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Identifying and Prioritizing of Factors Affecting the Acceptance of Electronic Services from the Perspective of Citizens¹

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Abstract:

This study was carried out aimed to identify and prioritize the factors affecting the acceptance of electronic services from the perspective of the Iranian citizens. The present study is considered as an applieddevelopmental research in terms of purpose and qualitative and quantitative research in terms of method. Library studies, interviews, and questionnaires were used to collect data. The questionnaire had face validity and Cronbach's alpha and composite reliability were used to estimate its reliability. The statistical population related to the qualitative study, included professors in the field of e-government and active executive experts working in the Ministry of Communications and Information Technology, the Administrative and Employment Organization, and the Management and Planning Organization are 17 people who were selected using targeted snowball sampling. The statistical population related to the quantitative study, included the Iranian citizens, 384 people were selected from the infinite population according to Morgan's table and were examined according to the infinite statistical population. LISREL software, SPSS and one-sample t-test were used to analyze the data. According to the results, the factor of citizens 'efficiency, perceived usefulness, perceived ease have the greatest impact on the acceptance of electronic services from the citizens' point of view, respectively.

1. Introduction

The governing paradigms for achieving development have undergone many changes over the centuries (Maleki et al., 2021: 32) and in this

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regard, information and communication technology, as an emerging and powerful phenomenon, is considered as a new paradigm mentioned which has been described as the greatest technological revolution since the Industrial Revolution, after the industrial revolution (Taqvaei and Akbari, 2011: 20). The paradigm that e-government is one of the most important issues in the information society resulting from it (Lakzian et al., 2011: 4). E-government is defined as the use of information and communication technology to increase access and change all aspects of government services for the benefit of citizens, companies, and other stakeholders (Khan & Krishnan, 2019). E-government is becoming an important channel for communication with citizens through the provision of e-services by improving the administrative efficiency of government institutions (Sawalha & et al, 2019, Verkijika & De Wet, 2018, Ahmad & et al, 2019., MacHova & et al, 2018., Hartani & et al, 2020., Aduwo & et all, 2020).

Electronic services refer to intra and extra-organizational activities that meet the needs of the people with the support of various electronic exchanges (Motalebzadeh et al., 2019; Tabatabai Jafari et al., 2020). It should be acknowledged that it is not possible for society to enjoy the benefits of electronic services by investing and providing the necessary equipment (Shaddel and Kharazmi 2016: 86) and enjoying the benefits of electronic services requires the acceptance of these services by citizens, and will stop implementing it without the demand for electronic services (LaPorte et al, 2006: 426; Jung, 2019., Susanto & et al, 2017). The implementation, adoption, and spread of e-government is problematic in most developing countries and is still in its infancy. In a way, it can be said that the desire of citizens to accept e-government services plays an important role in the success of e-government, and it is not enough to just support the government (Carter & Belanger, 2004; Berlin, 2017).

The United Nations has examined the E-Government Development Index ¹(EGDI) in different countries with regard to the role of the coronavirus epidemic in 2020 and the results show that the Islamic Republic of Iran has risen from 86th to 89th place among 193 countries and has decreased by 3 steps compared to 2018. Flowing a little reflection on the Iranian organizations that today provide electronic services in the country; it can

¹ The EGDI is a composite indicator that consists of three indexes (Online Service Index, Telecommunication Index and Human Capital Index) that are equally weighted and cover a broad range of topics that are relevant for e-government.

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be concluded that the acceptance of electronic services faces obstacles, especially by citizens. It has not been able to attract the attention of organizations as it should and has not been able to play its key role completely (Motalebzadeh et al., 2019: 11).

It is necessary to study the combined and comprehensive aspects of technical, sociological, and organizational aspects affecting the acceptance of e-services to create a favorable future image of information technology and e-government in the country in line with the 20-year vision document and according to the ideals, aspirations and needs Society is mandatory (Venkatesh and Davis, 2000., Klopping and Mc Kinne 2004). Therefore, the factors affecting the acceptance of e-government in various personal, social, technological, and organizational fields need to be identified, and the challenges in these areas to enjoy the benefits and its acceptance by citizens should be reviewed and addressed (Kofi Mensah & Mi, 2019). Therefore, it is possible to provide the context for the successful implementation of e-government by examining and recognizing the factors affecting the acceptance of these services and paying attention to them in providing services. Therefore, the researchers of the present study sought to identify and prioritize the factors affecting the acceptance of electronic services from the perspective of citizens to provide solutions to increase the level of acceptance of electronic services. On the other hand, it is hoped that the results of the present study will be useful in enumerating the problems faced by government organizations in the field of acceptance and use of electronic services and better provision of electronic services and policymakers and public sector managers will be able to achieve a picture of the factors influencing the acceptance of e-services by citizens.

2-Theoretical foundations

1-2. Electronic government

Information and communication technologies developed in the last decade of the twentieth century, which coincided with the advent of the use of computer systems and networks. These technologies could become powerful tools in the hands of society and be used to make life easier and better in various human activities. Almost the electronic revolution could have a significant impact on all aspects of social and economic activities (Yaghoubi, 2018: 207) and e-government, as an innovative process in the public sector is considered as one of the most interesting concepts in this field (Hosseini Shoar, 2018: 61).

E-government, known as digital government or online government, involves the use of information and communication technology to optimize the performance of government organizations (Boughzala & etal, 2015). (In fact, e-government refers to the government restructured on the basis of information and communication technology, so that the public sector is citizen-friendly (Hosseini Shoar et al., 2018; Tomaszewiczz, 2015, Keeping, 2017). In e-government, Technology Information, and communication such as "The Internet" and "Web" are used as a tool to achieve better government through better political results, better services, and more, interaction with citizens (Zaki and Hassanzadeh, 2019; Meijer, 2015). In fact, governments are using social media as a new communication channel to communicate with citizens and transfer information. On the other hand, this technology is used by citizens to better access governments to convey their ideas (Drissa & et al. 201et al E-government can be defined from the perspective of two main approaches: These approaches put e-government on their agenda with different goals and pay special attention to it. For example, the purpose of the instrumental approach was to reduce costs and increase productivity in serving citizens (Arif, 2008), while the second approach considered the use of information technology to monitor the government and government oversight. On non-governmental elements. In the first approach, the government focuses on efficiency issues and often focuses on the ICT sector directly, and the provision of services by governments is considered, so e-government is specifically defined as a tool for providing services by the government to citizens.

