

# Hungarian University of Agriculture and Life Sciences Doctoral School of Economic and Regional Sciences

# THE ROLE OF E-GOVERNMENT IN ENHANCING THE ORGANIZATIONAL EFFECTIVENESS

# CASE STUDY: SYRIAN INVESTMENT AGENCY (SIA)

Ph.D. Thesis

Ahmad Juratli

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Hungarian University of Agriculture and Life Sciences, Hungary							
Name of Doctoral School:	Doctoral School of Economic and Regional Sciences						
Discipline:	Management and Business Administration Sciences						
Head of Doctoral School:	Prof. Dr. H.c. Popp József, DSC						
	Corresponding member of the Hungarian Academy of Sciences						
	Hungarian University of Agriculture and Life Sciences						
	Institute of Economic Sciences						
Supervisor:	Prof. Dr. József Poór DSc,						
	Professor Emeritus						
	Hungarian University of Agriculture and Life Sciences						
	Selye János University, Slovakia, Full Professor						

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**Approval of Supervisors** 

**Approval of Head of Doctoral School** 

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# **1. BACKGROUND OF THE WORK AND ITS AIMS**

#### 1.1. Introduction

The expansion of knowledge and research at the end of the last century and in all areas of life led to the emergence of many concepts and strategies that changed the foundations of excellence and success (BERGER et al., 2005). The huge increase in the amount of data available has created an urgent need to develop integrated systems of this information using new and modern methods capable of Dealing with the latest state-of-the-art technology capable of processing data and storing and retrieving a huge amount of information (OTIKE, 2013).

Therefore, developed countries have been alerted to the importance of having electronic sites through which they seek to provide various services to the beneficiaries electronically and in a manner that achieves success and reduces the cost of time and effort as well as reducing the material costs of transactions for both governments and citizens (BHATNAGAR, 2004). In its strategies and objectives, most governments adopted the concept of e-government as one of the most important tools, which have contributed to the success and effectiveness of their work. They have made many efforts and budgets to carry out the necessary infrastructure (TADROS and ASSEM, 2006).

The implementation of the concept of electronic government will help change the traditional pattern of government and non-governmental services from a bureaucratic nature to dynamic and interactive electronic services (ABERBACH and CHRISTENSTEN, 2007). In the reconstruction phase, Syria will help to empower the knowledge-based industries, in order to develop the local ICT sector, (PANTJADARMA, 2004) develop a competitive environment, to improve the chances of education, stimulate social development and effective cooperation between the public and private sectors, by providing an encouraging environment for investors and overcome challenges and obstacles (CLINTON and GORE JR, 1993), which will positively affect the promotion of domestic investment and attracting more foreign investment, providing accurate information to decision-makers regarding long-term plans and development projects, which will clearly contribute to the reconstruction process in Syria, by focusing on the government sector (FREEAR, 2016).

Syrian Investment Agency has been chosen as a sample of this study, where the SIA is considered as one of the most important agency in Syria taken into consecration the assets amount and its operations (COMMERCIAL BANK OF SYRIAN CBS, 2019).

This study is divided into three main sections, the preliminary framework for study, the theoretical framework and then the practical framework of study.

The research framework will discuss the research methodology, the research problem, the research hypothesis, the research model, the research tool and the previous studies used in the research.

While the theoretical framework (literature) is related to the study variables that will be discussed by dividing this framework into two main topics, each subject investigates the fundamental variable in the study.

The practical framework is the statistical study of the research sample and the suggested model in order to reach the results than to consider the recommendations.

# **1.1.1.** Motivations of the research

The reconstruction process needs to increase the use of information and communication technology ICT among Syrian society and the percentage of skilled workers as well as the opportunities for a better pioneering culture and growth in local technology projects.

The increasing potential and skills of ICTs and thus the opportunity of society as a whole to become an active participant in the knowledge economy, thus providing the Syrian people with a better standard of living in the future. This will create opportunities to attract more foreign investment.

Due to the above-said reasons, a change in the government functions should be adjusted in order to get the maximum beneficial interaction with the available information, which is related to the needs of the society. The Syrian Investment Agency is the field of this research.

By interviewing different groups of employees within this organization, regarding the methodological implications discussed in this research. Based on the answers, the formulation of the questions can contribute to clarifying the problem of the study

The methodological frame of study in the light of its theoretical framework and its field of implications requires the design of a hypothesis model in table 1 that refers the study variables, reflecting the temporary solutions proposed by the researcher to answer the research questions raised in the problematic. This Table includes some previous literature with measures used for both variables E-government and organizational effectiveness.

Studies	<b>E-Government</b>	Organizational Effectiveness
	Measurements	Measurements
AL-SHALABI and AL-)	Viability – Security - Privacy	Organizational Effectiveness
(KHAWALDA, 2016		
(CORDELLA, 2010)	Viability	Organizational Effectiveness
(ZHAO et al., 2008)	Privacy	Organizational Efficiency
(IRFAN and IBRAHIM, 2017)	Viability	Organizational Effectiveness
(PANDEY and GEETIKA, 2013)	Viability - Security	Organizational Efficiency
(KAREEM and HASEENI, 2015)	Viability - Security	Organizational Efficiency
(AL ZOUBI et al., 2011)	Viability – Security - Privacy	Organizational Effectiveness
(RANA et al., 2013)	Viability – Security - Privacy	Organizational Efficiency

#### Table 1 Measurement of variables in some related literatures

Source: Authors' own research (2021)

This study is based on many models that discussed the link between E-government and the organizational effectiveness through different and limited dimensions for each variable, as referred to in the previous table. The added value and the objective of this study are making a new model that gather a group of dimensions for each variable to identify the relationship between E-government and the organizational effectiveness, particularly for the ethics dimension which has not been studied before in the local literature (Syrian context)

Which will be discussed widely in the methodology of the study, and presenting these relationships and influences in the results that lead to proving or negating the hypotheses of the study. After that to understand the nature of the relationship between E-government and organizational effectiveness. Then to identify the nature of the moral impact of the application of E-government in the variables of organizational effectiveness

# 1.1.2. Research objectives

This study based on a model that aims to examine the relationship between E-government and organizational effectiveness. The objectives of this study can be precisely defined as follows:

- Constructing a model that represents the relationships of the variables study and their different effects, and presenting these relationships and influences to the results that lead to proving or negating the hypotheses of the study.
- Understand the nature of the relationship between E-government and organizational effectiveness.
- To identify the nature of the impact of the application of E-government in terms of (Viability, Security, Privacy) on the organizational effectiveness in terms of (Organizational Effectiveness, Organizational Efficiency, Organizational Ethics).

