

**EFFECT OF E-GOVERNANCE IMPLEMENTATION TO IMPROVE
SERVICE OPERATIONS**

Analytical Study in Al-Najaf International Airport

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The present investigation focus on the effect of e-governance implementation to improve service operations, the main instrument of this study is the questionnaire. The study was implemented at Al-Najaf international airport in Iraq. A random sample was selected and statistical techniques were adopted such as structural equation modeling, correlation coefficients, and regression. the main result indicates that there is a positive impact of e-governance implementation on service operations.

Keywords:

E-governance , Resources, Technology, Process, People, Service Operations

1.Introduction

Since the 1950s, the world has developed into a world-dominated world economy (Giddens, 2018). This fact has been accepted by all world standards and people have tried to integrate it into airport operations (Wensveen, 2018). With the globalization of the aviation sector, those who have served in Iraqi airports have improved service delivery to customers and are still controlling the global rate of globalization. According to (Sangeetha & Rao, 2017), e-governance has a direct impact on improving the economy, providing services, and innovating around the world. It has played an important role in providing services by establishing e-governance through technological and connectivity advances.

E-governance has been largely supported by computer innovation and continuous improvement of the purpose of computers (Banerjee et al., 2016). Initially, the only purpose for computers was to handle, store and share data. Companies began using computers to manage information systems in the 1970s and have evolved into an important achievement in e-governance. The introduction of MIS in companies that have gradually penetrated the governance, currently referred to as e-governance or e-governance.

The establishment of technology in leadership was seen as a strategic step to improve service delivery and increase competition among the Government. New opportunities like network administration have evolved from the establishment of e-governance. In their study, (Glooda et al., 2015) states that e-governance has linked various government departments to citizens, business and other governments. A vivid example is the establishment of e-payroll in Iraq where airport employees can view their paychecks and keep records for their tax information (Armey et al., 2014). Nevertheless, the introduction of e-governance has not changed the ultimate role of the airports to the citizens and other people who use the airports. The only thing that has changed is an improvement of information dissemination and exchange (Kumar, 2015). Information needed by the airport users can now be quickly given and the feedback from the users can be received more effectively and with great speed.

Iraq has developed a national development strategy to help achieve the development goals of Iraq. To implement the National Development Strategy, the Government adopted an approach to e-governance (Marr, 2018). In Iraq, the e-government committee was established in 2008. The committee is chaired by the Minister

of science and technology and has representation from all ministries and the presidency. The role of the committee is to coordinate e-governance in Iraq and to manage emerging e-services within the government.

There has been a significant imbalance in e-governance among different countries in the world since electronic governance has become an important component of governance (Madon & Krishna 2018). The United States, European countries and some Asian countries have taken tremendous steps in establishing e-governance. However, some countries like Iraq have done a little in implementing e-governance though some sectors like government payment systems and e-training in schools have accepted it . With global change and globalization, e-governance is inevitable, and governments should maintain their systems within the framework of e-governance (Straker & Wrigley 2018). To maintain improved service delivery and technological change, airports in Iraq have adopted e-governance in their systems.

2. Literature Review

2.1. E-governance

The word governance comes from the Latin word (gubernatio) and the Greek word (kybernan) which meaning "to lead, to drive a ship or a car". Although it seems a new term since the middle ages there is a record of its use (Mayntz,2003). The French called gouvernance and with it they referred to the art of governing. In England, there is a record of the word governance since 1380. In Portugal, it was called governance (Stoker,1998) , In the dictionary edition of the Spanish language of the year 1803 was already written like that. In the last edition, The definition of governance is defined as "Art or way of governing which aims to achieve economic development, social and institutional support, promoting a healthy balance between State, civil society and the economy market and action and the effect of governing or governing. E-governance is a broader concept than public management electronic, which consists of the use of information and communication technologies for the diffusion and provision of public services. It is to make the Government accessible to the citizen whenever they wish (Heeks,2001).E-governance has so many solutions for environment, economic, social and operation as it shown in Figure 1.

