

The Impact of E-government Applications on Decision-Making Effectiveness

Case Study at Jordanian Ministry of Interior- Jordan

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Abstract

The aim of this study is to identify the impact of E-government applications on the decision- making effectiveness, in the Jordanian Ministry of Interior. The study population consisted of (297) employees of the occupants of administrative positions at the Ministry, researchers studied all the community by distributing (297) questionnaires, (270) valid questionnaires were recovered. The study found that there is a significant effect of E-government applications on the effectiveness of the administrative decision-making in the Jordanian Ministry of Interior. The study recommended Ministry of Interior to increase using E-government applications in all levels and functions, and reinforce using of E-government applications in decision making with all its stages to enhance decisions effectiveness.

Key Words: E-Government, Decision-Making Effectiveness, Ministry of Interior, Jordan.

Introduction

The only solution for any country wishing to keep up with continues development; is the openness towards the electronic communities and technology, where countries have become unable to keep pace with the new digital progress, and incapable on the continuation of the decent life in traditional societies which does not recognize the vulnerable. The information network or the internet had become the most important means to allow for extensive knowledge and intensive contact with least cost and the fastest possible time.

The management of the government institutions has to keep up with the successive rapid changes and instability in business environment. These institutions couldn't achieve the requirements of today and tomorrow work needs, the quality in the provision of services, speed and ease of civil services, and the accuracy and reliability of information provided. All this have become a fundamental condition for achieving the vision and mission of government institutions to reduce the burden on service providers, and alleviate the recipients on service recipients from citizens. Decisions and decision-making in any organization represents the pivotal role of each manager, whatever the nature of the work or functional level, when they do the functions of planning, organizing, leading and directing, communication and

control. Managers make many different decisions, these decisions need to be supported by electronic applications (harem, 2014.88), and so this research studied the role of Government applications on decision making effectiveness in Jordanian Ministry of Interior.

Literature Review

Electronic Government

The concept of E-government played an important role in the modern world, it has occupied a wide area of scientists and specialists thinking in general, and reflected its impact between scientists of administration in particular (Mohammed, 1992.145). The idea of E-government did not come from nothing; it passes several developments on the political, economic, social, technological and other fields (Aichaoui, 2009.98).

E-government is defined as a process of change and transformation of relations from facilities of the business and citizens through information technology, with the aim of providing better citizens and enable them to access to information which provide more transparency, curtail corruption and maximize the revenue and reduce expenditure (Hawash, 2006.145), also defined the possibility of various governmental institutions to provide services through the internet speed, accuracy, and light tablet, and the less cost and efforts through one of the website on network "(Al Aboud, 2003.178), on the other hand E-government defined as the ability of the administrations of government institutions to put services, transactions, and the streamlining of procedures with the governmental electronic manner to the recipients of the service and businesses organization, or to government departments with transparency, credibility and easy without any complexities or without any routine measures (Al mutwaly, 2003.2), and converse of all business processes in governmental institutions electronically in various areas through the positions of governmental institutions that are filed on the World Wide web (Bakri, 2000.44). While (turban, et al, 2010) that it use of information technology in general and e-commerce in particular, to provide citizens and organizations for easy access and comfortable services, which take place between the government to the citizens, the government to business, government to government, government to employee.

The E-government is considered the effective way to conduct all government transactions with citizens and governmental institutions itself, where the use of and the adoption of E-government lead to facilitate transactions of the payment of taxes and other transactions that reduce the cost, effort and time, and it increases the use and separation the technology between individuals and lead to do governments work effectively and systematically and lead to get the information and decisions which made by the governments easy and rapidly (Titi, 2008). Researchers agreed to classify the E-government into four classifications ((Stair & Reynolds) (turban, et al, 2010) (Titi, 2008) :

1. Government -to- Citizens: (G2C), where this application represent all dealings between governmental institutions and its citizens, which could happen electronically when the computer and the internet is existed, a citizen has become to interact with the services and information which provided by the government from his home and from every place across the network, and exclude them for waiting to receive a specific service or waiting to arrive a certain models, he can obtain a service effectively and easily (Titi, 2008.150).
2. Government-to-Business (G2B) The Government institutions striving to automate the transactions and interference with businesses facilities, this category is called government of organization where the relations between the two parties of two side are building which include all interactions and transactions, where the Governmental institutions sell the products and the services to private institutions, then the private institutions also sell the products and services to the governmental institutions and pay the invoices, the goal of this application is to reduce the cost and get the best information, the governmental institutions help to reduce costs, and this helps governments to obtain the data which facilitate the decision Making (Donna, 2006,207-235).

