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Research Article

E-government in Jordan and Studying the Extent of the E-government Development Index According to the United Nations Report

Mohammad Ali Alqudah, Leyla Muradkhanli*

Department of Computer Science, Khazar University, Azerbaijan

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*Corresponding author:

E-mail:

mohamad.ali@khazar.org

leyla@khazar.org

ABSTRACT

This research paper presented the experiences of a group of countries as pioneering models in the field of e-government and compared them to Jordan with the aim of evaluating their status at the global and continental levels. Methods for measuring and evaluating the development of E-government suggested using a method called multi-practice are a practice of multi methodology, which combines methods and techniques, and proposes to evaluate the tangible and intangible benefits of e-government, which shows that the multiplicity of aspects of measurement may lead to a kind of reliability in e-government also Methods for measuring and evaluating e-government performance proposed by international organizations. By United Nations E-Government Survey The comparison and evaluation were done using the e-government maturity index issued by the United Nations EGDI, which includes the Telecommunication Infrastructure Index (TII) and The human capital Index (HCI), and the Online Service Index (OSI) e-government service sub-indicator, in the period between 2008 and 2020, and this comparison comes in order to benefit from these experiences, redress weaknesses, and exploit the opportunities available to Jordan to develop its e-government, keep pace with the global movement and raise its efficiency in a way that serves the goals of sustainable development The results were that Jordan, according to by United Nations E-Government Survey Jordanian e-government is still in the first generation It has many improvements performance on the e-government index the change in the EGDI . Some comparisons of Jordan with Arab countries have been presented in the EGDI in 2020 for the United Nations report

Keywords: e-government, Jordan, Telecommunication Infrastructure Index, human capital Index, the Online Service Index, development

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Introduction

The tremendous and continuous development of information technology has resulted in the associated cognitive revolution and the growing increase in Electronic operations in the twentieth century to increase awareness. Governments need to take advantage of these modern technologies in Facilitating interaction and communication between the government and its institutions, As well as between the government and each of the business sector and citizens. In various areas of life, including the completion of transactions And the provision of services efficiently and effectively, which led to the emergence of What is known as E-Government, this concept refers to Availability of information and services through a public electronic network. It relies on a set of IT tools Such as computers, the Internet and websites for the purpose of connecting Information, updating services electronically, and increasing productivity. The e-government offers to re-create and re-create the public sector Relations between government and citizens to provide public services by electronic means, with speed, infinite capacity and costs and less effort through the use of the Internet and network sites Governmental. Most of the governments that launched the initiative have completed E-government is the first stages of it to be enabled Beneficiaries search for information and see it on Internet path, and nowadays are starting to develop stages Coming from e-government by establishing a structure that represents Online services available directly on the Internet And enhance the organizational and cognitive ability of the beneficiaries to activate. And the completion of their official work related to it.

Jordan, like other countries, cannot be isolated from the developments of the digital revolution and renaissance Global technology, so it has become imperative to adopt e-government despite the difficulty of implementation, the enormity of requirements, and the lack of implementation elements, but it no longer had a choice but to keep pace, as it started implementing the e-government project, which was supposed to be a comprehensive project that contributes to the investment field. And developmental and seeks to achieve an information society, to In addition to activating the

relationship between the citizen and the government and strengthening the relationship between institutions through interactive means, and from this point of view this research paper tries to study this aspect to highlight the Jordanian e-government site and compare it with what global governments have achieved according to the provisions of the United Nations report sustainable development to stimulate action and progress, track development and achieve competitiveness in this

The project, by posing the problem of this study, represented in the following main question: What is the position that the Jordanian government has achieved in implementing and developing its e-government in comparison to the continental and global levels? What is the status of the Jordanian e-government? What position has Jordan occupied in its implementation of the e-government project? What is the global position that Jordan occupied in implementing the e-government project according to the United Nations report on sustainable development? Discussing the United Nations report for the year 2020 for sustainable development? Based on the questions, her hypotheses were formulated as follows: The Jordanian e-government is considered to be in the first generation and still has many improvements ahead of it. Jordan ranks in its implementation of the e-government project an advanced position on the continent. Jordan is considered one of the countries that are lagging behind in the world in implementing the e-government project, the objectives of the study: The study seeks to achieve the following objectives. Electronic and display the theoretical framework to accommodate a number of its dimensions; Addressing the mechanism for measuring the development of e-government. Determine the status of the Jordanian e-government at the continental and global level.