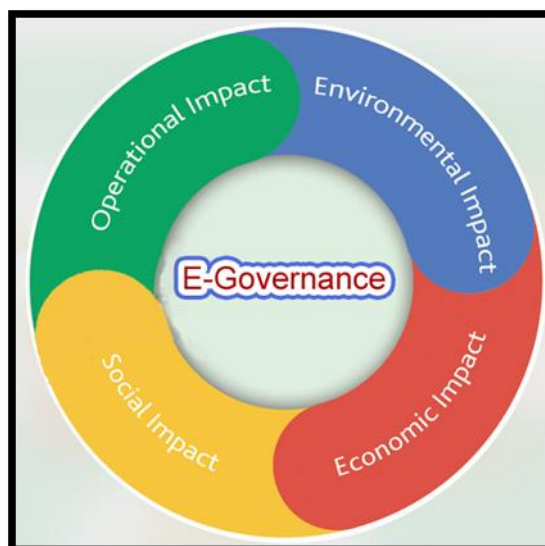


Figure: 1 E-Governance Solutions

The aim of the e- governance "to participate in the opportunities offered by the new information and communications technologies (NICT), integrating them into their procedures and objectives in order to increase their efficiency, effectiveness, economy and legitimacy. political and democratic nature "(López and Leal, 2002). E-governance seeks and has the function of improving the processes and procedures management in the

presence of ICT and the internet, by offering information and electronic services which should be more accessible, more relevant and responsive to the needs of the citizens, as the communication between institutions to improve their facet of consumed- of public services (Subirats, 2001). e-governance or electronic governance refers to the way in which they are taken the decisions while the Government is the way in which they are executed. As literature points out the provision of a service is a function of the Government while the decision to lend or not to do so is related to governance or good Government (Saxena,2005) . E-governance involves applying ICT by the airport authorities to deliver services, transact, exchange information, and integrate various services (Bhattacharya & Suri 2017). The objective of e-governance is to improve service delivery to citizens, other governments and businesses. The key dimensions of e-governance are resources, technology, process, and people as it shown in Figure 2.



Figure: 2 E-Governance Dimensions

2.1.1.Resources

A successful e-governance will require sufficient resources that the government will exploit with an aim to meet the requirement or the goal of e-governance. The primary requirement for a successful e-governance is that the workplace or the airport needs to be fully computerized (Dawes,2008). Computer, therefore, is the key resource that is required for e-governance. In this case, the computers will need to be connected to allow the continuation of online work (Allen et al.,2001). One other requirement which the system needs to have is an online workflow procedure. The second resource that will be important is it experts or trained persons. The operation of the software requires a trained person such that can be able to operate in adherence to the requirement. Training is therefore required for the employees such that they can be user-friendly to the software used in the airport (Coe et al.,2001). Additionally, airport services will require easy accessibility which means that the paper system needs to be removed and everything is made computerized for not only transparency but also speedy work (Finger & Pécoud,2003).

2.1.2.Technology

Technology is the key driving force for e-governance operation, both communication and information technology are applied such that the aims of e-governance can be achieved. Information and communication technology are utilized in delivering services within the Iraqi airport (Garson,2006). Other uses comprise of exchange of information, the interaction of various systems, communication interactions and in ensuring that services from the government easily access by the citizens and businesses (Schnoll,2015). Information technology which is mostly used in the operation of Iraqi airport has transformed the way people communicate work and live. The airport has reaped the advantages of utilizing information technology in improving its

services to the public (Bailey et al.,2017). Involvement in the use of information technology has not only let to increase public participation but have created trust on the government services. The potential of technology, therefore, becomes a solution to improving services to the public from the government. Online delivery or airport services has made the accessibility of the information easier to the public (Schnoll,2015).

2.1.3.Process

Process e-governance is a major issue that requires attention from the government, it is a sector which the airport organization has to seem to have forgotten and overlooked as well. Process E-governance can be described as the way at which the airport can consolidate its operation to meet the standard quality, rules and the guidelines as provided by the state law (Meijer,2015). Processes are initiated such that they can operate toward a common goal of the organization such as the Iraqi airport. E-governance is the ability to utilize information technology such that all efforts contributed by the employees can be targeted in achieving the key goals of the organization. Process e-governance functions by ensuring that there is the utilization of the available resources such that all services offered by the Iraqi airport can reach the public easily. The process will comprise the strategy, systematic and consistent activities which are integrated to achieve the goal of the airport (Hill,2015).

2.1.4.People

People refers to the employees and the citizens or the consumers of the services offered by the Iraqi airport. People or the employees serve at various sectors within the airport to ensure that e-governance is successful. Among the activities that are accomplish by individual is information gathering, provision of public information, stakeholders decision making within the operation of the airport (Banerjee et al.,2016). E-governance can only be supported by people who have a technical knowhow. For that reason, the government of Iraq organized a tour to India to study how India has implemented e-governance in its airports and the public sector. Over 10,000 officials in Iraq have been trained on e-governance (Ahmed et al.,2017).