3. Government-to-Government (G2G). It include the activities of electronic commerce between all governmental institutions both within the governmental institution or between more than governmental institutions, to increase the effectiveness of the services provided by the government reducing redundancy and duplication.
4. Government-to-Employees (G2E) the other nomenclature for this application is Intra- Employee, the governmental institutions include large numbers of employees who work geographical site variety and far from each other, so the interest of the various Governmental institutions to increase effectiveness by providing various services and information electronically where the particular applications for many of the actors contact in a manner where it is the use of special applications in order to conduct many of the players communicating with the Employees.

The Effectiveness of Decision-Making

Decision-making is the essence of the administrative process and the axis around which the rest of the administrative processes (Hamdoneh, 2015), and decisions are considered the instrument for achieving the goals of the Governmental institutions, it contributes basically to continue the Governmental institutions to administrative activities effectively. According to Peter Drucker good decision makers know that they haven't finished making a decision until they build its implementation and effectiveness into it. Until then it's not a decision-it's only a good idea. They also know that a decision is a commitment to action (Muharemovic, 2015). By the way that the decision depends on the basis of the prediction of the future and achieved in its content the perception of what is involved in the future in certain expectations, the successful decision that is adopted reflects on the adequacy of the director in the exercise of his functions in government institutions, from here emerged the importance of the decisions and there role in the growth and development of Governmental institution, lies the importance it attaches to the Governmental institutions and to responsibility of the adoption of decision is that the activities in the field of the development of scientific and technological advances and the broad cultural in human societies requires the adoption of a vision of clear scientific in decision-making (Al Shmma, 2007.239).

Effectiveness is the extent to which an activity fulfills its intended purpose or function (Harvey, 2016), effectiveness means also the capacity of the organization's to secure available resources and used effectively to achieve specific goals (Richard Steers, 1991,302), and it differ from efficiency which is defined as the capacity to achieve maximum results and services by using the available resources as the best use as possible as, and focus on how to achieved the objectives and requirements, and based on the depth of the effects caused by its achieved and the speed of the results and consequences (Jebali, 2012.33), and points of the theory of the institutions, but the researchers still in the controversy about determining the precise meaning, at the same time, they are fully convinced that it is difficult to recognize and accept any theory in the field of organization doesn't fall in its accounts the concept of effectiveness, because effectiveness plays an important role in the management generally, that considered an important input to the organizations and administrative development and helps it to achieve its objectives through standing on the level of the effective degree for organization, and then strengthen the positive aspects and discourse negative (Al Allaq, 1982.117).

Many researchers think that the decision-making process ending with the selection of the best alternative, but this belief is incorrect, in fact, the process, is ending, when the decision into effect, it means when convert it into effective action; because the success of the governmental institution or failure it depends on the effectiveness of the administrative process, and the process of decision-making is acceptable the measure (Al Shmma, 2007.137), and the provision of the effective resolution become during two factors, the first factor is the quality in light of the accuracy, costs, procedures and safety elements, the second factor is the admission with the frame of the convinced and satisfied elements, and with the sense and a desire to enforcement. Whereas, the total effectiveness of the decision and the possibility to measure it by three criteria (Bilal, 2005.304): The quality of decision, the accept of decision, and the suitable timing to the decision-making, the effectiveness of the decision is the result to the type of decision (quality)

multiplied by the degree of acceptance of decision by those who must enforce it, as (Hawari, 1997.99) has told that in order to be the decision effected, it should address to high, abstract and intellectual notions and to the notions of overall strategy with strong impact, it's not just decision in the silly subject and the decision must be the possibility of enforcement interfere into composition of the decision itself, it means that the decision is not just goodwill or decision which aimed to convince people to enforce it, but it becomes by its composition translated decision in the form of work although it grows with a highly more thought.