While the second approach focuses on effectiveness and a kind of e-government, in fact, the role of information technology on the whole of systems, organizations, and social systems is considered in this approach (Ari-Veikko, 2007). However, e-government should be considered a technical-social system (Faqihi and Memarzadeh, 2014). E-government is defined as the redesign of information relationships between government management and its stakeholders in the relevant environment to create added value. This definition can include a range of more efficient service delivery and more active citizenship strategies that will reduce the gap between government and citizens (Bekkers & Zouridis, 1999). The nature of the government, as a political entity, will not change, assuming the use of information technology and the Internet or other computer networks in the administrative cycle and administrative relations between the internal

elements of the government structure as well as relationships between the structure and citizens and The social and economic institutions of the private sector, but also the circulation of information and the provision of government services and administrative affairs, will be accelerated, and governments will use information technology and cyberspace to achieve their goals in administrative structures while maintaining their political nature. Therefore, government electronification has a tool nature (Zaki and Hassanzadeh, 2019).

2-2. Electronic services

Electronic services have a short history both in theory and in the application. The concept of electronic services is not a simple combination of the words service and electronic. In fact, electronic services have a special semantic load that includes the interaction between the service provider and the customer, so services are provided through the Internet (Tabatabai et al., 2020). Electronic services mechanize and computerize current paper-based processes regarding the realization of e-government, which in turn accelerates new management practices. This system is able to create a bridge between government officials, the private sector, and citizens, and provide a suitable environment for effective and integrated control for government and organizations to make optimal use of social, political, and, economic capital in the development path. (Shahnazari et al., 2017; Guzi & etal, 2016). Electronic services include all interactions and transactions between service providers and consumers with the electronic network. E-services can have commercial content such as ebanking, e-retail, and non-commercial content such as e-government and e-health (Mou & et al. 2017). Electronic services typically cover all stages of the online transaction, ie information services, terms of services the performance of services, and after-sales service (Xu & et al, 2et al. If eservices are implemented successfully in all areas, not only will cost be improved but more efficient services will be provided (Adler-Milstein, 2017). Our country has always been focused on this goal, but at present only a part of public services is offered electronically through government portals and websites or through the private sector (government service counter). Electronic services in Iran are divided according to the general international model in which the main services of the government are defined into four categories in this model (Secretariat of the High Information Council, 2008). Figure 1 shows this division:

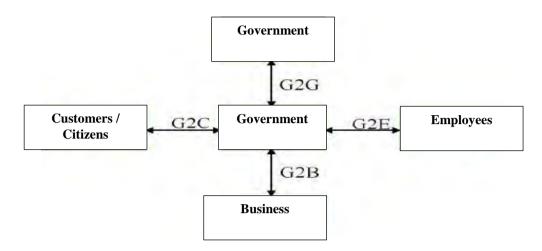


Figure 1. Types of government services by the recipient of the service

Government-to-Citizen services (G2C); It refers to the provision of appropriate information and services to individuals, including public services for driver's license renewal, payment of various bills, and so on.

Government-to-Government services (G2G); It refers to the relationship between government agencies with each other.

Government-to-Business services (G2B); It refers to the need to establish specific relationships between the business environment and the government.

Government-to-Employees services (G2B); It refers to the need for government employees to communicate with the government in the organization's internal networks, such as government employees' access to human resource information.

According to a report on e-government development, Government-to-Citizen services (G2C) have the largest share of total government e-services with 44%, and Government-to-Government services (G2G) have the lowest share of all government e-services with 23% (Administrative and Recruitment Organization (ARO),2018).

3-2. Acceptance

Researchers have paid special attention to conducting research to study issues related to technology acceptance due to the pervasiveness of electronic systems and the need to use them (Rahnavard et al., 2016).

There is a direct relationship between the effectiveness of information systems and their acceptance. On the other hand, the acceptance of these systems by users affects the amount of investment, success, and positive results. Therefore, users' resistance to change will not achieve the desired goals (Siegel, 2008; Jaberi et al., 2020).

Acceptance is considered a multidimensional phenomenon because it includes important variables such as beliefs, attitudes, characteristics of people, and their perceptions (Chang & Cheung, 2001; Taherdoost, 2018). In other words, researchers define technology acceptance as the free and voluntary action of individuals in using that particular technology. From Rogers' point of view, acceptance is a four-step process, including knowledge, orientation, decision-making, and compliance. He believes that the personality and social characteristics of individuals have a significant effect on their readiness to accept innovation.

Numerous models and theories related to the acceptance and application of information technology by users have been obtained during different studies, these designed models will help us to better identify these factors and the relationships between them (Sun & Zhang, 2006). , Tahriri et al., 2021). Some of the most important of these models are the "Theory of Reasoned Action" (Vallerand, 1992), "Theory of the spread of innovation " (1995, Rogers & et), "Theory of Planned Behavior" (Mathieson, 1991), "Technology Acceptance Model (TAM)"(Davis, 1989)," Technology Acceptance Model 2 (TAM2)"(Venkatesh & Davis, 2000)," Decomposed Theory of Programmed Behavior "(Taylor & Todd, 1995) and" Unified Theory of Acceptance and Use of Technology (UTAUT)" (2003, Venkatesh & et al).

3. Research background

According to the results presented by several studies on the factors affecting the acceptance of e-services, there are different basic indicators affecting the acceptance of e-government in different societies. Therefore, these indicators should be examined and explained by considering the indigenous characteristics of each community (Carter & Belanger, 2005). In the following, some research related to this issue in Iran and other countries is mentioned.

Samarrahi et al. (2019) have studied the role of e-service quality on the acceptance of Internet banking in Pakistan according to the Technology Acceptance Model (TAM).