The importance of the study the topic of e-government has received a high degree of importance and attention from many researchers because it has become a new entry point in improving the overall situation of countries, which required delving into it. Countries of the world in order to benefit from their experiences, as a kind of benchmarking in this regard,

that would provide important and decisive notices to direct decision-makers and policy-makers in the right direction. Study methodology: The two researchers adopted in this study the descriptive and analytical method, which aims to: Photographing the phenomenon and studying its situation, as the two researchers used the comparative approach to compare Jordan with the leading countries in implementing the e-government project and discussing the United Nations report for the year 2020 for sustainable development. This is considered as one of the analytical quantitative studies, where It relied on secondary information and used the data available through the United Nations database as well United Nations e-government reports from the year 2008 to the goal of 2020 AD, as well as data from the World Bank to enable comparison between e-government indicators in different countries of the world, and this comparison was made using the e-government development index, EGDI, which is based on the weighted average. For three sub-indicators: the electronic service index, the communications infrastructure development index and an index that assesses human capital, and the comparison countries were selected based on the latest classification in the EGDI index for the year 2020.

Literature Review

In this study, researchers (Faid et al., 2020) clarified the correlation between E-government and productive performance related to the level of income, the study clarified how to benefit from the implementation of e-government in fighting corruption, reducing costs, and reducing wrong practices, and focused on how to make e-government effective in achieving productivity related to the level of income, and concluded that there is a positive impact of e-government on Per capita gross domestic product, and it also revealed that middle-income countries are the ones that drive global economic growth through their implementation and support for information and communication technology infrastructures, and its results also showed that interest in electronic services enhances the efficiency of the public sectors of any e-government. As this study was the starting point for our research paper to impose a

positive relationship between income level and e-government, to list it as a factor affecting the maturity and development of e-government in Jordan.

As for the study (Nawafleh et al., 2012), it aimed to determine the most important factors controlling the disease The success of e-government, and a comparison between the various factors that differ between developed and developing countries was included, and this was supported by a case study of Finland as it is an advanced country and Saudi Arabia being a developing country, and the study showed that all countries share a number of important factors that will contribute to maturity and development. E-government, including infrastructure, human capabilities, development of education systems, levels of the organization, etc. These factors were studied through the programs adopted by both countries and the challenges they faced. The attribution has been completed on this study in terms of the possibility of comparison between countries that do not have the same ingredients, and in terms of benefiting from the success of the experiences of the leading countries, and the use of factors that have been proven to be related to e-government.

The assessment of challenges is also addressed in the study (Machova & Lnenicka, 2016) And the achievements made in the countries of the European Union for their e-government between the years 2008 and 2014, during which it examines the crises that the European Union has been exposed to and their impact on e-government, and assesses the impact of a number of factors related to e-government. The study presented how to choose the most appropriate indicators to measure government maturity. The electronic government presented by many organizations and researchers and concluded that the e-government development index submitted by the International Union is the best among them due to the existence of a sequence between its reports and a chronological consistency and covers the largest segment of countries. Impact and differences, including a slight development in electronic government, and set a prediction that Denmark will be the best country in terms of developing e-government, and this is what

has actually been achieved. We based on this study in selecting the EGDI for measurement and comparison as the most comprehensive and consistent indicator.

Definition of e-government

According to the United Nations, e-government was defined as: "the use and implementation of governments Information and communication technology in the public sector, as it aims to effectively manage data and information, expand participatory communication channels and provide more advanced public services, reliable information and broad knowledge for all citizens(Molnár, 2020); it is noted in this definition that the United Nations Organization The United States limits the concept of e-government to the use of information and communication technologies and links them to the quality and manner of providing government services to citizens.