The effectiveness of decision-making relies on the possibility to choose best solution which available to the problem, this is being when the decision-maker gets a lot of information about the problem, and gets the alternatives and available options from different sources before taking the decision, the effective decision is taken by overall sight of the organization and its surrounding, it is not existed by confined sight to the local or temporal problem, or a temporary look, the reason that has commanded the decision-maker to predict the dangerous and the problems that arise from the decision-making, and the characters that causes, every alternative from available alternatives to the decision-maker must scrutinized to know the preference that involved (Canaan, 1999.313), and evaluating the effectiveness during the specific aims of the work and during the effective measures, with respect to the characteristics of effective decisions as follows (Imad Eddin, 1998.68 -69):

1. Taking into account the legitimacy of the decision so as to be within the general framework of the legislation in force in the state.
2. Follow the scientific method in all steps in the decision-making process that begins to know the case that you need to make a decision until the follow-up, implementation and evaluation.
3. Determine the appropriate time to make the decision and implementation.
4. Ensure the participation of subordinates in decision making, because they will be affected by it, leading to increased motivation to commit to it.
5. The use of modern techniques and methods, computer example, in the decision.
6. Avoid mistakes when make the decisions that the decision-maker has made it reluctance to be taken because of the recent experiences, and other reasons.

Methodology

This study is based on descriptive and analytical approach, which included a survey of librarians, by reference to the references and ready-made sources to build a theoretical framework for the study, and survey the field to collect the data by study tool (questionnaire), which has been built and distributed to the sample and analyzed statistically, to answer the questions of the study and testing its hypotheses, in order to achieve the objectives of the study, and make recommendations in light of what the study found as results.

Study Problem

The problem is represented in the lack of using E-government applications, and making of most decisions with the traditional applications, this is reflected positively or negatively on the success of the decision-making. So the focus on the opinions of the dealers with the government software is considered very important to determine the success and failure of E-government applications, then reflects this positively or negatively on the success of the decision-making, so; the problem of this study represented in answering the following main question: how E-government applications effect on the effectiveness of the decisions at the Ministry of Interior in Jordan?

Importance of Studying

The Importance of the study comes from the importance of the theme of the respondent, which is (The effect of E-government applications on the effectiveness of the decision-making), where the use of information and communication technologies in the government came in response to a bureaucratic, organizational hierarchy and communication issues in providing services to all dealers with government, as well as the availability of E-government applications which is considered as a strong indicator on the successful conduct of the administrative work, so; how to exploit E-government applications to improve administrative decisions and develop the quality of services provided is an important issue worth studying.