According to the results, the factors have a direct impact on the user's intention to choose Internet banking. Alveda Sabani (2020) in a study entitled the study of the impact of transparency in the establishment of egovernment in Indonesia with the aim of developing and validating the Technology Acceptance Model (TAM), examined the impact of transparency on the establishment of e-government in Indonesia from citizens' perspectives. According to the results, all the factors of the mentioned model are important factors in the evaluation of citizens for e-government in Indonesia. Rovasha & et al (2020) reported in a study on the factors affecting e-banking services in Jordan that the direct impact of trust and privacy and perceived usefulness and ease on the use of e-banking.

Almaya (2020) conducted a study to investigate the factors influencing Jordanian citizens' decisions to use e-government services. According to the research results, website quality, Internet trust, government trust, expected performance, effort expectation, and facilitating conditions have a positive effect on behavioral intention to use e-government. Komlan Gabongli et al. (2019) during a study reviewed a technology-wide adoption model for predicting the acceptance and sustainability of mobile phone-based money in Togo. According to the results, perceived ease of use is the most important factor influencing consumers' intention to make money based on mobile phones, while perceived usefulness and economic acceptance decisions have less impact.

Lia & song (2019) examined the role of service quality, perceived value, and citizens' continued use of e-government in China in a study. According to the results, the intention to use is influenced by service quality, service value, and customer satisfaction. Enzan et al. (2019), in a study, examined customer acceptance of mobile marketing in Jordan. According to the results, performance expectation, effort expectation, hedonistic motivation, social impact, price value, facilitating conditions, habit, and risk have a significant impact on customers' behavioral intention to use mobile phones. Omarbehej & et al. (2019) empirically examined students' attitudes toward e-services at the School of Business Administration using the TAM model in Saudi Arabia. According to the results, there is a positive relationship between perceived ease and perceived usefulness with students' actual use of electronic services. Dong Lu & et al. (2019), in a study, examined consumer acceptance of smart product-service systems in sharing the economy in China. According to

the results, ease of understanding and its useful use are preconditions for acceptance.

Research method

This study was carried out aimed to identify and prioritize the factors affecting the acceptance of electronic services from the perspective of Iranian citizens. This research is considered applied-developmental research in terms of purpose and qualitative and quantitative in terms of method. Data were collected through library studies, interviews, and a 25item researcher-made questionnaire. The statistical population related to the qualitative study included professors in the field of e-government and executive experts active in this field in the administrative and employment organization, the Ministry of Communications and Information Technology, and the Management and Planning Organization, who were 17 people. These numbers were selected using targeted snowball sampling. The statistical population related to the quantitative study included Iranian citizens, 384 people, who were selected from the unlimited population as a sample according to Morgan's table. SPSS software, LISREL, and a one-sample t-test were used to analyze the data. In order to confirm the validity and reliability of research in the qualitative stage, it should be said that there is a significant difference between the concept of validity and reliability in qualitative research and quantitative research.

Therefore, most qualitative methodologists use the concept of transferability instead of validity and the term verifiability instead of the concept of reliability (Mohammadpour, 2019). In order to ensure research transferability, a rich description of the data and special coding and analysis methods are used. Documentation of analytical processes and reviewing data and using evidence and documentation and recording activities and steps are also considered in the direction of verification as a solution to ensure verification (Abbaszadeh, 2012; Tabatabai, Hassani, Mortazavi and Tabatabai Cheer, 2013).

Accordingly, in this study, the coding method was used to ensure transferability in the qualitative part and various stages of coding, including the initial stages, were documented and archived by the researcher for verification. Composite reliability and construct validity were used in the quantitative step.

Cronbach's alpha coefficientsQuestion numberVariables0.82233-42Efficiency of citizens0.87243-51Perceived usefulness0.82052-57Perceived Ease

Table 1- Cronbach's alpha coefficient

According to Table 1, Cronbach's alpha coefficients for all variables are greater than 0.7. Therefore, proper reliability is established.

Results

In the qualitative part of this study; research published in reputable domestic and foreign scientific databases in the period 2000-2020 was used in addition to interviews. In the present study, first, the factors were coded considering one code for each of the extracted factors, then, each of them was classified in a similar concept, considering the concept of each of these codes and thus, the research concepts were identified. A total of 3 concepts and 25 indicators were discovered and labeled for the factors affecting the acceptance of electronic services from the perspective of citizens. Table 2 shows the final extracted indicators associated with each concept.

Table2- Classification of factors affecting the acceptance of electronic services from the perspective of citizens

Indicators	Concepts	
Experience, citizen education, access to networking equipment, access to systems, education, self-efficacy, personal innovation, expected performance, facilitator conditions, revenue Comparative advantage, quality improvement, - Individual productivity, perceived risk, positive attitude, user satisfaction, external motivation, internal motivation,	Efficiency of citizens Perceived usefulness.	Citizens
hedonistic motivation	uscramess.	
Perceived comfort ,flexibility ,perceived simplicity, speed, system anxiety, perceived compatibility	perceived ease	

The research model was developed as described in Figure 2 in the qualitative stage as well.

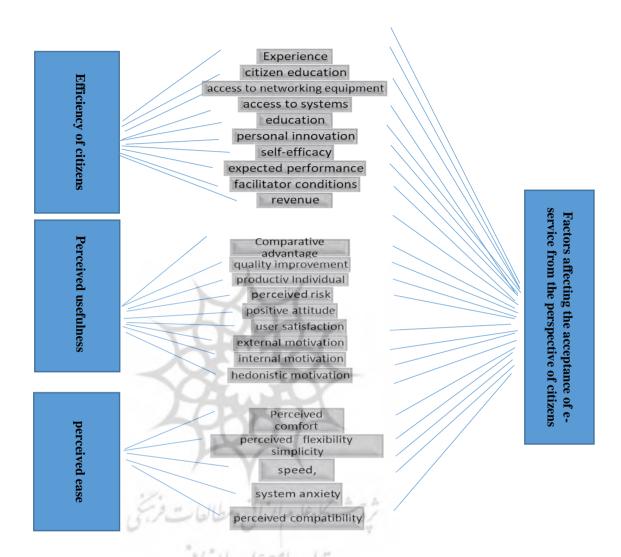
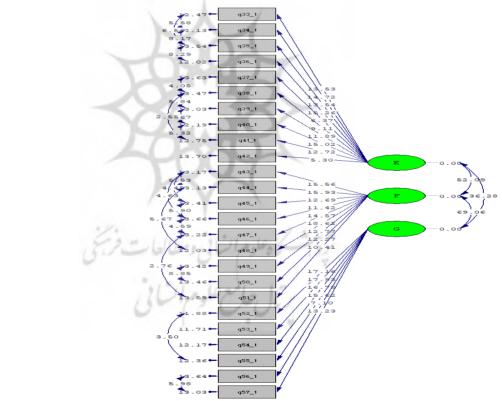