2.2. Service operations

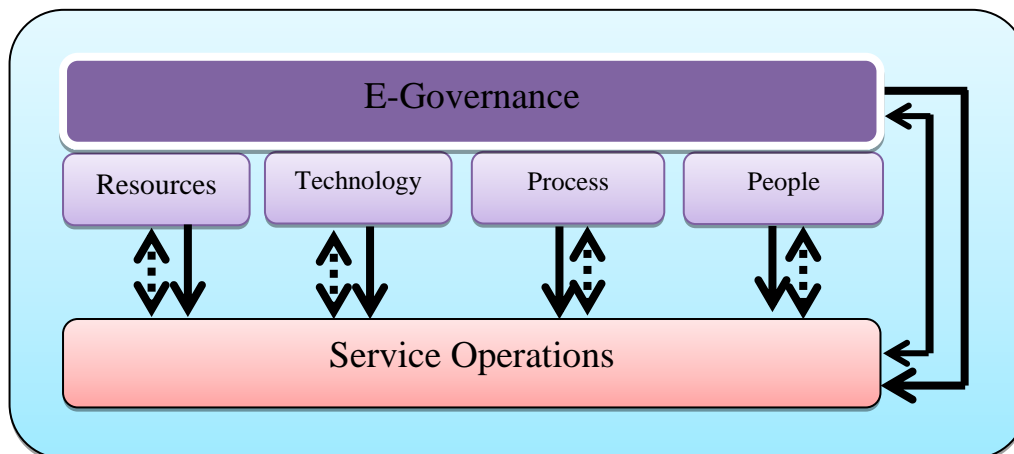
From a commercial point of view, both goods and services offer benefits or satisfaction and they are products. The vision of a product says that it is a set of attributes, tangible and intangible, physical , two in a special way. The broad vision says which is a set of attributes, tangible and intangible, that the buyer can accept for meet your needs and desires (Harvey,2016). So that, In the broadest sense, every product has intangible items, regardless of what occurs in the factory. The concept of service is not only defined as (what is given? And how do you give ?), but as the integration of these elements with the strategy of the company and the needs of customers. This definition will be very useful for the design of the service (Babich & Kouvelis,2015). From the above, it can be deduced that the service organizations are those that do not have as main goal the manufacturing of tangible products, that the buyers are going to permanently own; that is, the company is selling the service as the core of its offer to the market, which is aligned with the company's strategy and the needs of the customers (Harvey,2016).

Service operations in airport involves all the activities that are done with the aim of achieving the goals of the airport. They involve operating the systems of the airport and managing various departments of the airport (Graham 2013). Airports are always trying to improve the service operations to satisfy the customers and improve the lives of its employees. With external bodies and international standards regulating the airports in Iraq, service operations are improving on daily basis to conform to the international standards. The service operations are highly influenced by many factors. The service operations in the airports depend on the amount of resources allocated to the airports, technological advancements, the processes employed, and the technical knowhow of the people working in the airports.

3.Material and Methods**3.1.Instrument**

Depending on the discussion for previous studies and literatures , a theoretical model were proposed to explain the e-governance on the basis of its dimensions (resources, technology, process, people) that affect the service operations. The instrument used to collect the data were the questionnaire. The questionnaire consists of three parts. The first one belongs to respondents characteristics and the second part included the independent variable e-governance (EG), which consists of four basic dimensions (resources (RE), technology (TE), process (PR), people (PE)) , And the third part included the dependent variable service operations (SO), the conceptual framework is shown as in Figure 3 .

In order to test the reliability Cronbach alpha coefficient were calculated ,It is the first analysis to be carried out and its purpose is to verify to what extent the indicators measure what they should measure, in short to demonstrate and support the validity of the measurement scale. To carry it out, construct is analyzed the set of indicators that make up each one of them and the test was used as it shown in Table1, that proved acceptable value of reliability. The constructs have an acceptable level of reliability, all have a Cronbach's Alpha value greater than 0.7.

**Figure: 3 Conceptual Framework****Table: 1 Alpha Cronbach Model**

Var.	Item	Cronbachs Alpha
Resources	RE	0.944
Technology	TE	0.816
Process	PR	0.768
People	PE	0.882
E-Governance	EG	0.932
Service Operations	SO	0.822

3.2.Sample

The study was carried out in Al-Najaf international airport in Iraq. A random sample of 63 employees were selected. However, 80 were retrieved ,six were rejected to participate and complete the questionnaire. The number of completed questionnaires returned were 65, two were invalid and excluded from the sample, thus the final number of 63 questionnaires were used for analysis. Accordingly, the response rate was 78.7%. Therefore,

the sample size is sufficient to achieve the minimum required for data analysis. We finally obtained a total of 63 valid responses. This represents a sampling error of 4.3 % .

As antecedents of EG construct as independent variable, we consider four of the sub variables (RE,TE,PR and PE). these four variables effect the dependent variable SO which measured by ten items.