Study model

Figure (1) shows study variables

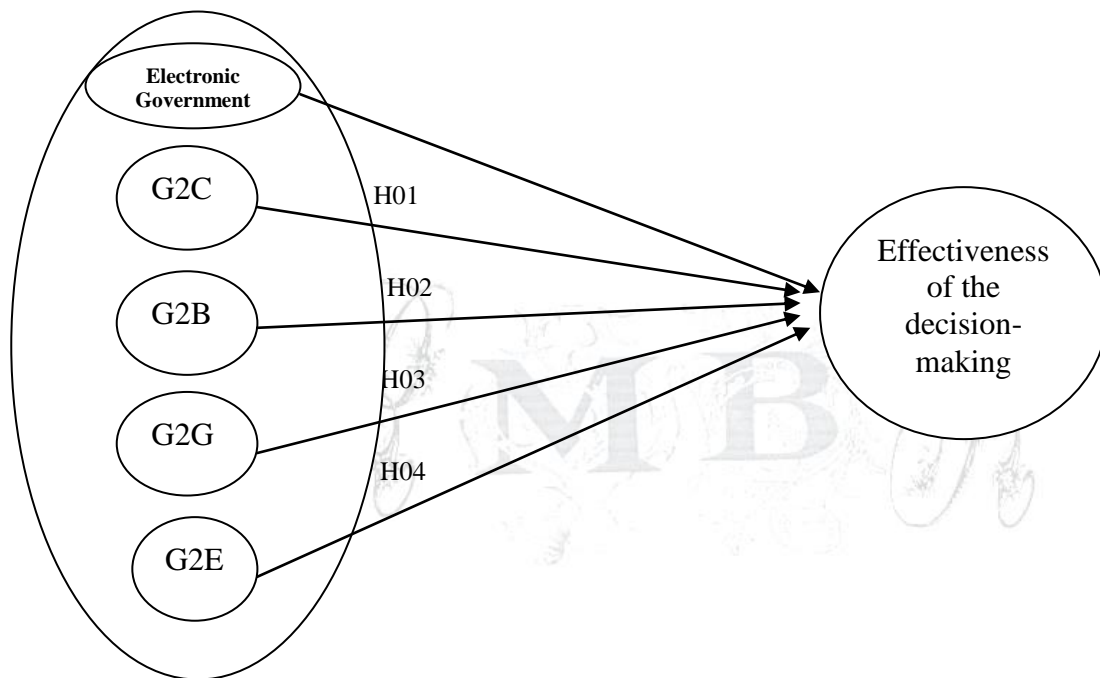


Figure (1) study model

Hypotheses

The main hypothesis (H0): there is no significant statistical effect at the level of significance ($\alpha \leq 0.05$) for E-government applications on the effectiveness of the decision- making at Interior Ministry- Jordan.

The main hypothesis segmented into four minor hypotheses, as follows:

H01) there is no significant statistical effect at the level of significance ($\alpha \leq 0.05$) for the application of E-government, "government-citizens" (G2C) on the effectiveness of the decision- making.

H02 there is no significant statistical effect at the level of significance ($\alpha \leq 0.05$) for the application of E-government "Government-to-Business" (G2B) to the effectiveness of the decision- making.

H03) there is no significant statistical effect at the level of significance ($\alpha \leq 0.05$) for the application of E-government, "government-government" (G2G) to the effectiveness of the decision- making.

H04) there is no significant statistical effect at the level of significance ($\alpha \leq 0.05$) for the application of E-government, "government-employees" (G2E) to the effectiveness of the decision- making.

Population and the Study Sample

The study population consists of occupants of the administrative functions for the Interior Ministry center in Jordan in each of the Nationality Directorate and the affairs of the Arabs and foreigners, Investment Directorate, Directorate of Human Resources, Information Technology Directorate is made up, including the governor, the district administrator, eliminating manager, department head and employees, totaling (297) male and female employees, the researchers studied the community fully where he distributed (297) questionnaires, (270) valid questionnaires recovered, where the ruled (27) questionnaire unfit for analysis, 67% of the sample were male and the rest were female.

Results

The Validity of the Study Tool

Table (1) the stability of the internal consistency coefficient of the dimensions of the E-government (using Cronbachs alpha).

#	dimension	Alpha
1	G2C	0.847
2	G2B	0.711
3	G2G	0.885
4	G2E	0.901
5	E-government	0.921
6	the effectiveness of decision- making	0.855

The table (1) shows that the value of "Alpha" ranging between (0.711) and (0.901), the value of the "Alpha" to all the paragraphs of the E-government amounted to (0.921) and the value for the effectiveness of decision- making (0.855), so the stability of this tool is acceptable for study, and the data collected is suitable for measuring variables, and submit to an acceptable degree of reliability.

Describe the variables of the study

Electronic government

Table (2) shows the averages and standard deviations; rank the relative importance of aspects of E-government.

#	dimension	Mean	Standard deviation	ranking	Relative importance
1	G2C	4.233	0.413	3	High
2	G2B	4.344	0.676	2	High
3	G2G	4.167	0.650	4	High
4	G2E	4.352	0.638	1	High
E-government		4.193	0.402		High

Note from the table (2) that the paragraphs of the E-government in terms of the relative importance is high, reaching the arithmetic mean (4.193) and standard deviation (0.402), and the application of (the Government of the staff) came in first place with an average (4.352) and standard deviation (0.638) and the relative importance of high, came while the application (government to government) the last rank average (4.167) and standard deviation (0.650) and the relative importance of high.