# 1.1.3. Research problems

The research problem stems from that Syria currently is living in the reconstruction stage and needs to increase the use of information and communication technology ICT in the Syrian society that increase the percentage of skilled workers, as well as enhance the IT culture, that helps to become an active factor in the knowledge economy, which provide the Syrian people with a better standard of living in the future during creating new opportunities to attract more foreign investments.

Based on the above reasons, should adopt the E-government system in order to get the maximum of beneficial interaction with the available information, which is related to the society's needs. The problems of this study represented in the following questions:

- How does the E-government in terms of (Viability, Privacy, Security) impact on the organizational effectiveness in terms of (Effectiveness)?
- How does the E-government in terms of (Viability, Privacy, Security) impact on the organizational effectiveness in terms of (Ethics)?
- How does the E-government in terms of (Viability, Privacy, Security) impact on the organizational effectiveness in terms of (Efficiency)?

In addition, the study will answer the following questions:

- Is there a relationship between E-government implementation and organizational effectiveness?
- Does the SIA's management have awareness of applying the E-government?

# 1.1.4. Research importance

The importance of the research stems from the important role of the E-government itself as it will have the basic role in the reconstruction phase through the community's readiness to develop it through the development of applications and benefiting communities from local change and communication system (local area network, broadband network and e-payment). The development of electronic legislation and finally the implementation structures as the following aspects:

- The importance of the organization is one of the most important governmental institutions in Syria, and also is one of three governmental institutions that applied the E-government in Syria.
- Providing a theoretical and field framework that links E-government with organizational effectiveness. This link represents an added value of interest. In particular, there is a shortage of available studies in Syria and the regional area.
- Provide scientific foundations on which the organization in question can be based on the research population by determining the relationship between E-government and organizational effectiveness.
- Addressing one of the topics that are of particular importance in all organizations and all dimensions of E-government and its impact on organizational effectiveness

# 1.1.5. Research hypotheses

In this section, tried to issue the hypothesizes depending on the goals of the research and as the three main hypotheses that are being tested in this research and developed by several previous studies that have been studied the impact of electronic management in enhancing the organizational effectiveness as:

ZENG (2016), has tested viability of the electronic management which led the individuals to choose electronic self-service delivery methods over more traditional methods of service delivery for government services and that's make the organizational to be more Ethical which developed in this research as the hypothesis (H1.2 and H2.2).

Even CORDELLA and WILLCOCKS (2012), has tested the viability of the organization and the nature of the service delivered and the socioeconomically development supported by it are constantly shaped by the negotiation that occurs among the different actors involved and the consequent changes the organizational effectiveness itself and it has been modified to fit this research in the hypothesis (H3.2), and ZHAO et al. (2008) has tested another dimension of E-government which is privacy and the communicating for social impact on organizational efficiency which (H1.1,and H3.1) build it on ZHAO et al. (2008) research.

Another dimension was studied by (IRFAN and IBRAHIM, 2017) when his study examines the role of the viability of E-governance in administrative efficiency and combating corruption which (H1.2

and H2.2) build it on this model, But PANDEY and GEETIKA (2013) was trying to understand the most factors that impact on organizational efficiency in marketing view and he found that Viability and Security of the e-governance are the most important factors for the end user (H1.1and H1.3).

KAREEM and HASEENI (2015) was agree on his study, But AL ZOUBI et al. (2011) found out that the privacy is important as much as Viability and Security and how effect on the firms performance as the hypothesis (H1.3 and H3.3).

Most of the previous studies were qualitative researches and data were collected mainly from secondary sources, so the topic tried to merge all dimensions of E-government to find out which is more important and which one has more effect on the dimension of organizational effectiveness? Especially that the research studying this impact for a new sample. Also, not all the researchers studied all the impacts between the dimensions of the study variables.

Therefore, the study relied on a set of main and subsidiary hypotheses that are based on those previous studies and that is will be our added value for all those previous studies:

And based on literatures, the hypotheses will be shown in figure 1 as the following:

<u>**H1:</u>** There is a significant impact for E-government characteristics on organizational effectiveness.</u>

The main hypothesis is derived from the following hypotheses:

- H1.1- There is a significant impact for viability on organizational effectiveness.
- H1.2- There is a significant impact privacy for on organizational effectiveness.
- H1.3- There is a significant impact for Security on organizational effectiveness

**<u>H2</u>**: There is a significant impact for E-government characteristics on organizational ethics.

The main hypothesis is derived from the following hypotheses:

- H2.1- There is a significant impact for viability on organizational ethics.
- H2.2- There is a significant impact for privacy on organizational ethics.
- H2.3- There is a significant impact for security on organizational ethics

**<u>H3</u>**: There is a significant Impact for E-government characteristics on Organizational Efficiency:

The main hypothesis is derived from the following hypotheses:

- **H3.1**-There is a significant impact for viability on organizational efficiency.
- H3.2-There is a significant impact for privacy on organizational efficiency.
- H3.3-There is a significant impact for security on organizational efficiency.

#### **Figure 1 Research hypotheses**

Source: Authors' own research (2021)

#### 1.2. Assessment of the reality of E-government in Syria

The social and developmental burdens in Syria have become very large after the war that started in 2011. These burdens can be revealed through (MINISTRY OF COMMUNICATION TECHNOLOGY MOCT, 2005):

- The resources available in the public treasury are weak,
- The increasing number of citizens and their needs,
- Inability to achieve social development goals,
- The weakness of important economic sectors in facing the challenges of regional and international competition,
- Keep up with local competition only,
- Weak relationship between the government and the private sector,

All of the above has led the Syrian government to the necessity of activating the role of E-government in its institutions, which is the main tool for achieving a successful development.

In the year 2004, the Syrian government took care of and strengthened the national initiative for Egovernment and encouraged the automation of government institutions according to a comprehensive program that aims to enable administrative reform in institutions to ensure that citizens and institutions are served in parallel in addition to increasing the effectiveness of human resources through the use of modern technologies (ALSAEED et al., 2014). Accordingly, the Ministry of Communications and Technology MoCT signed a Memorandum of Understanding with the United Nations Program through the Project of Government Services Rehabilitation GCR, which aims to reinforce the previously mentioned initiative, which included:

- Inventory the government services which are available in the institutions and determine priorities,
- Study the current reality of documents in order to be classified electronically,
- Setting a vision and strategy for the E-government project.

