoption and Implementation: The Electronic Government Implementation Framework', 2011, *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 6, no. 3, pp. 13–27.
12. Osman, I.H., Anouze, A.L., Irani, Z., Al Ayoubi, B., Lee, H., Balci, A., Medeni, D.C. and Weerakkody, V., 'COBRA Framework to Evaluate e-Government Services: A Citizen-centric Perspective', 2014, *Government Information Quarterly*, vol. 31, no. 2, pp. 243–256.
13. Ozturan, M. and Surucu, U., 'Citizen Satisfaction with E-Government Services: Case of Turkey', 2019, *International Journal of Research and Scientific Innovation*, vol. 6, no. 12, pp. 148–151.
14. Skordoulis, M., Alasonas, P. and Pekka Economou, V., 'E-government Services Quality and Citizens' Satisfaction: A Multi-Criteria Satisfaction Analysis of TAXISnet Information System in Greece', 2017, *International Journal of Productivity and Quality Management*, vol. 22, no. 1, pp. 82–100.
15. Twizeyimanaa, D.J. and Andersson, A., 'The Public Value of E-Government – A Literature Review', 2019, *Government Information Quarterly*, vol. 36, no. 2, pp. 167–178.
16. United Nations, 'E-Government Survey 2022. The Future of Digital Government', New York: United Nations, Department of Economic and Social Affairs, 2022.
17. Weerakkody, V., Irani, Z., Lee, H., Hindi, N. and Osman, I., 'Are UK Citizens Satisfied with E-Government Services? Identifying and Testing Antecedents of Satisfaction', 2016, *Information Systems Management*, vol. 33, no. 4, pp. 331–343.
18. Ziemba, E., Papaj, T. and Descours, D., 'Assessing the Quality of E-Government Portals – the Polish Experience', in *Proceedings of the 2014 Federated Conference on Computer Science and Information Systems*, vol. 2, 7–10 September 2014, pp. 1259–1267.