Effectiveness of decision-making

Table (3) Arithmetic means and standard deviations of the vertebrae effective decision-making process

#	Dimension	Mean	Standard deviation	Relative importance
	the effectiveness of decision-making	4.273	0.507	High

Note from the table (3) that the Relative importance for general average of the paragraphs of the effectiveness of the decision-making is high, where the overall average (4.273) and standard deviation (0.507).

Test and discuss the hypotheses of the study

The test of appropriate model

To test the suitability of the study data for the analysis of linear regression test were written, multiple linear correlation, and autocorrelation.

a. Multiple linear correlation tests.

We have been using Pearson correlation coefficients for the detection of multiple linear correlation problem between the variables of the study, Table (4) the correlation matrix for the variables of the study, where the correlation coefficient values between the study variable of (the effectiveness of the administrative decision) independent variables, all values are statistically significant and at the level of significance 0.01 (**), and is an indication of the presence of linear relationship between the dependent and independent variables of the study sample.

Table (4) Correlations Matrix

Dimension	G2C	G2B	G2G	G2E	result
G2C	1				No self-correlation
G2B	0.529**	1			No self-correlation
G2G	0.540**	0.663**	1		No self-correlation
G2E	0.541**	0.387**	0.576**	1	No self-correlation

Table (4) indicates that the highest correlation between the independent variables is (0.663) between the two variables (Government-to-Business) and (government to government), while the correlation coefficient between the other independent variable values was less than that, and this shows the lack of the a phenomenon of multiple linear correlation between the independent variables, where the link that connects to the top of (0.80) is considered an indication of the existence of this problem, so we say that the sample devoid of multiple high linear correlation problem.

B. Autocorrelation test

Which is known as the presence of correlation between the random error limits in the regression model, resulting in a bias in the value of Estimated Parameters, and thus weakening the ability of the model to predict. And be sure to test it (Durbin-Watson Test). This test is based on a comparison of D-W spreadsheet

for a sample size of N and its number of variables K with the result of the calculated D-W, where there are two values that are classified to count D-W and they are dl Minor Value and du Great value. Where they are refused the presence of autocorrelation problem if the value of D-W calculated is greater than (Montgomery, 2001). The results were as clarified in the following table:

Table (5) test autocorrelation problem

Hypotheses	D-W	DL	DU
H0-1	1.925	1.748	1.789
H0-2	1.900	1.748	1.789
H0-3	1.875	1.748	1.789
H0-4	1.823	1.748	1.789
H0	1.791	1.679	1.788

Note that the values of D-W of the variables in the hypotheses mentioned are all larger than du indicating the absence of data from the autocorrelation problem of the lack of any correlation between the random error limits in the regression model.

Test Hypotheses

Researchers use multiple linear regression to test the main hypothesis, and simple linear regression analysis for minor hypothesis the results as follows:

1. The first sub-hypothesis (1H0): there is no significant statistical effect at the level of significance ($\alpha \leq 0.05$) for the application of E-government (G2C) Government-citizens to the effectiveness of the decision- making.

Table (6) * Test the impact of the application of the results of government - citizens on the effectiveness of the decision-making

Dependent variable	R	R ²	f-statistics	Sig F*	Regression coefficients				
					independent variable	β	Std error	t-statistics	Sig*
the effectiveness of decisions	0.404	0.164	52.383	0.000	G2C	0.496	0.069	7.238	0.000

* The effect is statistically significant at the level of ($\alpha \leq 0.05$)

The results of (Table 6) showed that the independent variable the application of (government - citizens) has statistically significant effect on the dependent variable (the effectiveness of decision- making), where the F value calculated is (52.383), and the level of significance (Sig F = 0.000) which is less than 0.05, while the correlation coefficient (R = 0.404), which refers to the positive relationship between the two variables, in addition to the value of the coefficient of determination was (R² = 0.164) which indicates that 16.4% of the variation in (the effectiveness of decisions) can be explained by the variation in the (government - citizens), with all other variables constant.