### 1.3 Literature review & hypothesis development

The current chapter deals with reviewing the literature on the concept of implementing Egovernment as an independent variable according to specific dimensions: privacy, security and viability, and their relationships with the dependent variable, which is organizational effectiveness according to specific dimensions, which are organizational efficiency, organizational effectiveness, and organizational ethics.

Based on the previous references, it is necessary to refer to what are the basic rules and strategies upon which the concepts of E-government are built, what are the mechanisms of transition from traditional frameworks to the technical level, the reasons for the transition, in addition to reference to the requirements for the application of E-government in emerging countries according to specific stages

And then studying the effect of applying E-government on organizational activities in terms of the above-mentioned organizational dimensions.

### **1.3.1. Electronic Government, Independent variable**

In the last few years, the world has witnessed tremendous development in information and communication technology at various levels. This has had a great impact on the people, their style and their approach to management, and it is, therefore, necessary to examine the influential administrative and psychological elements of the technology (BÉLANGER and CARTER, 2008), Many organizations have begun to adopt the concept of e-management around the world, whether in developed or developing countries, by presenting their information on the Internet and many of the internal transactions are done through the Intranet, and thus allowed the networks to the organization and its customer's opportunities to communicate Away from complex bureaucratic procedures (HEEKS, 2003).

Modern information and communication technologies have changed many of the concepts and administrative principles. This is why most countries have introduced these new techniques into administrative mechanisms and the rigid administrative structures, especially those that provide services to citizens (KING, 2009).

Modern information and communication technologies play a major role in contemporary administrative work, as a mechanism of modern management that must be adapted to administrative work, and one of the basic resources of these structures in dealing with global conditions and developments characterized by rapid change and fierce competition, To overcome bureaucratic difficulties on the one hand and to adapt to the nature of the age and its electronic products on the other (MONTAGNA, 2005).

The electronic government was applied in miniature and in simple ways and did not reach the official picture until late, starting in late 1995 in Florida, USA, in the Central Post Office. The concept of

electronic government shows that the person can access the services through the computer without going to the institution (KING, 2009).

In this research, it uses viability, privacy, and security, which are the most influential elements in the achievement of electronic management and importance according to the laws that used in Syria. However, before starting to get acquainted with the concept of e-management, it is important to note some of the fundamental issues on which e-governance depends primarily on its applications and work properly.

# 1.3.2. Organizational effectiveness, Dependent variable

It cannot talk about a developing, developed and ongoing organization without accurately determining the degree of effectiveness of the foundations on which it was built, the extent of its efficiency and its ability to achieve its objectives, and this, of course, depending on all concerned parties of the administration and the owners and workers and their behavior and professional ethics. The success of business organizations is determined by their ability to compete and ensure their existence and continuity. This can only be achieved through their efficiency and effectiveness, in addition to adhering to high professional ethics. This combination represents a cornerstone for the organization and nurtures its competitive position as competitive advantages. Solid which is difficult to simulate by competing enterprises (SIN and ALAN, 2000). Therefore, this study will try to shed light on the efficiency, effectiveness, and ethics of the institution from the point of view of the stakeholders, through target questions, what is efficiency means, what are the different types of efficiency, what is effectiveness, and what are the different approaches to its study, and How is the ethics of the institution arise and what is its importance?

# 2. MATERIALS AND METHODS

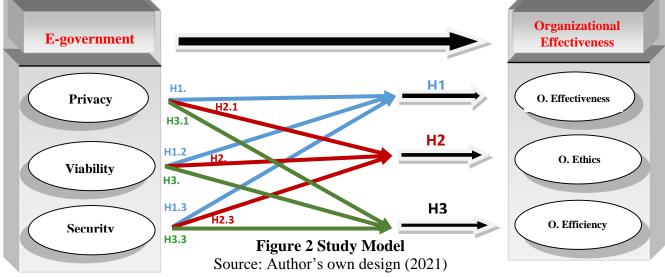
# 2.1. Research methodology

After developing the hypotheses in chapter five, which have been supported and based on the reference studies which relate to this study, this chapter introduces how to test the research hypotheses, considering that, the main objective of this study is to examine the perceptions of the study sample, which is one of the government agencies that implemented the E-government project, which focused on the impact of applying E-government on the available organizational effectiveness in this institution. In addition, this chapter will explain how the study chooses its sample and data sources. It also illustrates the measurement of the dependent variable and the independent variables that will be used in the following chapters through ANOVA analysis. This chapter continues as follows: It describes the criteria for selecting the sample used. How the data were collected, defines the statistical techniques that should be used to test hypotheses that related to the research questions.

# 2.1.1. Study Model

Within the methodological framework of the study, and in light of its theoretical framework and the field of its connotations, a hypothetical model was designed, Figure 2, which indicates the logical relationship between the study variables, also reflects the temporary solutions proposed by the researcher for the answer, as the research posed some questions to clarify the problem. The study model represents a set of hypotheses that are based on:

- The possibility of measuring each of the study variables.
- Comprehensiveness and testability of the model.
- The fluctuations of consistency with the characteristics of the organization



This model of three variables dimensions was discussed by (CORDELLA and WILLCOCKS, 2012), (ZHAO et al., 2008), (BABBIE, 2007), (YIN and HOLLWECK, 2016). The following equation present the general modal of E-government (Privacy, Security, and Viability) to predict the dependent variables of the organizational effectiveness (Organizational Efficiency, Organizational Ethics, and Organizational Effectiveness)

#### **Organizational Effectiveness =**

# a + $\beta$ 1 Privacy (PRI) + $\beta$ 2 Viability (VIA) + $\beta$ 3 Security (SEC) + e

Table 2	Study	variables
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Independent Variable	Dependent Variables				
• Privacy (PRI)	Organizational Effectiveness (EFF)				
• Viability (VIA)	• Organizational Ethics (ETHIC)				
• Security (SEC)	• Organizational Efficiency (OE)				

Source: Author's own survey (2021)

#### 2.1.2. Study Methodology

The research is planned to answers the questions of research and reflected the problem of research competently. Thus, this research employed the descriptive approach, as one of the scientific methods of collecting data, a method that depends on the study of phenomenon, as it exists in reality. It is concerned as a precise description and expressed in quantitative terms. The qualitative expression describes the phenomenon and explains its characteristics, giving a numerical description of the extent of this phenomenon, size, and degrees of correlation with another phenomenon.