According to the World Bank in 2011, it was defined as follows: "The term e-government refers to Government agencies' use of information technologies, such as the use of broadband networks, the Internet and mobile computing, through mutual relationships between citizens, institutions, government agencies, and other stakeholders, which would achieve a set of goals including improving government service delivery to citizens, improving interaction with the business and industry sector, improving levels of Availability, and access to a more efficient government administration " (Caiado et al., 2018),and through this definition, it is clear that the emergence and development of e-government are linked to its internal and external electronic transactions and is considered the most important motivation for the government to stimulate change from the traditional pattern. While the Organization for Economic Cooperation and Development defined it in 2003 as: "the use of technologies." Information and communication, especially the Internet, as a tool for achieving better government(OECD, 2003), The Organization for Economic Cooperation and Development focused in its definition on the imperative of using the Internet in particular and linked the use with the aim of improving and achieving better quality without

detailing the transactions or services Its intended government action.

Methods for Measuring, Evaluating and Developing E-government

Methods for measuring and evaluating the development of e-government

Methods for measuring and evaluating the development of e-government proposed by researchers(Isaac, 2007) suggested using a method called multi-practice

Methodologies are a practice of multi methodology, which combines methods and techniques, and proposes to evaluate the tangible and intangible benefits of e-government, which shows that the multiplicity of aspects of measurement may lead to a kind of reliability in the results and they classify the evaluation procedures as follows:

- Difficult measures: cost-benefit analysis, standards in e-government;
- Soft metrics: method of registration, stages of e-government, social aspects;
- Hierarchy of metrics: return on investment, total costs, and revenues, improvement of planning and control quality, quality of decisions, the value of information, system characteristics.

In 2004 researchers (Arayankalam et al., 2020; Deng et al., 2018; Sabani et al., 2019; Stojanovska-Stefanova et al., 2020)presented a study linking e-government maturity assessment with trade Electronic and suggested five indicators for measurement, namely:

Awareness efficiency: the total number of internet users in relation to the total number of customers.

Popularity competency: Classification of the service provider or agency relative to the total number of agencies.

Communication Efficiency: A score based on overall site content such as relevance, security, and privacy with online data, publications, e-mail, licenses, etc

Transfer efficiency: the measurement is based on customer satisfaction with single services, e-transactions for the country, and the time of visiting the site.

Retention Efficiency: It is meant to retain customer loyalty on the basis of repeat transactions and frequency of visits and evaluation was presented E-government by evaluating the performance of digital government websites. The study suggested using a multidimensional strategy for evaluating websites that include methods such as usability testing, availability, user comments, usage data, and internet performance.

Methods for measuring and evaluating e-government performance proposed by international organizations

By (United Nations E-Government Survey 2020: *Digital Government in the Decade of Action for Sustainable Development (With Addendum on COVID-19 Response)*, 2020) Commission for the Information Society presented a study on how to achieve the development of e-government, by fulfilling three main conditions, and it showed that the evaluation of the best way to measure the development of e-government is through the objectives of the program itself and the government agency that sponsors it, and it has defined the conditions as follows:

- Achieving the efficiency of the electronic service provided
- Achieve efficiency in engineering internal governance structures and processes
- Equal provision of service, organizational structures, and human resources to suit the application and implementation of information and communication technologies (Isaac, 2007; Kaur et al., 2020; Kraay, 2018).

In (KASSEN & Scholar, n.d.; Un, 2016; *United Nations E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development (With Addendum on COVID-19 Response)*, 2020), the United Nations presented a report containing an index to measure e-government, and it was completed Registering it as a quantitative indicator for the report, and then developing it into a theoretical model that combines the elements of e-government, e-readiness, and e-participation, in addition to e-government practices, and this composite index measures the capacity of governments from three main aspects and represents its sub-indicators as follows:

E-Service Measurement Index: the scope and quality of service provision benefit evaluation and provision, and the level of - Availability (Al-Nidawi et al., 2018; Kraay, 2018; Un, 2016; Verma et al., 2005);