Figure 2: Factors affecting the acceptance of e-service from the perspective of citizens

In the quantitative part of this study; according to the descriptive statistics of the research, 34% of the respondents were in the age range of 25 to 34 years, 45.3% in the age range of 35 to 44 years, 16.9% in the age range of

45 to 54 years and 1.3 % were over 55 years old. 1.8% of citizens did not answer this question; by gender, 57.5% of the citizens under study were male and 40.9% were female. 1.6% of citizens did not answer this question; also, 5.7% of the citizens under study had an associate degree, 43.2% had a bachelor's degree, 41% had a master's degree and 8.1% had a doctorate. 2% of citizens did not answer this question.

Confirmatory factor analysis with the help of LISREL was used to evaluate the suitability of the model. The values of the t-statistic were examined to evaluate the significance of the factors. According to Figure 3, the significance value of all components is outside the critical range of -1.96 and +1.96, so all factor loads are statistically significant at the 95% confidence level and the first necessary condition for the components to remain in the model and establish validity and the reliability of the structure is established. Also, the value of all factor loads is greater than 0.5, so the second necessary condition is met.



Chi-Square=1617.04, df=253, P-value=0.00000, RMSEA=0.119

Figure 3. Evaluation of significance level using t-statistic

Confirmatory factor analysis using LISREL software should always be greater than 0.5; which is more than 0.5 in the following model of factor loads.

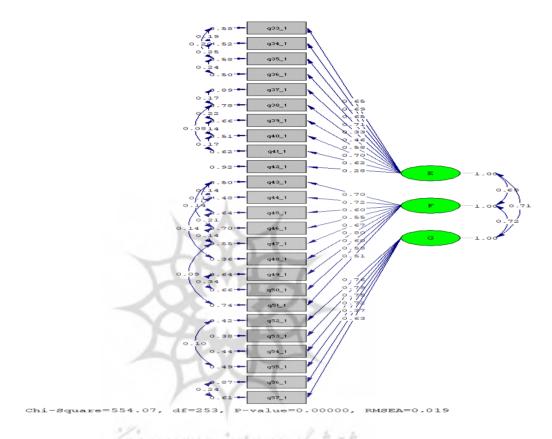


Figure 4. Confirmatory factor analysis test

According to Figure 4, the most effective components in terms of citizens' efficiency are access to systems with a factor load of 0.71, expected performance with a factor load of 0.70, education of citizens with a factor load of 0.69, performance with a factor load of 0.65, Access to the necessary equipment to connect to the network with a factor load of 0.65, facilitator conditions with a factor load of 0.62, personal innovation with a factor load of 0.58, self-efficacy with a factor load of 0.46, education with

a factor load of 0.33, income with a load Factor 00.28, respectively. The most effective components in the perceived usefulness dimension are user satisfaction with a factor load of 0.80, quality improvement with a factor load of 0.72, the comparative advantage with a factor load of 0.70, positive attitude with a factor load of 0.67, individual productivity With a factor load of 0.60, external motivation with a factor load of 0.60, internal motivation with a factor load of 0.58, perceived risk with a factor load of 0.55, hedonic motivation with a factor load of 0.51, respectively. Also, the most effective components in terms of perceived ease are flexibility with a factor load of 0.79, perceived comfort with a factor load of 0.76, the speed with a factor load of 0.73, perceived compatibility with Factor load 0.63, system work anxiety with factor load 0.37, respectively. Fit indicators should be within acceptable limits to check the suitability of the above model.

Table 3 . Measurement model fit indicators of citizens

The value obtained	allowable limit	Fit index	
2.19	Less than3	Chi square/df	
0.01	Less than 0.08	RMS	
0.77	Greater than 0.5	PDF	
0.85	Greater than 0.8	GFI	
0.88	Greater than 0.8	AGFA	
0.92	Greater than 0.9	NFI	
0.92	Greater than 0.9	NNFI	
0.93	Greater than 0.92	CFI	
0.90	Greater than 0.92	RFI	
0.93	Greater than 0.9	IF	

Source : Calculations of the present study

According to the fitting results of Table 3, the main economic and absolute indicators have observed the allowable limit. Although among the comparative indicators, the RFI index is in the allowable range, other indicators have the necessary standard that is sufficient. Therefore, it can be concluded that the model has a good fit, ie the observations in the sample correspond to what is expected in a real community. After confirmatory factor analysis, effective factors were analyzed using a one-sample t-test. According to the results of the one-sample t-test, as seen in Table 4, the significance level of all factors is equal to 0.000 and less than

0.50. Therefore, the mean statistical hypothesis of each factor with an average of 3 is rejected.

On the other hand, checking the confidence interval of 0.95 indicates that the value of the lower limit and the upper limit of each of the factors is positive. Therefore, it can be concluded that the effect of each factor on the acceptance of electronic services is more than the average of 3. Table 4 shows the prioritization of these factors based on their average. The first priority: is citizens' efficiency, the second priority: is perceived usefulness, and the third priority: is perceived ease

Table 4-one-sample t-test results of the factors affecting the acceptance of electronic services from the perspective of citizens

	Test Value = 3						
Average Interval of Different Upper	Interva	95% Confidence Interval of the Difference		Sig. (2-	df	t-value	
	Low limit	in averages tailed)					
4.207	1.160	1.153	1.207	0.000	383	44.521	Efficiency of citizens
4.156	1.214	1.097	1.156	0.000	383	38.930	Perceived usefulness.
4.105	1.166	1.0403	1.104	0.000	383	35.151	perceived ease