3.3.Demographic profile

Comparison of our sample with the official statistics showed it to be representative in terms of specialty, demographics. In particular, 90.5% of the respondents were male and (9.5 %) were women, the majority were (30-39) ages with (54%) with (22.2%) for less than 30, and the rest were (17.5%) for (40-49) and (6.3%) for (above 50). with regard to years of experience, 93.7 % of less than 10 years of experience which was the majority, and 6.3% with (20-40) years of working experience, and there was no records of above 20 years. Table 2 describes the demographic profile of respondents.

Table: 2 Demographic Profile

Characteristics	Frequency (N=76)	Percentage (%)
Gender		
Male	57	90.5%
Female	6	9.5%
Age		
Less than 30	14	22.2%
30-39	34	54.0%
40-49	11	17.5%
50- above	4	6.3%
Years of Experience		
Less than 10	59	93.7%
10-19	4	6.3%
20- above	0	0.0%

3.4 . Normality test

The normal distribution of the data is tested by the adoption of a program. The results in Table 3,4 indicate that the data follow the normal distribution. The values of the skewness and kurtosis coefficients were recorded between the (+1.96 ,-1.96) , Here are the conditions that are required, This is confirmed by the histogram graph of the data as shown in Figure 4.

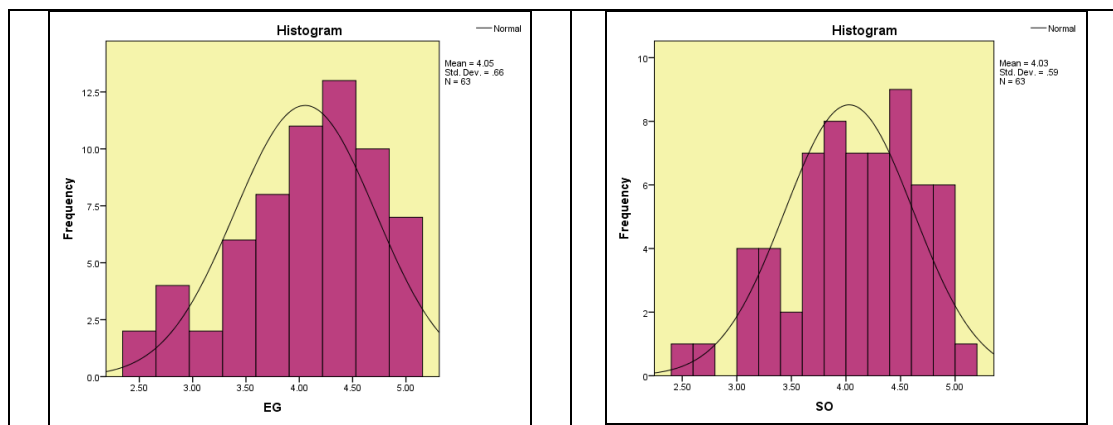
Table: 3 Normality Test for EG Data

Variable	min	max	skew	c.r.	kurtosis	c.r.
q16	2.000	5.000	-.914	-4.204	-.014	-.031
q15	3.000	5.000	-.872	-4.012	-.339	-.781
q14	2.000	5.000	-.988	-4.545	.236	.543
q13	1.000	5.000	-1.182	-5.438	.812	1.868
q12	2.000	5.000	-.842	-3.872	-.423	-.973
q11	2.000	5.000	-1.276	-5.869	1.393	3.205

q10	2.000	5.000	-1.114	-5.123	.744	1.712
q9	2.000	5.000	-1.166	-5.363	.721	1.658
q8	2.000	5.000	-.845	-3.888	-.084	-.193
q7	2.000	5.000	-.878	-4.038	.385	.887
q6	2.000	5.000	-1.097	-5.046	.515	1.184
q5	2.000	5.000	-1.044	-4.803	.697	1.603
q4	2.000	5.000	-1.269	-5.840	.772	1.776
q3	2.000	5.000	-1.288	-5.925	1.357	3.121
q2	2.000	5.000	-.758	-3.485	-.295	-.679
q1	3.000	5.000	-.789	-3.631	-.446	-1.026
Multivariate					88.434	20.763

Table: 4 Normality Test for SO Data

Variable	min	max	skew	c.r.	kurtosis	c.r.
Z10	2.000	5.000	-.878	-4.038	.385	.887
Z9	2.000	5.000	-1.276	-5.869	1.393	3.205
Z8	2.000	5.000	-1.166	-5.363	.721	1.658
Z7	2.000	5.000	-1.055	-4.852	-.029	-.067
Z6	2.000	5.000	-1.114	-5.123	.744	1.712
Z5	2.000	5.000	-.845	-3.888	-.084	-.193
Z4	2.000	5.000	-1.269	-5.840	.772	1.776
Z3	2.000	5.000	-1.044	-4.803	.697	1.603
Z2	2.000	5.000	-.758	-3.485	-.295	-.679
Z1	2.000	5.000	-1.288	-5.925	1.357	3.121
Multivariate					44.807	16.297