Communications infrastructure index: the extent to which the foundations of information and communication technology are being exploited. Calculate primary factors including readiness and utilization (Das et al., 2017; Kraay, 2018; Nawafleh et al., 2012; Un, 2016);

Human Capital Index: reflects available skills, educational levels, and the government's ability to spread - knowledge (Al-dweeri et al., 2019; KASSEN & Scholar, n.d.; Kim, 2018; Kraay, 2018; Porumbescu, 2016) The report explains the imperative of the three aforementioned indicators that measuring e-government is considered an evaluation The country's use of the Internet to provide information, products, and services, as well as the level of wired communications And wireless and infrastructure development, and human capital in every country, and through these aspects, the measurement may reach reliability in its results.

Presentation and analysis of study results

Presentation and analysis of the results related to the first hypothesis

The first hypothesis of the study stated that: (*United Nations E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development (With Addendum on COVID-19 Response)*, 2020) "The Jordanian e-government is still in the first generation It has many improvements." In order to confirm the validity of this hypothesis, we presented the relevant general data With e-government, the first is to clarify the reality of the Jordanian e-government and its components, in order to reach an understanding For the case of Jordan, assessing its status and interpreting the results of international reports that adopt global ranking and international classification For electronic governments in the world. Before presenting the data, it must be pointed out that there are no accurate statistics Of Jordan, as most international indicators suffer from

missing data, and the following table shows the order that Jordan occupied in The e-government index and the rates achieved in the index's development in relation to the countries

of the world during the period from 2003 to 2018 (EGovernment Program - Minister of Digital Economy and Entrepreneurship, n.d.) .

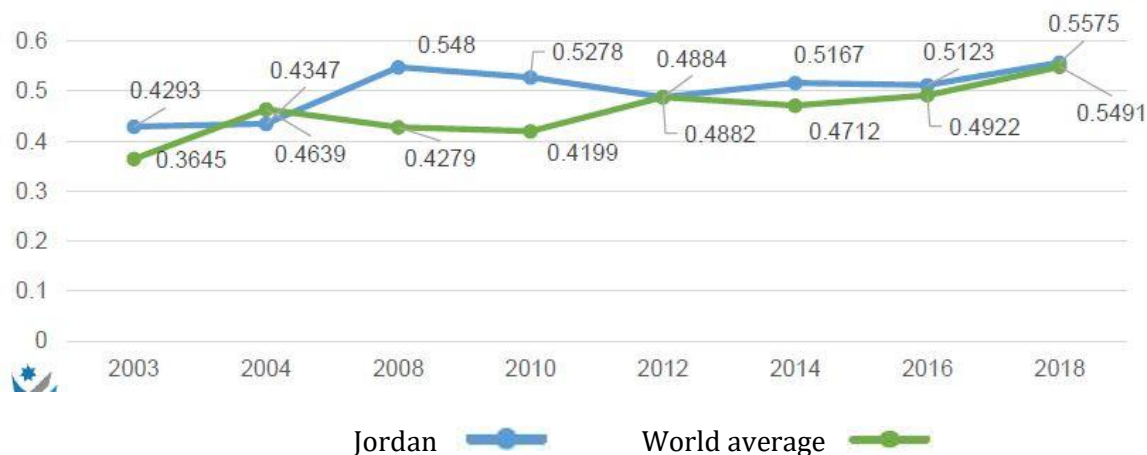


Figure 1. Jordan's performance on the e-government index (2003-2018) EGDI

Note through figure (1) Jordan's performance on the e-government index the change in the EGDI which There was a continuous decline between 2003 and 2018 in Jordan's global ranking and instability in its rates, The penetration of the e-government followed by the economic obstacles and challenges that this period has known, such as a collapse in oil prices, a decrease in accumulated savings, a decrease in foreign exchange reserves and others. In the development of electronic government.