Source: Calculations of the present study

Discussion and conclusion

In fact, if the industrial revolution is considered the initiator of modern society and bureaucratic government, the communication revolution can be considered the initiator of information societies and the emergence of e-government, so nowadays, the development of information technology has become one of the main concerns of developing and developed countries. Providing services quickly, easily, and conveniently has attracted the attention of public sector brokers in most countries of the world in recent years. On the other hand, the use of new information and communication technologies is a good tool to achieve this goal, which will also play an important role in public sector reform. Therefore, it has led policymakers to put the relevant policy on the agenda and provide its institutional and executive context. Some of the benefits of e-government, in addition to facilitating services and increasing citizens' access to government services, are reducing the gap between government

management and citizens to improve the democratic process. In other words, it is a rational necessity and a public demand to step on the path of e-government and smart government. It is the right of the people of a society to receive government services more easily, cheaply, and collectively. Governments are now focused on creating strategies to provide more efficient and effective services by introducing e-government techniques that enable citizens to access electronic services. On the other hand, it forms a conscious community that is able to interact. It has made possible easy access to electronic services for all groups of citizens with the introduction of mobile devices. The government has also launched eservices in various fields such as education, agriculture, health, personal registration, transportation, and so on. Despite this, most people are not aware of e-services. Although people use the Internet for a variety of purposes, they rarely use it to receive e-services from government agencies. If e-government is accepted and used by citizens, it will bring many benefits to society, such as transparency and accountability.

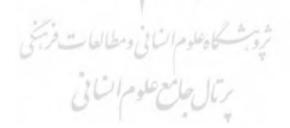
Therefore, it is crucial to understand and influence the variables that affect the acceptance of e-government services. Therefore, the present study was carried out aimed to identify the factors affecting the acceptance of electronic services by citizens to be used by managers and decision-makers as a roadmap in this field. According to the results of the research: According to the respondents, the efficiency of citizens, perceived usefulness, and perceived ease have the greatest impact on the acceptance of electronic services by citizens, respectively.

Also, according to the research findings in the indicators section, the most effective indicators in terms of citizens' efficiency are access to systems with a factor load of 0.71, expected performance with a factor load of 0.70, education of citizens with a factor load of 0.69, respectively, which the above results are consistent with the results reported by Yaghoubi et al. (2011), Rahnama et al. (2016) and Jin Hee Kim and Keith Sang Sug Lee (2020). The most effective indicators in the perceived usefulness dimension are user satisfaction with a factor load of 0.80, quality improvement with a factor load of 0.72, and comparative advantage with a factor load of 0.70, respectively which are consistent with the findings of Kakala Mutangala Jerry (2020), Yan Lia, Hoping Shang (2019). Also, the most effective components in terms of perceived ease are flexibility with a factor load of 0.79, perceived simplicity with a factor load of 0.79, perceived comfort with a factor load of 0.76, and speed with a factor load

of 0.73, respectively. The mentioned results are consistent with the research of Brothers (2015), Elahi et al. (2010), and Haghighi et al. (2014).

Solutions and suggestions

- Providing the necessary infrastructure for different segments of society, as well as the installation of Internet terminals and counters in public spaces, can increase the scope of use of e-government services.
- ❖ Another need of users is the user-friendliness of the pages of government services websites, which increases the level of acceptance of mobile government services and users' use of these services if they pay attention to it.
- ❖ Providing high capacity of Internet bandwidth, increasing the speed of the Internet and updating the telecommunication infrastructure and removing the restrictions on speed, Internet quality, quantitative and qualitative expansion of Internet service centers and communication networks, education and information on the benefits of electronic services and users' interests in using it.
- ❖ It is necessary to prepare appropriate cultural contexts to persuade and encourage citizens to use new technologies, so it is necessary to prepare cultural programs through the media and inform the benefits associated with the use of technologies.
- ❖ Implementing skill-based short-term training projects in cooperation with technical and vocational training centers and utilizing the capacity of mosques and pulpits to express the capacities of new electronic methods.



References

- 1. Azani, Mehri; Rahimi, Alireza; Kohzadi, Esfandiar; Shahriari, Esfandiar and Shahriari, Zabihullah (2013). Estimating the digital divide between the cities of Isfahan and prioritizing to reduce it, Fifth International Congress of Geographers of the Islamic World, Tabriz, Iran.
- 2. Elahi, Sha'ban; Abdi, Behnam; Danaifard, Hassan, (2011). Acceptance of e-government in Iran: Explaining the role of the individual, organizational and social variables in technology acceptance, Journal of Public Management Perspective, 1 (1): 41-67.
- 3. Pourbagheri, Mahmoud and Khatibzadeh Mahmoud (2015). Investigating the factors affecting the acceptance of electronic services other f government counter offices as a service channel in Mashhad, 29th International Conference on Electricity, Tehran, Iran.
- 4. Tahriri, Arash; Afsa, Akram (2021). Meta-analysis of factors affecting the behavior of auditors to accept information technology. Two Quarterly Journal of Value and Behavioral Accounting. 6 (11): 1-40.
- 5. Taghavi, Seyed Mehdi and Hafezian Razavi, Kazem, (2004), Interaction between the public and private sectors in e-government; Tehran: Asre-To see Danesh Cultural-Artistic Institute
- 6. Hosseini Shoar, Mansoura; Esfandiari Moghadam, Alireza; Zarei, Atefeh and Hassanzadeh, Mohammad. (2018). Investigating the factors affecting the adoption of web technology in e-government from the perspective of cities see Human Interaction and Information, 3 (4): 60-71.
- 7. Haghighi Nasab, Manijeh, Ghasemi, Samira, Turkman, Mehdi and Ghasemi, Ali, (2014), identifying the factors affecting the acceptance of egovernment services from the perspective of the studied citizens: Government service counter in Tehran.
- 8. Jaberi, Johre; Baradaran, Massoud and Yazdanpanah, Massoud (2020). Analysis of the role of cognitive factors in the tendency to use environmental and meteorological information by farmers in Dehloran (combined application of social cognition theories and technology acceptance), environmentally, 45 (1): 87-98.
- 9. Secretariat of the High Information Council (2008). Compilation of a comprehensive information technology program in Iran, report on the current situation of e-government in Iran.
- 10. Secretariat of the Information Council (environmentally government. Tehran: Golvazeh Publications.