# 2.1.2.1. Study sample

The study population is represented by SIA. The main aim understands the nature of the relationship between E-government and organizational effectiveness, which has no enough studies to cover the current problems. The study sample has included a random sample of employees and managers in SIA, in order to obtain accurate statistics of the employees' number in each branch of SIA. Also, the study seeking to distribute the questionnaires for each of the targeted bodies of SIA in the Syrian governorates, so the sample community will be about 150 employees, and the sample was 110 employees.

#### **2.1.2.2. Data collection tools**

- Theoretical Framework: in order to obtain the data and information required to support the study's objectives and to contribute the MODAL test and the hypotheses of the study, the theoretical side has relied on many sources represented by scientific references such as books, studies, conferences, Syrian governmental websites of the formal Syrian ministries, and researches that related to the topic of the study that covered the vocabulary of the aspect theoretical study.
- Practical Framework: the following methods were used in order to collect the data required for the study: Questionnaire form as a main tool in data collection by distributing (110) questionnaires to the study sample employees in SIA, where answering on a set of written questions about the research topic without the researcher's help. The number of retrieved forms reached (99) questionnaires.

#### **2.1.2.3.** Arbitration and validation of the questionnaire:

The questionnaire was based on previous studies (SMITH et al., 2010a), (ZACK et al., 2009), (SCHEIN, 2004), (AL ZOUBI et al., 2011). The questionnaire was redesigned as required by the present study. This study is based on two sources by collecting the data needed to complete this study: secondary data and primary data:

- Secondary Data: will be obtained from the available literature and the results of some studies related to the subject of the study, with the aim of completing the theoretical framework and setting hypotheses in the study.
- Primary Data: The research relied on two tools to measure the results; the first one is a questionnaire that was distributed for the study sample.
- The questionnaire was designed and developed to cover the different study variables, which included: Section 1: General demographical information about the characteristics of the sample.

Section 2:

- The first axis of organizational effectiveness includes six paragraphs.
- The second axis of organizational ethics includes eight paragraphs.
- The third axis of organizational efficiency includes seven paragraphs.
- The fourth axis of viability includes six paragraphs.
- The fifth axis of privacy includes four paragraphs
- The sixth axis of security includes fife paragraphs.

The researcher distributed 110 questionnaires to the employees of SIA; the returned questionnaires were 99, which means that the response rate was 90 %, which is a high rate. As shown in the following, table 3

Name of Institution	Number of	Distributed	Received	Response
	Employees	Questionnaires	Questionnaires	Rate
SIA	150	110	99	90 %

 Table 3 Rate of the distributed and received questionnaires in SIA

Source: Author's own survey (2021)

The questionnaire distribution process was required more time and effort from the researcher because of depending on the interviewing method to clarify the questionnaires, thus providing sufficient time and atmosphere for responders for freedom of expression about their opinion.

# 2.1.2.4. Statistical methods used in the study

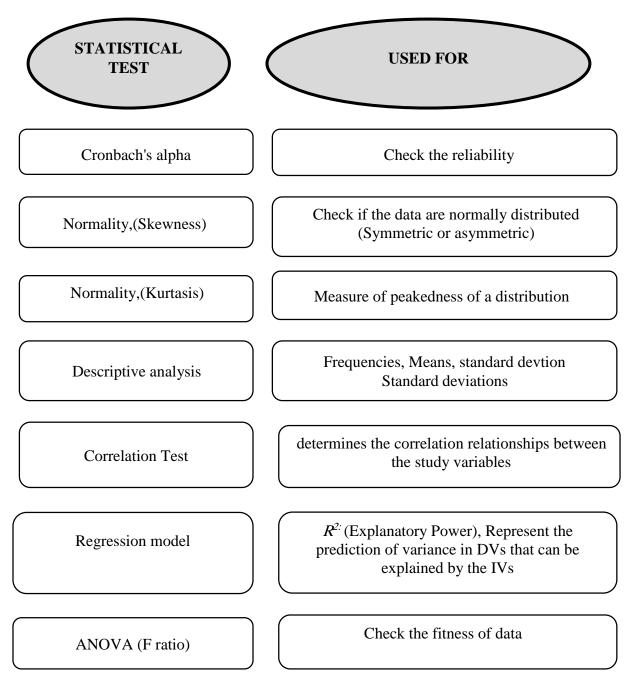
In order to test the study model and its hypotheses, a set of statistical methods have been used, and the statistical program (S.P.S.S-25 - For Windows) has been employed. The statistical methods are:

- Frequency percentages, to calculate the sample distribution.
- The arithmetic mean, and the standard deviation, to rank the responses of the sample, which was used in describing and diagnosing the study variables and their dimensions.
- Alpha Cronbach coefficient, to measure the stability of the study.
- Correlation analyses, which was used to determine the strength and nature of the relationship between the study variables
- Multiple regression analysis test and ANOVA, which are used to determine the significant effect of the independent variable on the dependent variable.

In addition, through the statistical study, it became clear that the linear formula was the best to show the form of the relationship between the study variables.

In general, the study variables and their effects can be considered of great importance in creating a meaningful match between the research sample and its environment and providing the necessary requirements to achieve the objectives.

In the following figure, 3 illustrates the statistical tests that will be used in the current study and the target of usage for each one.



# Figure 3 Statistical tests and the purpose of usage

Source: Authors' own research (2021)

#### 2.2. Case study, Syrian investment agency (SIA)

The Syrian Investment Agency (SIA) was created pursuant to Legislative Decree No. 9 of 2007 in conjunction with the legislative decree No. 8/2007 for the Encouragement of Investment, which has legal personality and financial and administrative independence and is linked to the Syrian Prime Minister, Also SIA is one of the three public institutions which applied the E- system in its administration to facilitate investors' transactions, for that, this study depended the SIA to be case study.(COMMISSION OF SYRIAN STATE PLANNING SOSSP, 2005), the main vision of SIA is creating an investment environment conducive to sustainable development, While its primary mission is encourage and facilitate the flow of investments to contribute the economic and social development.

#### 2.2.1. Reality of human resources in SIA

The total number of vacancies has been increased recently to be 150 vacancies in SIA, from various fields (except employees who are working in SIA as representatives and behalf of Syrian ministries and other public bodies), 110 employees in the central administration, that located in Damascus, 40 employees in seven branches distributed in the Syrian governorates that related to administration of SIA directly, and it's important to refer that 69 Males that equal 46 % of employees, and 81 Females that equal 54 %, (SYRIAN INVESTMENT AGENCY SIA, 2015).