The results are the second hypothesis

The second hypothesis of the study stated: (2020 United Nations E-Government Survey / Multimedia Library-United Nations Department of Economic and Social Affairs, n.d.; Nations, 2020)“Jordan ranks in its implementation of the e-government project to ensure the validity of this hypothesis, some comparisons of Jordan with Arab countries have been presented in the EGDI in 2020 for the United Nations report. This report summarizes the increase in the average of the e-government development index to 60% compared to 55% in the previous version of the report in 2018 (EGovernment Program - Minister of Digital Economy and Entrepreneurship, n.d.; United Nations E-Government Survey 2020: Digital Government in

the Decade of Action for Sustainable Development (With Addendum on COVID-19 Response), 2020).

The report indicated in this issue:

Almost all countries of the world have national portals on the Internet and systems for automating government work. The reality of e-government has improved across different geographic regions and in countries with varying levels of income, including the least developed and developing countries. The report monitored growth in the provision of government digital services, e-participation initiatives, efforts to make use of data in government work and open government data portals around the world(UN E-Government Survey 2020, n.d.)

Classification of a number of Arab countries has progressed to varying degrees, and new experiences have emerged to use emerging technologies to improve government services and increase electronic participation. Digital transformation has become part of the national development plans in many Arab countries As for the report was based on various indicators in this edition 2020(UN E-Government Survey 2020, n.d.)

The e-government development index, which is the main indicator in the report. E-Government Development Index The main

indicator in the United Nations e-government report measures the trends of e-government development for 193 countries with a degree ranging from zero to one. The e-government development index consists of three sub-indicators that form the following equation, EGDI = 1/3 (OSI + TII + HCI) (Nations, 2020) .

Telecommunication Infrastructure Index (TII). And it talks about infrastructure matters such as the spread of the Internet and its speed in all regions, whether in remote or remote cities and others.

Human Capital Index (HCI) .This indicator is concerned with the level of education, culture, and the possibility of dealing with the digital environment by individuals in the country.

Digital Government Services Index. (Online Service Index (OSI) In reference to the concurrent factors in the development of e-government, including human resources and digital services, as well as infrastructure

Within the index, countries are divided into four categories: very high, high, medium and low. And inside for each category, the countries

are divided into four sub-quarters, from lowest to highest. With the importance of the level of income to support the development of e-government in any country, the report indicated that income alone does not the progress of e-government is guaranteed, and some countries have already demonstrated a commitment to improving digital services and overcoming the restrictions imposed by the levels of communications infrastructure and human capital.

For the very high category: The index score ranges between (1- 0.75).

High category: Index score ranges between (0.75 – 0.5).

Intermediate Category: Index score ranges between (0.5- 0.25).

The low category: Index score ranges between (0.25-0).

According by (EGovernment Program-Minister of Digital Economy and Entrepreneurship, n.d.) The Jordan ranked (117) in the world out of (193) countries, while it ranked (10) Arab out of (20) Arab countries included in the report you can follow figure 2.

The low category		Intermediate category		High category		very high category	
number	Country	number	Country	number	Country	number	Country
191	Somalia	127	Lebanon	66	Qatar	21	UAE
		131	Syria	91	Tunis	38	Bahrain
		143	Iraq	106	morocco	43	KSA
		162	Libya	111	Egypt	46	Kuwait
		170	Sudan	117	Jordan	50	Oman
		173	Yemen	120	Algeria		
		176	Mauritania				
		177	Comoros				
		179	Djibouti				

Figure 2. The ranking of Arab countries compared with world countries for the e-government development index

The ministry indicated that the United Nations Department of Economic and Social Affairs announced yesterday the issuance of the United Nations e-government development report for the year 2020, which is a report issued every two years by the (United Nations E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development (With Addendum on COVID-19 Response), 2020).

The report covers (193) member states of the United Nations and measures the level of development in e-government development through three main indicators: the e-government services index, the communications infrastructure index, and the human capital index.

The ministry indicated in its statement that the report indicates an improvement in the value of the telecom infrastructure index in Jordan by 26%, as the value of the index in 2018

reached (0.4406), while it increased by (0.1134) to become (0.554) in this year 2020 report Where Jordan ranked tenth among the Arab countries, as shown in the following (3).