- 11. Zaki, Yashar and Hassanzadeh, Javad (2019). Comparison of International e-Government Development Index between Geographical Regions of the World, Quarterly Journal of Government Studies, Journal of the Faculty of Law and Political Science, Fourth Year, 13 (5): 137-172.
- 12. Rezaei, Mehdi and Yaghoubi, Ismail (2016). E-Government: A New Model in Administrative System Reform and Public Service Delivery, Urban Management, 41 (2): 247-266.
- 13. Rahmani, Maliheh and Ebrahimzadeh, Issa (2019). Identifying and ranking the factors affecting the acceptance of electronic services of Mashhad Municipality from the perspective of citizens, Public Management Research, 11 (41): 265-286.
- 14. Administrative and Recruitment Organization (2018). Comprehensive Administrative System Reform Program, Second Round (97-99).
- 15. Management and Planning Organization (2005). Special subdivision document (optimization of government and e-government organizations) Tehran: Deputy of Management Development and Human Capital of the Management and Planning Organization of the country.
- 16. Shaddel, Lia and Kharazmi, Omid Ali (2015). Factors Affecting the Acceptance of Electronic Services by the Citizens of Mashhad, Geography and Urban Space Development, Year 3, 1 (4): 86-104.
- 17. Shahnazari, Ali; Farjam, Saeed and Mir Mohammad Aliroudaki, Tahmineh Sadat (2018). Presenting a Strategy Map for the Development of Electronic Services of the Social Security Organization Using Scenario Planning, Management of Government Organizations, 1 (6): 101-114.
- 18. Tabatabai Jafari, Seyedeh Faezeh; Yazdani, Nasser and Ghazizadeh, Mostafa (2020). Investigating the Impact of Electronic Services Quality Dimensions on Bank Competitiveness (Case Study: New Economy Banks, Pasargad, Tejarat and Mellat), Business Management, 11 (2): 192-215.
- 19. Qadiseh, Rahim; SalimiFard, Khodakaram and Mokhtari, Kobra (2013). Identification and ranking of factors affecting e-citizen readiness in Iran using fuzzy hierarchical analysis, information and communication technology in educational sciences, 4 (2): 121-145.
- 20. Motalebzadeh, Batool; Peykari, Hamidreza and Sadeghi, Mehrdad (2019). Factors Affecting the Acceptance of Electronic Health Services from the Perspective of Social Security Employees, Health Research, 4 (1): 9-15.

- 21. Maleki, Saeed; Goodarzi, Majid; Amanpour, Saeed and Rahimi Chamkhani, Alireza (2021). Investigating the Factors Affecting Citizens' Tendency to Accept Electronic City at Large, Medium and Small Urban Levels, Case Study: Cities of Ahvaz, Behbahan and Mansouria in Khuzestan Province, Spatial Planning, 10 (36): 31-52.
- 22. Montazer, Faramarz (2019). Assessing Iran's position from the perspective of the ICT Development Index among the countries of the region with emphasis on the Iran Vision Document 1404, Urban Development Studies, 2 (7): 125-142.
- 23. ValadBeygi, Abdul Sharif (2021). The importance of e-government in the 21st century, news code: 3111939, published on 06/03/1400, available at: https://www.iribnews.ir/00D3YZ
- 24. Yaqubi, Ismail. (2018). Good governance and promoting the health of the administrative system; Explain the role of e-government. Public Management Research, 37 (1): 203-222.
- 25. Yaqubi, Noor Mohammad; Orei Yazdani, Badreddin; Shakeri, Roya (2012). Identifying and analyzing the factors affecting the acceptance of Internet banking services, Business Management Perspective, 5 (38): 38-41.
- 26. Adler-Milstein J, Holmgren AJ, Kralovec P, Worzala C, Searcy T, Patel V. Electronic health record adoption in US hospitals: the emergence of a digital "advanced use" divide. J Am Med Inform Assoc. (2017); 24(6):1142-1148.
- 27. Aduwo, E.B., Item, E.O., Afolabi, A.O., Oluwnmi, A.O., Tunji-Olayeni, P.F., Ayo- Vaughan, E.A., Uwakonye, U.O., Oni, A.A., (2020). Exploring anti-corruption capabilities of e-procurement in construction project delivery in Nigeria. Constr. Econ. Build. 20 (1): 56-76.
- 28. Ahmad, T.Itemjafari, R., Venkatesh, V., (2019). The government of Jamaica's electronic procurement system: experiences and lessons learned. Internet Res. 29 (6):1571-1588.
- 29. Alvedavedi Sabani,(2020), Investigating the influence of transparency on the adoption of e-Government in Indonesia, The current issue and full-text archive of this journal is available on Emerald Insight at: https://www.emerald.com/insight/2053-4620.htm
- 30. Arif, M. (2008Alvedatomer Orientation in e-Government Project Management: a Case Study, Electronic Journal of e-Government, 6(1):7-8.