**Figure: 4 Normality Histogram for Data**

4. Results

4.1. Confirmatory Factor Analysis CFA

In order to test the model construction Amos software were used . And using confirmatory factor analysis (CFA) with (SEM) modeling of structural equations are statistical techniques can be used to reduce the number of observed variables of latent variables by examining the variance between them (James et al., 2006). The adequacy of this tools is most appropriately applied to measures the relationship that validity given the sample

data (Berne, 2012) .in order to accept the model it should meet the required conditions of (Good Fit Index) in addition of CFA condition which required above 0.40 loading. The condition appeared in Table 5.

Table: 5 Fit Indices for Modeling According to SEM

Fit Index	Acceptable Threshold Levels	Description
<i>Absolute Fit Indices</i> Chi-Square X2	Low χ^2 relative to degrees of freedom with an insignificant p value ($p > 0.05$)	
Relative χ^2 (χ^2/df)	2:1 (Tabachnik & Fidell, 2007) 3:1 (Kline, 2005)	Adjusts for sample size.
(RMSEA)	Values less than 0.07 (Steiger, 2007)	Has a known distribution. Favours parsimony. Values less than 0.03 represent excellent fit.
GFI	Values greater than 0.95	Scaled between 0 and 1, with higher values indicating better model fit. This statistic should be used with caution.
AGFI	Values greater than 0.95	Adjusts the GFI based on the number of parameters in the model. Values can fall outside the 0-1.0 range.
RMR	Good models have small RMR (Tabachnik and Fidell, 2007)	Residual based. The average squared differences between the residuals of the sample covariance and the residuals of the estimated covariance.
SRMR	SRMR less 0.08 (Hu& Bentler, 1999)	Standardized version of the RMR. Easier to interpret due to its Standardized nature.
<i>Incremental Fit Indices</i>		
NFI	Values greater than 0.95	Assesses fit relative to a baseline model which assumes no covariance between the observed variables. Has a tendency to fit in small samples.
NNFI (TLI)	Values greater than 0.95	Non-normed, values can fall outside the 0-1 range. Favours parsimony. Performs well in simulation studies (Sharma et al, 2005; McDonald and Marsh, 1990)
CFI	Values greater 0.95	Normed, 0-1 range.

Source : Daire H., Joseph C., Michael R. Mullen, Structural Equation Modeling: Guidelines for Determining Model Fit, Journal of Business Research Methods Volume 6 Issue 1 2008 .

4.1.1. EG Model

The model of variable EG includes four variables with 16 items , according to SEM techniques for the confirmatory factor analysis (CFA) , the model in Figure 5 does not meet the required conditions and not good to measure this variable, so it need to modify the model by using (modification indices) . So the acceptable model be as it shown in Table 6 and Figure 6.