# 3. RESULTS AND DISCUSSIONS

# **3.1. Introduction**

This chapter presents the results of the data analysis. This chapter presents sampling characteristics for the sample study SIA, which shows the reliability and validity of each variable, descriptive analysis such as frequencies, means, and standard deviations. Then, it presents the normality test throw Skewness and Kurtosis to that confirm if the data are typically normally distributed or not. In additional, this chapter presents an analysis of variance (ANOVA), finally, it shows the multiple regression model and testing hypotheses.

#### **3.2. Instrument reliability**

As the topic mentioned previous, it is important to confirm that the validity of the questionnaire items (Instrument validity).

In the next chapter, the reliability of the instrument of this study was tested using Cronbach's alpha that shows the reliability coefficient for all variables according to depending researchers, taking in the considerations to standard values that refer to acceptable when the Alpha standard are between 0.6 and 0.7, and the reliability will be high if the stander will be above 0.7.

The tests will be before and after the distributing the questionnaires as the following:

# 3.2.1. Tests before the distributing the questionnaires

Apparent validity tests: in order to ensure the validity of the questionnaire in measuring the study variables, where the questionnaire was initially tested to prove its validity by presenting it to a group of experts who are specialists in administrative sciences. They gave their opinions regarding the ability of the questionnaire in measuring the study variables and its dimensions, in addition to their opinions regarding the clarity and accuracy of the questions from the scientific point of view. Accordingly, there were approval points and other points that needed to be modified to be clearer to the respondents, and accordingly some deletions, modifications, and additions were made to showing the final questionnaire which achieved the majority positively of respondents in the same time it is consistent with the study hypotheses.

#### **3.2.2.** Tests after distributing the questionnaires:

It is necessary to ensure the reliability of the questionnaire elements (Instrument Validity). This chapter examined the reliability of the study tool and verify the authenticity of its contents after distribution to the respondents in addition to showing the reliability coefficient of the overall variable by measuring the stability of the questionnaire and measuring the internal consistency between the questions that express the study variables and that reflect the values of the positive or negative significant correlations, which means the strength or weakness of the interpretation of the questions, as the next:

• Measuring of the Instrument Reliability: To knowing the validity and consistency of the scale, the Cronbach alpha scale was used in all the axes of the questionnaire, and it was found that the Cronbach alpha coefficient was as shown in Table No 4, as the following: Organizational Efficiency (0.88), Organizational Ethics (0.82), Organizational Effectiveness (0.70), Viability (0.76), Privacy (0.85), Security (0.82)

**Table 4 Alpha Cronbach and cross correlations** 

Variables	Μ	SD	1	2	3	4	5	6
Organizational Efficiency (OE)	3.88	0.82	(.88)					
Organizational Ethics (ETHIC)	3.90	0.59	.313**	(.82)				
Organizational Effectiveness (EFF)	4.00	0.53	.095	.407**	(.70)			
Viability (VIA)	4.30	0.53	.327**	.387**	.316**	(.76)		
Privacy (PRI)	4.23	0.67	.410**	.454**	.204*	.379**	(.85)	
Security (SEC)	4.23	0.57	.320**	.797**	.443**	.439**	.337**	(.82)

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Source: Author's own survey (2021)

The above table shows that the alpha coefficient was (0.85) for the total level of the first variable (E-Government), for the second variable (Organizational Effectiveness), the alpha coefficient is (0.836), which is a very good level for both variables, which is a high evidence of stability, according to (SEKARAN and BOUGIE, 2016), which indicates that if the criterion is above 0.60 it is acceptable in social research.

• Measuring Internal Consistency: To measure the internal consistency was made between the dimensions of the study variables, and all these relationships were indicative and graded from weak to medium strength. As in the previous table above 21

# 3.3. Normality (Skewness and Kurtosis)

Evaluate the normality of data is a main condition before the tests statistically, because the normal data (normal distribution) is a main assumption for parametric testing (SEKKA, 2019b)

# 3.3.1. Skewness

In statistical tests, the normal state of the data must be evaluated and this is a necessary condition, since the normal distribution is a basic assumption for the parametric testing, and accordingly the skewness and kurtosis must be used to test the normal state (SEKKA, 2019a).

According to INTERNATIONAL MONETARY FUND (2018), indicates that skewness is the ratio of deformation from asymmetrical bell curve or normal distribution in a set of data. The acceptable range for describing the normal state is  $\pm$  1.96. Any value outside this range indicates that the data are abnormal and asymmetric (HAIR et al., 2006)

#### **Table 5 Skewness**

	Efficiency	Ethics	Effectiveness	Security	Privacy	Viability
Skewness	-1.537	-1.124	-1.024	-1.702	-1.136	936
Std. Error of Skewness	.243	.243	.243	.243	.243	.243

Source: Author's own survey (2021)

As present in the previous Table No.5, all variables' skewness values place within the range  $\pm$  1.96, which refer that all variables' data are normally distributed.

In addition, kurtosis is the measure, which used to describe the distribution (KENTON, 2019),

### 3.3.2. Kurtosis

Kurtosis is a measure to combine the weight of a distribution's tails according to the distribution' center., on another hand,  $\pm 2.58$  is the acceptable range to describe the normality of data, and out of this range, the data is not normal (HAIR et al., 2006).

#### **Table 6 Kurtosis**

		Efficiency	Ethics	Effectiveness	Security	Privacy	Viability
	Kurtosis	2.267	1.517	2.036	1.840	.770	2.260
	Std. Error of Kurtosis	.481	.481	. 481	. 481	. 481	. 481
~	4 (1 )	(2021)					

Source: Author's own survey (2021)

Table 6, shows the Kurtosis values for all dimensions, which refer that all values locate in the standard range  $\pm 2.58$  and refer to the normality of data distribution.