- 31. Ari-full-textttiroiko (2007). Encyclopedia of Digital, 1, Idea Group, 123-132.
- 32. Ali M. AL-, Ahmad Fraihat,(2020) E-Government's Service Quality; User perception Significance and Measurement, IJCSNS International Journal of Computer Science and Network Security, VOL.20 No.10, October 2020
- 33. Alvedavedi Sabani,(2020), Investigating the influence of transparency on the adoption of e-Government in Indonesia, The current issue and full-text archive of this journal is available on Emerald Insight at: https://www.emerald.com/insight/2053-4620.htm
- 34. BerndAlvedartz1 & Wilhelm M. Müller1 & Florian W. Schmidt,(2020), Digital Public Services in Smart Cities an Empirical Analysis of Lead User Preferences, Public Organization Review https://doi.org/10.1007/s11115-020-00492-3
- 35. Bekkers, V.J.M., and Zouridis, S. (1999). Electronic service delivery in public administration. International Review of Administrative Sciences, 65(2):183-195.
- 36. Berlilana; Hariguna, T.; Nurfaizah. (2017). Understanding of Public Behavioral Intent to Use e-Government Service: An Extended of Unified Theory of Acceptance Use of Technology and Information System Quality. Procedia Computer Science, 124(1): 285-292
- 37. Bhatnagar, S. (2000). Social implications of information and communication technology in developing countries: lessons from Asian success stories. Electronic Journal on Information Systems in Developing Countries, 1 (4): 1-9.
- 38. Boughzala, I., Janssen, M., Assar, S. (2015). Case Studies in E-Government 2.0 Changing Citizen Relationships. New York Dordrecht London: Springer Cham Heidelberg.
- 39. Carter, L., & Belanger, F. (2005). The Utilization of e-Government Services: Citizen Trust, Innovation and Acceptance Factors. Journal of Information Systems 15(3): 5-25.
- 40. Carter, L. & F. Belanger, "Citizen Adoption of electronic government initiatives", 37th Hawaii International Conference on System Sciences, Hawaii, 2004.
- 41. Chang, K. M. & Cheung, W. (2001). Determinants of the intention to use internet/www at work: a confirmatory study, information, and management, 39(1): 1-14.

- 42. Choudrie, J., Weerakkody, V., & Jones, S. (2005). Realizing egovernment in the rural and urban challenges. Journal of Enterprise Information Management, 18(2): 568-585.
- 43. Dong Lu 1, Ivan Ka Wai Lai 2, and Yide Liu, (2019), the Consumer Acceptance of Smart Product-Service Systems in Sharing Economy: The Realizingf of Perceived Interthe and Particularity.
- 44. Ebbers, W.E., et al. (2007), "Electronic government: rethinking channel management strategies", Government Information Quarterly.
- 45. Gilbert, D., Balestrini, P., and Littleboy, D. (2004). Barriers and benefits in the adoption of e-government. The International Journal of Public Sector Management, 17 (4/5): 286–301.
- 46. Grant, G., and Chau, D. (2005). Developing a generic framework for e-government. Journal of Global Information Management, 13 (1): 1–29
- 47. Guzdial, Matthew, Harrison Brent, Boyang Li, and Mark O.Riedl. 2016. Crowdsourcing opens an Interactive Narrative. In Proceedings of the 2015 Foundations of Digital Games Conference. Pacific Grove, CA. Available at: http://www.cc.gatech.edu/~riedl/pubs/guzdial-fdg15.pdf.
- 48. Hartani, N.H., Cao, V.Q., Nguyen, A.Q., (2020). Reducing corruptionOpenoan ugh e-government adoption, information and communication technology in ASEAN countries. J. Secure. Sustain. 9(2): 202 213.
- 49. Helbig, N., Ramon, Gil-Gracio, J., & Ferro, E. (2009). Understanding the complexity of electronic government, implications from the digital divide literature. Government Information Quarterly, 26(1): 89-97.
- 50. Jung, Secure 19). "Assessing citizen adoption of e-government initiatives in the Gambia: A validation of the technology acceptance model in information systems success". A critical article review, with questions to its publishers. Government Information Quarterly, 36(1): 5-7.
- 51. Keeping TY. (2017). Governance and good governance: A new framework for political analysis. Fudan Journal of the Humanities and Social Sciences; 11(1): 1-8.
- 52. Khan, A., Krishnan, S. (2019). Conceptualizing the impact of corruption in national institutions and national stakeholder service systems on e-government maturity. International Journal of Information Management, 46(3): 23-36.
- 53. King, W. R., & He, J. (2006). A Meta-Analysis of the Technology Acceptance Model. Information & Management, 43(5): 740-755.

- 54. Klopping, I.M., & McKinney, E. (2004). Extending the technology acceptance model and the task-technology fit model to consumer ecommerce. Information Technology, Learning, and Performance Journal, 22(1): 35-48.
- 55. Kofi Mensah, I., Mi, J. (2019). Predictors of the Readiness to Use E-Government Services from Citizens' Perspective. International Journal of Technology Diffusion, 10(1): 39-59.
- 56. La Porte, T.M., Demchak, C.C. Jong, M., & Friis, C. (2002). Democracy and bureaucracy in the age of the web, empirical findings, and theoretical speculations. Administration and Society, 34(4): 411-446.
- 57. Lee, J. K., (2000), "The e-citizen," Social Education.
- 58. Lieber, A. (2000). E-government initiatives meeting. Retrieved from http://www.osti.gov/.
- 59. Machova, R., Volejní kova, J., Lnenicka, M., (2018). Impact of egovernment development developmen
- 60. . M. A. M. Fowsar1 & T. Fathima Sajeetha,(2020), Factors Determining the Access to E-services of Public Institutions in Sri Lanka: A Case Study of Selected Divisional Secretariat Areas in Ampara District. Journal of Politics and Law; Vol. 13, No. 3; 2020
- 61. Meijer, A. (2015). E-Government Innovation. Government Information Quarterly, 1(32): 198-206.
- 62. Mohammed Amin Almaiah, Yacoub Nasereddi,(2020), Factors influencing the adoption of e-government services among Jordanian citizens, Electronic Government, Vol. 16, No. 3, 2020
- 63. Moon, J. W., & Kim, Y. G. (2001). Extending the TAM for a worldwide Web Context. Information & Management, 38(4): 217-230.
- 64. Moon, M.J. (2002). The evolution of e-government among municipalities: Rhetoric or reality. Public Administration Review, 2(4): 424-433.
- 65. Mou J, Shin DH, Cohen JF. Trus,t, and risk in cons, user acceptance of e-services. Electron Commerce Res. (2017); 17(2): 255-88.
- 66. Nidhi Singh, Neena Sinhab Francisco J. Lébana-Cabanillas,(2020), Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence, International Journal of Information Management,50(2020),19-205