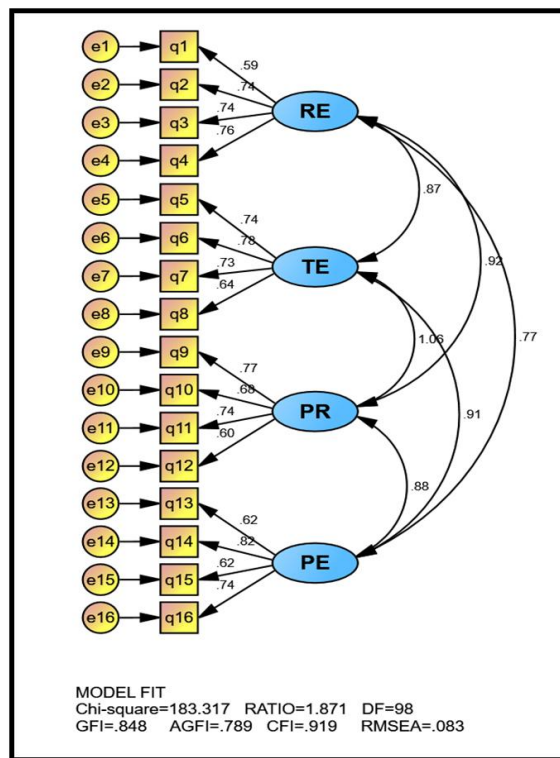
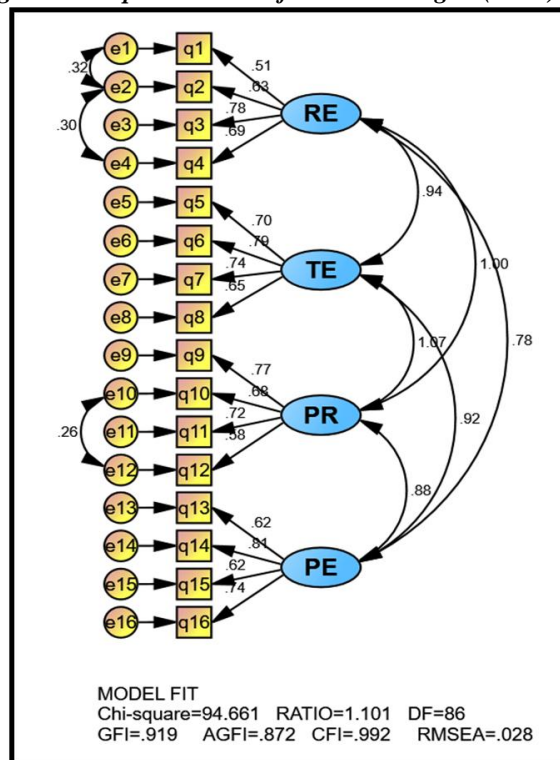
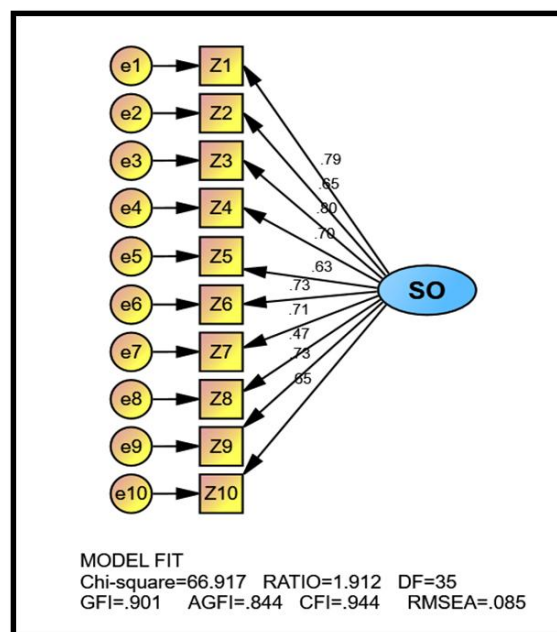
*Figure: 5 Proposed model of EG according to (SEM)**Figure: 6 Modified model of EG according to (SEM)*

Table: 6 Indicators for Modified Model for EG

Indicator	Value	Condition
Chi/DF	1.101	Support
GFI	0.919	Support
AGFI	0.872	Approximately Support
RMSEA	0.028	Support
CFI	0.992	Support

4.1.2. SO Model

The model of variable SO includes 16 items , according to SEM techniques for the confirmatory factor analysis (CFA) , the model in Figure 7 does not meet the required conditions and not good to measure this variable, so it need to modify the model by using (modification indices) .So the acceptable model be as it shown in Table 7 and Figure 8.

*Figure: 7 Proposed model of SO according to (SEM)*

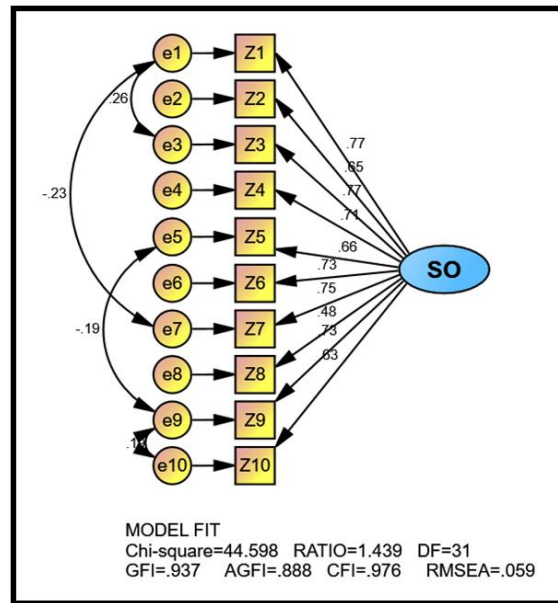


Figure: 8 Modified model of SO according to (SEM)

Table: 7 Indicators for modified model for SO

Indicator	Value	Condition
Chi/DF	1.439	Support
GFI	0.937	Support
AGFI	0.888	Approximately Support
RMSEA	0.059	Support
CFI	0.976	Support