The coefficient of regression ($\beta = 0.496$) it refers to the overall effect of the application (government - citizens) on the effectiveness of the decision-making managing, it has a significant effect, where the value of t is (7.238) and the level of significance (Sig = 0.000), and therefore reject sub-first hypothesis and accept the alternative hypothesis, which states that: There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) for the application of E-government (G2C) Government-citizens on the effectiveness of the decisions.

2. The second sub-hypothesis (2: H0): there is no significant statistical effect at the level of significance ($\alpha \leq 0.05$) for the application of E-government (G2B) Government-to-Business on the effectiveness of the decision-making.

Table (7) * Test the impact of the application of the results of Government-to-Business on the effectiveness of the decision-making process.

Dependent variable	R	R ²	F-statistics	Sig F*	Regression coefficients				
					Independent variable	β	Std error	t-statistics	Sig*
the effectiveness of decision-making	0.257	0.066	19.022	0.000	G2B	0.301	0.069	4.361	0.000

* The effect is statistically significant at the level of ($\alpha \leq 0.05$)

The results of (Table 7) indicate that the independent variable of the application of (Government-to-Business) has statistically significant effect on the dependent variable (the effectiveness of decision-making), where the value of F calculated is (19.022), and the level of significance (Sig F = 0.000) which is less than 0.05, while the correlation coefficient (R = 0.257), which refers to the positive relationship between the two variables, in addition to the value of the coefficient of determination was ($R^2 = 0.066$), that indicate that 6.6% of the variation in (the effectiveness of decision-making) can be explained by the variation in the (Government-to-Business), with the stability of all other constant variable.

The coefficient of regression ($\beta = 0.301$) it refers to the overall effect of the application (Government-to-Business) on the effectiveness of the decision-making managing, it has a significant effect, where the value of t is (4.361) and the level of significance (Sig = 0.000), and therefore reject sub-second hypothesis and accept the alternative hypothesis, which states that: There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) for the application of E-government (G2B) Government-to-Business to the effectiveness of the decision-making process.

3. Third sub-hypothesis (H03): there is no significant statistical effect at the level of significance ($\alpha \leq 0.05$) for the application of E-government (G2G) Government-Government to the effectiveness of the decision-making process.

Table (8) * Test the impact of the application of the results of the government - the government on the effectiveness of the decision-making process.

Dependent variable	R	R ²	F-statistics	Sig F*	Regression coefficients				
					Independent variable	β	Std error	t-statistics	Sig*
the effectiveness of decision-making	0.502	0.252	90.448	0.000	G 2 G	0.510	0.054	9.510	0.000

* The effect is statistically significant at the level of ($\alpha \leq 0.05$)

The results in table (8) indicate that the independent variable (the government - the government) has a significant effect on the dependent variable (the effectiveness of decision-making), where the value of F calculated is (90.448), and the level of significance (Sig F = 0.000), which is less 0.05, while the correlation

coefficient ($R = 0.502$), which refers to the positive relationship between the two variables, in addition to the value of the coefficient of determination was ($R^2 = 0.252$) and indicate that 25.2% of the variation in (the effectiveness of decision-making) can be explained by the variation in the (government - government), with the stability of all other constant or fixed variables. .

The regression coefficient ($\beta = 0.510$) it refers to the overall effect of the application (government - government) on the effectiveness of the administrative of decision-making, that has a significant effect, where the value of t is (9.510) and the level of significance ($\text{Sig} = 0.000$), and therefore, we reject third sub-hypothesis and accept the alternative hypothesis, which states that: There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) for the application of E-government(G2G) Government-Government to the effectiveness the process of the decision-making.

4. Fourth sub-hypothesis (H04): there is no significant statistical effect at the level of significance ($\alpha \leq 0.05$) for the application of E-government (G2E) Government – employees to the effectiveness of the decision-making process.

Table (9) * the results of test on the impact of application government- employees on the effectiveness of the decision-making.