- 67. Pazalos, K., Loukis, E., & Nikolopoulos, V. (2010). A structured methodology for assessing and improving e-services in digital cities. Telematics and InfTelematics 29(1): 123-136.
- 68. Samar Rahi, Mazuri Abd.Ghani, (2019) "Investigating the role of UTAUT and e-service quality in internet banking adoption setting", The TQM Journal, 31(3): 491-506.
- 69. Sawalha, S., Al-Jamal, M., Abu-Shanab, E. (2019). The influence of utilizing Facebooutilizing vernment adoption. Electronic Government, an International Journal, 15(1): 1-20.
- 70. Singh, A. K. & Sahu, R., (2007), "Integrating internet, telephones, and call centers for delivering better quality e-governance to all citizens," Government Information Quarterly.
- 71. Sun, H., and Zhang, P., (2006), The Role of Moderating Factors in user Technology Acceptance, Int. J. Human-Computer Studies, 64(6): 53-78.
- 72. Susanto, T. D.; Diani, M. M.; Hafidz, I. (2017). User Acceptance of e-Government Citizen Report System (a Case Study of City113 App). Procedia Computer Science, 124(56): 560-568.
- 73. Taherdoost, H. 2018. A review of technology acceptance and adoption models and theories. Procedia Manufacturing 22(8): 960-967.
- 74. Tomaszewicz, A. A. (2015). The Impact of Digital Literacy on Egovernment Development. Online Journal of Applied Knowledge Management. 3(2): 45-53
- 75. United Nations E-government Survey, (2020). DIGITAL GOVERNMENT IN THE DECADE OF ACTION FOR SUSTAINABLE DEVELOPMENT, Department of Economic and Social Affairs, UNITED NATIONS New York.
- 76. United Nations E-government Survey 2016: E-government in Support of Sustainable Development.
- 77. Vassilakis, C., et al. (2007), "A knowledge-based approach knowledge-based multi-channel e- government services", Electronic Commerce Research and Applications 6(9): 113-124.
- 78. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. MIS Quarterly, 27(3): 425-478.

- 79. Venkatesh, V., & Davis, F.D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. Management Science, 46(2): 186-205.
- 80. Verkijika, S., De Wet, L. (2018). A usability assessment of egovernment websites in Sub-Saharan Africa. International Journal of Information Management, 39(3): 20-29.
- 81. Xu, X., C. L. Munson and S. Zeng. (2017). the impact of e-service of fbrings on the demand for online customers. Intern. Journal of Production Economics 184(63): 231–244.
- 82. Yaghoobi, N-M., Bakhshimazdeh, M. and Alikhasi, M. (2014) 'providing a framework for the development of mobile government using fuzzy Delphi and fuzzy AHP: a case of mobile government in Iran', Int. J. Business Information Systems, 16(4): 393–408.
- 83. Yaghoubi, Nour Mohammad, Siavashi2, Reza & Bahmaei, Roohollah (2016), A Survey of Critical Success Factors of Private Banks in Electronic Banking Services, Modern Applied Science; 1097): 210-206.
- 84. Yaghoobi, Noor Mohammad, Salarzehi, Habibollah, Aramesh, Hamed & Shakeri, Roya (2010), Digital Gap in Iranian Rural Areas (Case Study at Sistan and Baluchestan-Iran), International Journal of Business and Management www.ccsenet.org/ijbm.
- 85. Yaghoubi, Nour Mohammad, Sargazi, Abbas Ali. (2014), Investigating the Effect of Office Automation on Organizational Excellence, International Journal of Academic Research in Business and Social Sciences, 4(8): 641-699.
- 86.Yaghoubi, Nour Mohammad; Pahlavani Mosayeb; Parsaei Farzad,(2017), Identifying and Ranking Development Drivers of Knowledge-based Technology-Driven Companies (Case study: Fars Province Science and Technology Park, International Journal of Academic Research in Business and Social Sciences Pages 85-113,
- 87. Yan Lia, Huping Shang. (2019), Service quality, perceived value, and citizens' continuous-use intention regarding e-government: Empirical evidence from China.
- 88. Zhang, J., Dawes, S. S. and Sarkis, J. (2005). Exploring stakeholders' expectations of the benefits and barriers of e-government knowledge sharing. Journal of Enterprise Information Management, 18(5/6): 548–567.

شناسایی و اولویت بندی عوامل موثر بر پذیرش خدمات الکترونیکی از دیدگاه شهروندان

چکیده

پژوهش حاضر با هدف احصای عوامل مؤثر بر بر پذیرش خدمات الکترونیک و اولویت بندی آن از نگاه شهروندان انجام پذیرفت. این پژوهش از نظر هدف کاربردی – توسعه ای و از نظر روش، کیفی و کمی است. برای جمع آوری داده ها ازمطالعات کتابخانه ای، مصاحبه و پرسشنامه استفاده شده است. پرسشنامه دارای روایی صوری بود و پایایی آن با استفاده ازآلفای کرونباخ برآورد گردید. جامعه آماری مربوط به مطالعه کیفی اساتید صاحبنظر در حوزه دولت الکترونیک و خبرگان اجرایی شاغل در وزارت ارتباطات و فناوری اطلاعات و سازمان اداری و استخدامی کشور می باشند که با کمک نمونهگیری هدفمند (گلوله برفی) به تعداد ۱۷ نفر انتخاب شدند. جامعه آماری مربوط به مطالعه کمی را شهروندان از ایران تشکیل دادند با توجه به نامحدود بودن جامعه آماری تعداد ۳۸۴ نفر مطابق جدول مورگان از جامعه نامحدود انتخاب و مورد مطالعه قرار گرفت برای تجزیه و تحلیل داده ها از نرم افزار لیزرل ، جامعه نامحدود انتخاب و مورد مطالعه قرار گرفت برای تجزیه و تحلیل داده ها از نرم افزار لیزرل ، جامعه نامحدود انتخاب و مورد مطالعه قرار گرفت برای تجزیه و تحلیل داده ها از نرم افزار لیزرل ، عامل سودمندی درک شده، سهولت درک شده به ترتیب بیشترین میزان تأثیرگذاری را بر پذیرش خدمات الکترونیک از سوی شهروندان دارند.

كلمات كليدى: دولت الكترونيك، پذيرش خدمات الكترونيك، شهروندان