4.2. H1 Hypothesis

According to the results that shown in Table 8 it is clear that there is a positive significant correlation relationship between EG and SO with value of (0.805), and this relationship is significant depending on the value of the statistic ($T=10.590$), which appeared to be greater than the value of the T table, And this result is supported according to the value of the level of significance which is acceptable which require that the value (<0.05). This result supported the hypotheses (H1). regarding the dimensions it is appeared that there is a positive significant correlation relationship between RE and SO with value of (0.601), and this relationship is significant depending on the value of the statistic ($T=5.871$), which appeared to be greater than the value of the T table, And this result is supported according to the value of the level of significance which is acceptable which require that the value (<0.05). This result supported the hypotheses (H11). Also there is a positive significant correlation relationship between TE and SO with value of (0.424), and this relationship is significant depending on the value of the statistic ($T=3.652$), which appeared to be greater than the value of the T table, And this result is supported according to the value of the level of significance which is acceptable which require that the value (<0.05). This result supported the hypotheses (H12). And there is a positive significant correlation relationship between PR and SO with value of (0.790), and this relationship is significant depending on the value of the statistic ($T=10.076$), which appeared to be greater than the value of the T table, And this result is

supported according to the value of the level of significance which is acceptable which require that the value (<0.05). This result supported the hypotheses (H13). Finally the result indicate that there is a positive significant correlation relationship between PE and SO with value of (0.846), and this relationship is significant depending on the value of the statistic ($T=12.404$), which appeared to be greater than the value of the T tabled, And this result is supported according to the value of the level of significance which is acceptable which require that the value (<0.05). This result supported the hypotheses (H14).

Table: 8 Correlation Coefficient Results

Var.	r	T	Sig	Hypothesis
RE	0.601**	5.871	0.000	Supported
TE	0.424**	000	0.001	Supported
PR	0.790**	000	0.000	Supported
PE	0.846**	000	0.000	Supported
EG	0.805**	000	0.000	Supported
T 0.01 = 2.390 T 0.05 = 1.671				

4.3. H2 Hypothesis

According to the results that shown in Table 9 it is clear that there is a positive effect of EG on SO , The regression coefficients were recorded as ($\alpha=1.109$), ($\beta=0.720$), which indicates that the value of the effect slope reached (0.720). and there is an explanation of the value of (64.8%) for any change in the dependent variable, because the value of the interpretation coefficient recorded a value of (0.648), and the regression is significant depending on the value of the statistic ($F=112.149$), which appeared to be greater than the value of the F tabled, And this result is supported according to the value of the level of significance which is acceptable which require that the value (<0.05). This result supported the hypotheses (H2). And the simple regression equation is as follows: $SO = 1.109 + 0.720 EG$.

Regarding the dimensions the results were as follow:

❖ There is a positive effect of RE on SO , The regression coefficients were recorded as ($\alpha=2.317$), ($\beta=0.408$), which indicates that the value of the effect slope reached (0.408). and there is an explanation of the value of (36.1%) for any change in the dependent variable, because the value of the interpretation coefficient recorded a value of (0.361), and the regression is significant depending on the value of the statistic ($F=34.471$), which appeared to be greater than the value of the F tabled, And this result is supported according to the value of the level of significance which is acceptable which require that the value (<0.05). This result supported the hypotheses (H21). And the simple regression equation is as follows: $SO = 2.317 + 0.408 RE$.

❖ There is a positive effect of TE on SO , The regression coefficients were recorded as ($\alpha=2.464$), ($\beta=0.375$), which indicates that the value of the effect slope reached (0.375). and there is an explanation of the value of (17.9%) for any change in the dependent variable, because the value of the interpretation coefficient recorded a value of (0.179), and the regression is significant depending on the value of the statistic ($F=13.338$), which appeared to be greater than the value of the F tabled, And this result is supported according to the value of the level of significance which is acceptable which require that the value (<0.05). This result supported the hypotheses (H22). And the simple regression equation is as follows: $SO = 2.464 + 0.375 TE$.

❖ There is a positive effect of PR on SO , The regression coefficients were recorded as ($\alpha=1.356$), ($\beta=0.663$), which indicates that the value of the effect slope reached (0.663). and there is an explanation of