The low category		Intermediate category		High category		very high category	
number	Country	number	Country	number	Country	number	Country
20	Yemen	12	Egypt	6	Oman	1	UAE
21	Somalia	13	Lebanon	7	Tunis	2	KSA
		14	Mauritania	8	morocco	3	Bahrain
		15	Syria	9	Algeria	4	Qatar
		16	Libya	10	Jordan		Kuwait
		17	Sudan	11	Iraq		
		18	Djibouti				
		19	Comoros				

Figure 3. The ranking of ranked among the Arab countries When comparing communications infrastructure index

With regard to the human capital index, which consists of four sub-indicators, which are the adult literacy rate, the total enrollment ratios in primary and secondary schools and post-secondary education, the expected number of years of education in addition to the average number of years of schooling, the report indicated a decline in Jordan in The Human Capital Index increased by approximately -8 percent, to become (0.6800) in the 2020 report, despite the improvement in the adult literacy rate by 1 percent.

The ministry indicated that the main reason for the decline in this indicator is due to the

decrease in the expected years of study from (13) to (10) years (according to data from UNESCO and the United Nations Development Program for the year 2018), and the decline in the total percentage of enrollment in education as a result of the increase in the population due to receiving large numbers Of refugees, whose school enrollment rate is generally lower, in addition to the lack of clear digital literacy programs Where Jordan ranked ninth among the Arab countries, as shown in the following (4).

The low category		Intermediate category		High category		very high category	
number	Country	number	Country	number	Country	number	Country
21	Somalia	15	Comoros	4	Kuwait	1	KSA
		16	Iraq	5	Libya	2	Bahrain
		17	Yemen	6	UAE	3	Oman
		18	Mauritania	7	Tunis		
		19	Sudan	8	Algeria		
		20	Djibouti	9	Jordan		
				10	Qatar		
				11	Lebanon		
				12	Egypt		
				13	morocco		
				14	Syria		

Figure 4. The ranking of ranked among the Arab countries When comparing Human Capital Index

The Ministry indicated that the Youth, Technology and Work program has been

launched, which includes a major component in partnership with the Ministry of Education,

whereby students in public schools from the seventh grade to the twelfth grade will be taught digital skills according to the curricula prepared for this purpose.

As for the e-government services index, which reflects the extent of progress in e-government through a set of axes: the institutional framework, the legal and regulatory framework, national strategies and their application, rates of use of electronic services, user satisfaction, speed of introduction of modern technologies, regional and international cooperation, and the adoption of comprehensive and integrated government policies to achieve development goals Sustainable 2030 is more effective while taking into consideration the interrelationships between the economic, social and environmental sectors.

The report also indicated Jordan's decline in the e-government services index, as the value of the index in 2018 reached (0.4931) and became (0.3588) in the 2020 report, a decline of -27%.

The Ministry indicated that the e-government services index is measured by the member states filling out the e-government services form, as the organization adopts a specific and unpublished methodology for how to calculate the rate of progress or decline for countries in this indicator, and this form was submitted in March 2019 Where Jordan ranked twelfth among the Arab countries, as shown in the following (5).

The low category		Intermediate category		High category		very high category	
number	Country	number	Country	number	Country	number	Country
18	Djibouti	9	Syria	5	KSA	1	UAE
19	Comoros	10	morocco	6	Qatar	2	Bahrain
20	Mauritania	11	Lebanon	7	Tunis	3	Oman
21	Libya	12	Jordan	8	Egypt	4	Kuwait
		13	Iraq				
		14	Yemen				
		15	Sudan				
		16	Somalia				
		17	Algeria				

Figure 5. The ranking of ranked among the Arab countries When comparing e-government services index

According to the press conference held by the United Nations team to launch the report, there is great weight in the legal framework that governs digital transformation, especially with regard to data privacy, the existence of

open data, data classification and electronic participation With regard to electronic participation No. 148 compared with countries of the world figure (6).