#### 3.4. Test the study model and hypotheses

In order to identify the impact of the independent variables represented by E-government and its three dimensions (VIA, PRI, and SEC) on the dependent variable represented by organizational effectiveness and its three dimensions (organizational efficiency, organizational ethics, organizational effectiveness), in the study sample, the Syrian Investment Agency. The research will verify the validity of the hypothetical model of the study according to some statistical tools and methods that have been chosen to conduct the analysis on the study variables as follows:

# **3.4.1.** Correlation test

Following the descriptive processes that depended on the data of the descriptive analysis, this topic determines the correlation relationships between the study variables, as shown in the table 7

Dimensions of E-government									
Dependent Variable	Viability	Security	Privacy	index					
Organizational Efficiency	.320**	.327**	.410**	.465**					
Organizational Effectiveness	.443**	.316**	.204*	.407**					
Organizational Ethic	.797**	.387**	.454**	.704**					

Table 7 The Correlation coefficient between dimensions of study variables, (N = 99)

\*\*Significant at (0.01) level

\*Significant at (0.05) level

Source: Author's own survey (2021)

According to previous table, the data indicate to:

- There are significant correlations between the dimensions of E-government and organizational effectiveness (the first dimension of the dependent variable) and all of them were of significant and medium strength. The evidence for this is through the values of the correlation coefficient that were shown in the previous table at a significant level (0.01).
- There are significant correlations between the dimensions of E-government and organizational ethics (the second dimension of the dependent variable), and they were all significant, moderate to high strength, and this is evidenced by the values of the correlation coefficient that shown in the previous table at a significant level (0.01) and (0.05).
- There are significant correlations between the dimensions of E-government and organizational efficiency (the third dimension of the dependent variable), and all of them were of significant and medium strength, and the research found it through the values of the correlation coefficient that shown in the above table at a significant level (0.01).

Accordingly, these results reflect the following:

- Acceptance of the first main hypothesis that indicates: There is a correlation between the dimensions of the independent variable represented by E-government (Viability, Privacy, Security), with organizational effectiveness (the first dimension of the dependent variable), and this includes the acceptance of all three sub-hypotheses stemming from this first main hypothesis
- Acceptance of the second main hypothesis that indicates: There is a correlation between the dimensions of the independent variable, E-government (Viability, Privacy, Security), with the organizational ethical (the second dimension of the dependent variable), and this includes accepting all three sub-hypotheses stemming from this second main hypothesis.
- Acceptance of the third main hypothesis that indicates: There is a correlation between the dimensions of the independent variable, E-government (Viability, Privacy, Security), with the organizational efficiency (the third dimension of the dependent variable), and this includes the acceptance of all three sub-hypotheses stemming from this third main hypothesis.

# 3.4.2 Regression test

In addition to the systematic treatments of the three study hypotheses, the research will discuss this topic, and analyze the influence relationships between the study variables. It is worth noting, when performing the collinearity test relationship test, it was found that most of the (VIF) values are less than 10, which means that there is no collinearity problem, as it is according (NETER et al., 1990), the problem of linear multiplicity occurs whenever the value of (tolerance) approaches (0) and the value of (VIF) approaches (10), According to the three main hypotheses and their sub-hypotheses, this effect was tested, and the research reached results according to the following:

Models	M1 H1.1	M2 H1.2	M3 H1.3	M4 H2.1	M5 H2.2	M6 H2.3	M7 H3.1	M8 H3.2	M9 H3.3
	VIB- EFF	PRI- EFF	SEC- EFF	VIB - ETHIC	PRI - ETHIC	SEC- ETHIC	VIB- OE	PRI - OE	SEC- OE
R <sup>2</sup>	.196	.043	.10	.63	.206	.15	.103	.168	.107
ANOVA (F)	23.713	4.211	10.769	168.435	25.133	17.085	11.165	19.633	11.596
Sig	.000 <sup>b</sup>	.043 <sup>b</sup>	.001 <sup>b</sup>	.000 <sup>b</sup>	.000 <sup>b</sup>	.000 <sup>b</sup>	.001 <sup>b</sup>	.000 <sup>b</sup>	.001 <sup>b</sup>
Mean Square	5.398	1.143	2.746	21.570	6.995	5.091	6.802	11.093	7.037
Coefficients (B)	.427	3.396	.313	.854	.395	.426	.479	.498	.500
t	4.870	2.052	3.282	12.978	5.013	4.133	3.341	4.431	3.405
Sig	.000	.043	.001	.000	.000	.000	.001	.000	.001

# Table 8Regression Analyses:

Source: Author's own survey (2021)

Based on the table No.8, which include the models of study:

• Modal 1: Impact of viability on organizational effectiveness, shows that viability has a significant positive impact on organizational effectiveness. Moreover, as it is seen in ANOVA analysis, the model was significant (p<0.01), and the F value was (23.713).

On the other hand, the viability's ability to explain organizational effectiveness in our model was relatively low since  $R^2$ =.196, however, is an acceptable percentage for social researches (SEKARAN and BOUGIE, 2016). The  $R^2$  value explained 19.6% of the changes that occurred in organizational effectiveness, whereas 80.6 % of the differences in organizational effectiveness is related to other factors. Based on what was mentioned above, it could accept the first sub hypotheses (H1.1) that says there is a significant impact between the E-government's viability and organizational effectiveness; however, this impact was relatively weak.

✓ H1.1- There is a significant impact for viability on organizational effectiveness.

# • Modal 2: Impact of Privacy on organizational effectiveness, shows that,

The privacy has a significant positive impact on organizational effectiveness. Moreover, as it is seen in ANOVA analysis in the above, the model was significant (p<0.01), and the F value was (4.211) with a freedom degree (1, 98). And, the privacy's ability to explain organizational effectiveness in our model was relatively low since  $R^2$ = .043, however, is an acceptable percentage for social researches (SEKARAN and BOUGIE, 2016). The  $R^2$  value explained 4.3 % of the changes that occurred in organizational effectiveness, whereas 95.7 % of the differences in organizational effectiveness is related to other factors. Based on what was mentioned above, it could accept the second sub hypotheses (H1.2) that says: there is a significant impact between the E-government's privacy and organizational effectiveness; however, this impact was very weak.

✓ H1.2- There is a significant impact for privacy on organizational effectiveness.

# • Modal 3: Impact of Security on organizational effectiveness, Shows that,

The security has a significant positive impact on organizational effectiveness. Moreover, as it is seen in ANOVA analysis, the model was significant (p<0.01), and the F value was (10.769) with a freedom degree (1, 98). And, the security 's ability to explain organizational effectiveness in our model was relatively low since  $R^2$ =.10, however, is an acceptable percentage for social researches (SEKARAN and BOUGIE, 2016).

The R<sup>2</sup> value explained 10.0 % of the changes that occurred in organizational effectiveness, whereas 90 % of the differences in organizational effectiveness is related to other factors. Based on what was mentioned above, it could accept the third sub hypotheses (H1.3) that says: there is a significant impact between the E-government's security and organizational effectiveness; however, this impact was relatively weak.