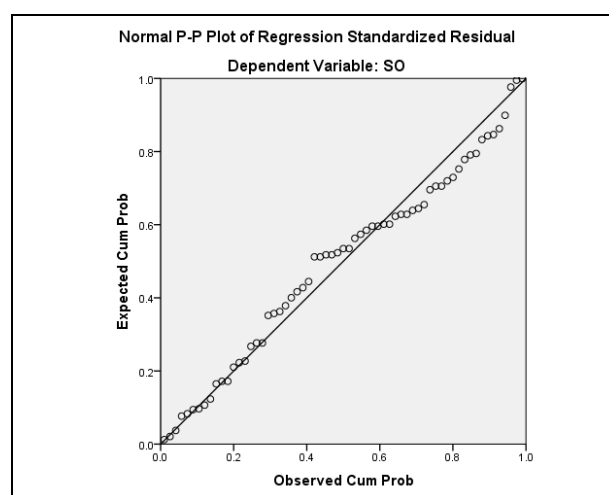
the value of (62.5%) for any change in the dependent variable, because the value of the interpretation coefficient recorded a value of (0.625), and the regression is significant depending on the value of the statistic ($F=101.525$), which appeared to be greater than the value of the F tabled, And this result is supported according to the value of the level of significance which is acceptable which require that the value (<0.05). This result supported the hypotheses (H23). And the simple regression equation is as follows: $SO = 1.356 + 0.663 PR$.

❖ There is a positive effect of PE on SO , The regression coefficients were recorded as ($\alpha=1.913$), ($\beta=0.554$), which indicates that the value of the effect slope reached (0.554). and there is an explanation of the value of (71.6%) for any change in the dependent variable, because the value of the interpretation coefficient recorded a value of (0.716), and the regression is significant depending on the value of the statistic ($F=153.866$), which appeared to be greater than the value of the F tabled, And this result is supported according to the value of the level of significance which is acceptable which require that the value (<0.05). This result supported the hypotheses (H24). And the simple regression equation is as follows: $SO = 1.913 + 0.554 PE$.

Table: 9 Regression Results

Var.	B0	B1	R2	F	Sig
RE	2.317	0.408	0.361	34.471	0.000
TE	2.464	0.375	0.179	13.338	0.001
PR	1.356	0.663	0.625	101.525	0.000
PE	1.913	0.554	0.716	153.866	0.000
EG	1.109	0.720	0.648	112.149	0.000
Ft 0.01 (1,61) = 7.077 Ft 0.05 (1,61) = 4.001					

Overall the linearity of the relation appeared in Figure 9

**Figure: 9 Linearity of the Relationship**

5. Discussion and Conclusion

E-governance is a system that illustrates a worldwide revolution concerning the accessibility of information upon the utilization of information and communication technology. The introduction of the internet, personal computer, and mobile phones are among the things that have assisted citizens to access the information. The implication of the introduction to the above tools has led to the influence on the way people interacts, communicates and learn. Most of the governments of the developing world have recognized the importance of e-governance. A properly designed and an implemented e-governance can result in easy and quality service delivery by the government. The implementation of the system also simplifies the compliance of government regulation. In this way, the participation of the citizen's increases and the services from the government will be trusted. The impacts of e-governance include the cost saving for citizens, businesses and the government itself. It is therefore crucial for policymakers and the managers of different organization such as the Iraqi airport to adopt e-governance to better their performance.

The implementation of e-governance in a state will strengthened the service delivery to the citizens from the government. The system has the potential to improve the services or how the government operates not only internally but also how it serves its customers. E-governance exceeds a tool that is used to improve the cost minimization in terms of offering services to the public. The system is described as an instrument for reforms that aims at transforming the operation of the government. This is a system that changes the way government delivers services to the public. It is primarily the automatization and making the information available to the public online. This will increase the accessibility and improves the participation of the public.

Good governance is characterized by being strategically innovative and using the latest technology to solve the current issues. E-governance does not only help the airports in Iraq compete with other international airports but also improve service operation (Wahida et al., 2015). With e-governance services in airports are readily available at a high speedy and with great efficiency. Evidently, e-governance in Iraqis airports has enabled aviation service providers, passengers, businesses and airport employees air their views without following any hierarchical policies, thus enhancing promoting collaborative spirit in the aviation sector (Hakkak et al., 2018). Moreover, e-payments have improved service delivery to airport employees and passengers by reducing the time taken in booking flight tickets and queuing in banks to pay for flights and receive salaries.

Further, digitalization has improved how airport managers work and learn new skills, thus improving service delivery (Ismail, & Abbas, 2015). Not just leading in airports, digitalization has enabled e-governance among managers and air traffic controllers in the airports through publications made in Iraq. The airport officials are gaining a lot of knowledge through video conferencing and through the internet using search engines such as Google. The knowledge they gain is used in governing operations in the airports thus improving service delivery.

E-governance improves the operations in the airports in Iraq. Therefore, technological advancements are required to enable e-governance and improved the service operations offered by the airports. The result has shown that e-governance offers significant outcomes in improving service operation in the airports. E-governance has resulted from improvement international aviation standards and the need to keep in pace with the other nations. Rapid change in the technological advancements presents airports with various opportunities, threats, and constraints which can easily be addressed by improving the service through e-governance implementation.

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