The low category		Intermediate category		High category		very high category	
number	Country	number	Country	number	Country	number	Country
175	Djibouti	142	Somalia	66	KSA	16	UAE
175	Sudan	148	Jordan	73	Tunis	18	Kuwait
183	Algeria	148	Iraq	77	Qatar	38	Oman
185	Comoros	158	Lebanon	106	morocco	51	Bahrain
186	Mauritania	158	Yemen	106	Syria		
189	Libya			106	Egypt		

Figure 6. The ranking of ranked among the Arab countries When comparing electronic participation

The Ministry indicated that it worked on the three axes during the past year after submitting the form, as the Council of Ministers issued a policy for classification and management of government data in the month of 1/2020 and is currently being implemented by government agencies, and the Ministry prepared the Personal Data Protection Law and submitted it to the Council of Ministers in the month of 12 / 2019, which approved the reasons for the draft law and is currently under review by the Legislation and Opinion Bureau, and the Ministry is following up with government agencies in order to increase the number of government data sets open on the Ministry's open government data platform to increase transparency and electronic participation by citizens and the business sector, and the Ministry is currently working on Preparing a policy for electronic participation to enhance the percentage of citizens' participation in decision-making procedures and preparing legislation in all its stages, and the policy of open user interface applications in addition to developing new channels for providing electronic government services, and the Ministry is working to activate the electronic signature to enhance the digital identity of citizens during the coming days. These measures are reflected in Jordan's ranking in the next report(*EGovernment Program - Minister of Digital Economy and Entrepreneurship*, n.d.).

It should be noted that the number of electronic services and their use increased by 145 services from March 2019, which is the month in which the form on which the report was based was submitted, and the number of movements increased in the months of March, April and May in 2020 compared to the same months in the year 2019 from 897 thousand movements to more than two million and a quarter million movements.

Conclusion and Future Suggestion

Jordan started implementing the e-government project (e-Jordan 2000), which was:

Reliable as a holistic project that contributes to supporting investment and development projects and seeks to achieve the information society, the basic building block of a knowledge economy, in addition to supporting

the relationship between the citizen and the government and between the government and institutions, and according to this research paper it was found that Jordan ranked 117 globally in 2020 in the e-government maturity index According to the United Nations classification, and it is below the global average, the Jordanian e-government is considered in the first generation and still has many improvements and reforms ahead of it. Jordan has not achieved satisfactory results even at the level of its continent, despite the weakness of the index in most countries of the continent, and there remains a large gap between it and the countries. The pioneer at the global level, and this confirms that the e-government project in Jordan is facing many and influential obstacles that prevented its progress, such as the weakness of the communication and information infrastructure, and it also shows that these government efforts alone are not sufficient to achieve development in electronic Jordan and need more direction, support and cultural awareness of The citizen is of the importance of moving towards electronic services and does not stand in the way of unjustified fear of this technological change, for nothing but not He is ignorant of its consequences and is expecting to run into problems instead of solving them; It can be said that the state's trend towards e-government is not an easy thing and it is not impossible, but it must first direct the culture of its society and take care of the human element, as it is the pulse of human life, then it has a transformation in the end. In this study the e-government index of the United Nations program was limited to For a comparison between Jordan and other countries, there are other factors related to the development of e-government, such as cultural norms and values, political strategies and visions, the mass of the information society that makes up the state, and resistance to change are all not included in this study. Future studies should seek to study such factors.

References

2020 United Nations E-Government Survey | Multimedia Library - United Nations Department of Economic and Social Affairs. (n.d.). Retrieved March 21, 2021,