✓ H1.3- There is a significant impact for security on organizational effectiveness

# • Modal 4: Impact of Viability on organizational ethics, Shows that,

The viability has a significant positive impact on organizational ethics. Moreover, as it is seen in ANOVA analysis. the model was significant (p<0.01), and the F value was (168.435). And, the viability 's ability to explain organizational ethics in our model was relatively high since  $R^2$ =.63, however, is an acceptable percentage for social researches (SEKARAN and BOUGIE, 2016). The  $R^2$  value explained 63 % of the changes that occurred in organizational effectiveness, whereas 37 % of the differences in organizational effectiveness is related to other factors. Based on what was mentioned above, it could accept the first sub hypotheses (H2.1), that says: there is a significant impact between the E-government's viability and organizational ethics; however, this impact was high.

✓ H2.1- *There is a significant impact for viability on organizational ethics.* 

# • Modal 5: Impact of Privacy on organizational ethics, Shows that,

The privacy has a significant positive impact on organizational ethics. Moreover, as it is seen in ANOVA analysis, the model was significant (p<0.01), and the F value was (25.133). And, the privacy's ability to explain organizational ethics in our model was relatively low since  $R^2 = .206$ , however, it is an acceptable percentage for social researches. The  $R^2$  value explained 20.6 % of the changes that occurred in organizational ethics, whereas 79.4 % of the differences in organizational ethics is related to other factors. Based on what was mentioned above, it could accept the second sub hypotheses (H2.2) that says: there is a significant impact between the E-government's privacy and organizational ethics; however, this impact was relatively weak.

✓ **H2.2-** *There is a significant impact for privacy on organizational ethics.* 

#### • Modal 6: Impact of Security on organizational ethics, Shows that,

The security has a significant positive impact on organizational ethics. Moreover, as it is seen in ANOVA analysis in the table No. 42, the model was significant (p<0.01), and the F value was (17.085), And, the security's ability to explain organizational ethics in our model was relatively low since  $R^2$ =.15, however, is an acceptable percentage for social researches. The  $R^2$  value explained 15 % of the changes that occurred in organizational ethics, whereas 85% of the differences in organizational ethics is related to other factors. Based on what was mentioned above, it could accept the third sub hypotheses (H2.3) that says: there is a significant impact between the E-government's security and organizational ethics; however, this impact was relatively weak.

✓ H2.3- There is a significant impact for security on organizational ethics.

#### • Modal 7: Impact of Viability and organizational efficiency, Shows that,

The viability has a significant positive impact on organizational efficiency. Moreover, as it is seen in ANOVA analysis, the model was significant (p<0.01), and the F value was (11.165) with a freedom degree (1, 98). And, the viability's ability to explain organizational efficiency in our model was relatively low since  $R^2$ =.103, however, is an acceptable percentage for social researches. The  $R^2$  value explained 10.3 % of the changes that occurred in organizational efficiency, whereas 89.7 % of the differences in organizational efficiency is related to other factors. Based on what was mentioned above, it could accept the first sub hypotheses (H3.1) that says: there is a significant impact between the E-government's viability and organizational efficiency; however, this impact was relatively weak.

# ✓ **H3.1-** *There is a significant impact for viability on organizational efficiency.*

# • Modal 8: Impact of Privacy on organizational efficiency, Shows that,

The privacy has a significant positive impact on organizational efficiency. Moreover, as it is seen in ANOVA analysis, the model was significant (p < 0.01), and the F value was (19.633) with a freedom degree (1, 98). And, the privacy 's ability to explain organizational efficiency in our model was relatively low since  $R^2$ =.168, however, is an acceptable percentage for social researches (SEKARAN and BOUGIE, 2016). The  $R^2$  value explained 16.8 % of the changes that occurred in organizational efficiency, whereas 83.2 % of the differences in organizational efficiency is related to other factors Based on what was mentioned above, it could accept the second sub hypotheses (H3.2) that says: there is a significant impact between the E-government's privacy and organizational efficiency; however, this impact was relatively weak.

✓ H3.2- There is a significant impact for privacy on organizational efficiency.

#### • Modal 9: Impact of Security on organizational efficiency, Shows that,

The security has a significant positive impact on organizational efficiency. Moreover, as it is seen in ANOVA analysis, the model was significant (p<0.01), and the F value was (11.596) with a freedom degree (1, 98). And, the security 's ability to explain organizational efficiency in our model was relatively low since  $R^2$ =.107, however, is an acceptable percentage for social researches. The  $R^2$  value explained 10.7 % of the changes that occurred in organizational efficiency, whereas 89.3 % of the differences in organizational efficiency is related to other factors. Based on what was mentioned above, it could accept the third sub hypotheses (H3.3) that says: there is a significant impact between the E-government's security and organizational efficiency; however, this impact was relatively weak.

✓ **H3.3-** *There is a significant impact on security on organizational efficiency.* 

# • Modal 10: coefficients and ANOVA with organizational effectiveness

The research also calculated multiple regression for the three dimensions of E-government together with the overall organizational effectiveness as shown in the next table No.9

#### **Table 9 ANOVA**

Model St		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.293	3	4.098	44.131	.000 <sup>b</sup>
	Residual	8.821	95	.093		
	Total	21.113	98			

a- Dependent Variable: effectiveness

b- Predictors: (Constant), viability, privacy, Security

Source: Author's own survey (2021)

The previous table shown presents, F ratio in ANOVA forms whether the overall multiple regression model. The Table shows that  $R^2$ = .582 that the Independents variables predict statistically significantly the dependent variable, F = 44.131, P<0.05. So, the regression model is a good fit.

#### **Table 10 Coefficients**

		Unstandardized Coefficients		Standardized Coefficients		
	Model	В	Std. Error	Beta	t	Sig.
1	(Constant)	.717	.298		2.408	.018
	Security	.115	.067	.133	1.729	.051
	Privacy	.191	.050	.278	3.795	.000
	viability	.458	.064	.543	7.196	.000

a. Dependent variable: organizational effectiveness

Source: Author's own survey (2021)

Return to the unstandardized coefficients B in the above Table No. 10, putting all the variables together in the regression model, to predict organizational effectiveness from E-government (Privacy, Security, and Viability).