Dependent variable	R	R ²	f-statistics	Sig F*	Regression coefficients				
					Independent variable	β	Std error	T-statistics	Sig*
the effectiveness of decision-making	0.583	0.340	137.885	0.000	G2E	0.462	0.039	11.742	0.000

* The effect is statistically significant at the level of ($\alpha \leq 0.05$)

The results of the (Table 9) highlights the independent variable of the application of (government - employees) has significant effect on the dependent variable (the effectiveness of decision-making), where the value of calculated is (137.885), at the level of significance ($\text{Sig F} = 0.000$), which is less 0.05, while the correlation coefficient is ($R = 0.583$), which refers to the positive relationship between the two variables, in addition to the value of the coefficient of determination was ($R^2 = 0.340$) and indicate that 34.0% of the variation in (the effectiveness of decision-making) can be explained by the variation in the (government - employees), with the stability of all other fixed variables.

The regression coefficient ($\beta = 0.462$) highlights that the application (government - employees) also has a significant effect on the effectiveness of administrative decision-making managing, where the value of t is (11.742) and the level of significance ($\text{Sig} = 0.000$), and therefore reject fourth sub hypothesis and accept the alternative hypothesis, which states that: There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) for the application of E-government(G2E) Government – employees to the effectiveness of the decision-making process.

The results of (Table 10) showed that the independent variables Government applications had significant statistical effect on the dependent variable (the effectiveness of decision-making), where the value of F calculated is (43.725), and the level of significance ($\text{Sig F} = 0.000$), which is less than 0.05, while the correlation coefficient ($R = 0.631$) refers to a positive relationship between the independent variables and the dependent variable, in addition to the value of the coefficient of determination was ($R^2 = 0.398$), pointing out that 39.8% of the variation in (the effectiveness of decision-making) can be explained by the variation in combined application of e-government.

To test the main hypothesis was used multiple regressions, and the results were as follows:

Table (10) the results of the main hypothesis test

Dependent variable	R	R ²	F-statistics	Sig F.	Regression coefficients				
					Independent variable	β	Std error	t-statistics	Sig t.
The effectiveness of decision-making	0.631	0.398	43.725	0.000	G2C	0.118	0.077	1.5333	0.126
					G2B	0.197	0.078	2.535	0.012
					G2G	0.333	0.074	4.526	0.000
					G2E	0.323	0.049	6.559	0.000

* The effect is statistically significant at the level of ($\alpha \leq 0.05$)

The regression coefficients (β) refers that the overall effect of the application (government- Business, government-government, government-employees) was a significant effect, where the values of t calculated statistically significant (Sig) is less than 0.05, the application (government- citizens) did not have a significant effect, where the value of t has a level of significance (Sig more than 0.05), so when you study the application of E-government combined, Accordingly; we reject the major hypothesis and accept the alternative hypothesis, which states that: there is statistically significant effect at the level ($\alpha \leq 0.05$) of E-government applications on the effectiveness of the decision-making process.

Conclusion

Results of the study indicated that The Ministry of Interior worked on well implementation of E-government applications, so as to ensure disseminating the information in proper way and time, which results in reducing the number of auditors in the Ministry, thus reducing the use resources, as well as achieving standards (effective decision-making) which appears from high level of availability. This result more effective decision-making, reduce bureaucracy and get rid of the cronyism that make decisions confined to a specific category and biased for personal interests. results of the study showed also that there is an effect of independent variables (E-government applications in all its four dimensions) on the dependent variable "most" is statistically significant at the significance level ($\alpha \leq 0.05$), which enhances the optimum utilization of the information provided by the E-government applications in the decision-making process, the preparation of decision-makers, rehabilitation properly to deal with the devices and extract the appropriate information to make effective decisions.

Recommendations

Researchers recommend Ministry of Interior to increase using E-government applications in all levels and functions for all services and activities in the Ministry, reinforce using of those applications in decision making with all its stages to enhance decisions effectiveness, and aware employees in the Ministry about how E-government applications can achieve effectiveness for the ministry services then citizens' satisfaction. Following our study model, future research can be conducted on the same ministry, other ministries, and other sectors using same or may use different indicators.

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