- from
<https://www.un.org/development/desa/publications/publication/2020-united-nations-e-government-survey>
- Al-dweeri, R. M., Moreno, A. R., Montes, F. J. L., Obeidat, Z. M., & Al-dwairi, K. M. (2019). The effect of e-service quality on Jordanian student's e-loyalty: an empirical study in online retailing. *Industrial Management & Data Systems*.
- Al-Nidawi, W. J. A., Al-Wassiti, S. K. J., Maan, M. A., & Othman, M. (2018). A review in E-government service quality measurement. *Indonesian Journal of Electrical Engineering and Computer Science*, 10(3), 1257–1265.
- Arayankalam, J., Khan, A., & Krishnan, S. (2020). How to deal with corruption? Examining the roles of e-government maturity, government administrative effectiveness, and virtual social networks diffusion. *International Journal of Information Management*, 102203.
- Caiado, R. G. G., Leal Filho, W., Quelhas, O. L. G., de Mattos Nascimento, D. L., & Ávila, L. V. (2018). A literature-based review on potentials and constraints in the implementation of the sustainable development goals. *Journal of Cleaner Production*, 198, 1276–1288.
- Das, A., Singh, H., & Joseph, D. (2017). A longitudinal study of e-government maturity. *Information & Management*, 54(4), 415–426.
- Deng, H., Karunasena, K., & Xu, W. (2018). Evaluating the performance of e-government in developing countries. *Internet Research*.
- eGovernment Program - Minister of Digital Economy and Entrepreneurship*. (n.d.). Retrieved March 8, 2021, from https://www.modee.gov.jo/En/Pages/eGovernment_Program
- Faid, G., Tariq, M. M., Ishtiaq, A., Zeynvand, V. L., Meyer, D. F., & Máté, D. (2020). The nexus of E-government and increased productivity relative to income level comparison. *Business, Management and Economics Engineering*, 18(1), 88–105.
- Isaac, W. C. (2007). *Performance measurement for the e-Government initiatives: A comparative study*.
- KASSEN, M., & Scholar, F. (n.d.). *e-Government in the United States*.
- Kaur, B., Kaur, J., Pandey, S. K., & Joshi, S. (2020). E-service Quality: Development and Validation of the Scale. *Global Business Review*, 0972150920920452.
- Kim, J. Y. (2018). The human capital gap: getting governments to invest in people. *Foreign Aff*, 97, 92.
- Kraay, A. (2018). Methodology for a World Bank human capital index. *World Bank Policy Research Working Paper*, 8593.
- Machova, R., & Lnenicka, M. (2016). Modelling e-government development through the years using cluster analysis. *JeDEM-EJournal of EDemocracy and Open Government*, 8(1), 62–83.
- Molnár, P. (2020). Measuring e-government and e-participation. *Prof. Dr. Miskolczi-Bodnár Péter (Eds.): Jog És Állam 29. Károli Gáspár Református Egyetem Állam-És Jogtudományi Kar, Budapest*.
- Nations, U. (2020). *United Nations E-Government Survey 2020*. UN. <https://doi.org/10.18356/8bdf045f-en>
- Nawafleh, S., Obiedat, R., & Harfoushi, O. (2012). E-government between developed and developing countries. *International Journal of Advanced Corporate Learning (IJAC)*, 5(1), 8–13.
- OECD, O. for E. C. and D. (2003). *The E-Government Imperative: OECD E-Government Studies*. OECD.
- Porumbescu, G. A. (2016). Linking public sector social media and e-government website use to trust in government. *Government Information Quarterly*, 33(2), 291–304.
- Sabani, A., Deng, H., & Thai, V. (2019). Evaluating the development of E-government in Indonesia. *Proceedings of the 2nd International Conference on Software Engineering and Information Management*, 254–258.
- Stojanovska-Stefanova, A., Aleksoski, O., & Magdinceva Sopova, M. (2020). E-government and digital public services: The Macedonian case of digitalization. *SocioBrains, International Scientific Refereed Online Journal with Impact Factor*, 7(74), 35–52.
- UN E-Government Survey 2020*. (n.d.). Retrieved March 21, 2021, from <https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2020>
- Un, E. (2016). government survey 2014. *E-Government in Support of Sustainable Development/UN Department of Economic and Social Affairs*.
- United Nations E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development (With addendum on COVID-19 Response)*. (2020). <https://www.un-ilibrary.org/content/books/9789210051453/read>
- Verma, N., Das, V. M., & Kalra, S. (2005). *E-government tool kit for Developing countries*. UNESCO, Asia Pacific Regional Bureau for Communication and Information.