# Organizational Effectiveness = a + $\beta 1$ Privacy (PRI) + $\beta 2$ Viability (VIA) + $\beta 3$ Security (SEC) + $\epsilon$ Organizational Effectiveness = .717+ (0.191\* PRI) + (0.458\* VIA) + (0.115\* SEC) + $\epsilon$

Finally, the results of regression model could be rewritten up as follows:

Multiple regression is run to predict organizational effectiveness from E-government (privacy, security, viability), these dimensions significantly predicted organizational effectiveness (Organizational Efficiency, Organizational Ethics, and Organizational Effectiveness), F (3.95) = 44.131, p < 0.001, R<sup>2</sup> value explained 58.2 % of the changes that occurred in organizational effectiveness. All the three dimensions added statistically significant to the prediction, p<0.05

### 3.5 Result discussion and conclusion

This research sheds light on the important role of E-government in Syria by studying its impact on organizational effectiveness in the SIA, the study based on the model that aimed to examine the relationship between the study variables (E-government and organizational effectiveness) and understanding the nature of the relationship between them, in addition, to identify the impact of the application of E-government on the organizational effectiveness dimensions. The study examined the relationship between the dimensions of the independent variable, E-government (Viability, Security, and Privacy), and the dimensions of the dependent variable, organizational effectiveness (organizational effectiveness, and organizational effectiveness (organizational effectiveness, and organizational ethics). The researcher found a positive and statistically significant relationship between the E-government and organizational effectiveness.

The results of this study are consistent with (IRFAN and IBRAHIM, 2017), who investigated the role of E-government on administrative efficiency in Sri Lanka, the study analyzed the practical challenges between E-government and administrative efficiency, the study found E-government can be a very effective tool in improving administrative efficiency.

Also, the result of the current study consistent with (PANDEY and GEETIKA, 2008), who assess the impact of E-government applications on the basic infrastructure and public utilities in the public sector in India. The study concluded that E-government in the public sector ensures the competitiveness.

It also consistent with (KAREEM and HASEENI, 2015), who examined the role of E-government in terms of (information technology, electronic archiving, electronic control) in enhancing organizational performance in Iraq. The study confirmed that there is a strong relationship between the E-government variables and the organizational performance variables in terms of efficiency.

Further, (AL ZOUBI et al., 2011) confirmed the result of the current study where he aimed to examine the impact of E-government adoption on companies' performance in Jordan. The results showed there is a statistically significant relationship between cost and time efficiency and business adoption for e-government.

Then (RANA et al., 2013), asserted that E-government is able to link governmental activities with the existing advanced technology. Further, she indicated that the E-government initiatives correlate positively with performance efficiency.

Finally, (AL-SHALABI and AL-KHAWALDA, 2016), investigated the impact and nature of the relationship between E-government in terms of (Viability, Security, and Privacy) on the organizational effectiveness in the Jordanian Ministry of Finance, the study showed that the characteristics of E-government positively affect the organizational effectiveness in the ministry.

The current study used the three dimensions of E-government in terms of (VIA, PRI, and SEC) and studied their impact on the three dimensions of organizational effectiveness (efficiency, ethics, and effectiveness). More importantly, the study contributed to literature by adding the new dimension (Ethics) to measure the organizational effectiveness that was not studied in Syria previously. The current study tried to fill up the gap in the literature in this regard. The explanation of the results of the current study are presented as follow:

Table 11, presents the results of the descriptive analysis, the results showed that the independent variable (E-government) in term of security recorded the highest mean (4.28), followed by the privacy and viability with an average (4.2).

- With regard to the **security** dimension, Table 11, shows that the majority of the respondents' answers (agree and strongly agree) with percentage (83.4%), which indicates that SIA employees agree on their organization's interest in the security feature, this means that there are safety policies and procedures for using the programs available in SIA, where (S5 and S1) scored the largest responsive, (S5: which indicates the presence of an official legal person who can intervene in the electronic system and make the appropriate modification in case of necessity). (S1: which indicates there is

specific authorities access for each employee in the electronic system). While question (S 3) recorded the least responsive, which inquired about the existence of a party that approves requests for access to the system, which indicates the absence of a concerned party in the SIA to approve a request for access.

- With regard to the **viability** dimension, Table 11, Shows that the majority of the respondents' answers (agree and strongly agree) with percentage (79.2%), which indicates that the sample members agree that the E-government sites in SIA are characterized by viability. Where (V6, V1) scored the largest responsive. (V6: indicates SIA management has the ability to face difficulties in implementing the electronic system. (V1: which refers to motivating different investors by converting all their traditional business into electronic business to facilitate their procedures), While question (V3) recorded the least responsive, which inquired whether SIA benefits from the services of the electronic system optimally according to the volume of transactions, and customer needs, which indicates that despite the presence of sufficient human resources to implement the electronic system optimally, in addition, the availability of converting the traditional business of investors to electronic. Nevertheless, the services of the electronic system are not utilized due to the presence of obstacles that may be related to the weakness of the infrastructure, as well as the suffering from other technical problems such as the lack of electricity, which has a negative impact on the availability of the Internet in Syria.
- Regarding the **privacy** dimension, the majority of the respondents' answers (agree and strongly agree) with percentage (77.2%), which indicates that the sample members SIA agree that the SIA website provides a kind of privacy to its beneficiaries, where (P1) scored the largest responsive. (P1: indicated that each employee has a special E-mail for each employee to document his electronic work. While (P2 and P4) scored the least responsive, (P2: There is a great deal of privacy in dealing with the electronic system), and the question (P4: indicted that the management carries out continuous electronic monitoring and provides employees with notes about their performance via E-mail), which indicates there is a weakness in the process of monitoring the employees' work and not providing them with feedback on their work ,

This may be attributed to a problem in keeping investor information and not securing it properly, or it may be due to the failure to use some advanced technologies that preserve the privacy of dealers such as encryption programs, concealment of user identity, and authentication of customer data as well as the provision of firewalls or the presence of intrusion detection systems. In addition to applying the principle of authority in dealing with individuals' data and information.

- The **organizational efficiency** dimension is the most applied dimension in SIA among the dimensions of organizational effectiveness, with an average (4.08), followed by the ethical dimension with an average of (3.93), and then the organizational effectiveness (EFF) with an average (3.88) .where the majority of the respondents' answers (agree and strongly agree) recorded (76.2%). The questions (OE 3-OE 5) scored the largest responsive, (OE 5: indicated that the authority has effective communication systems to increase the efficiency of its employees) and (OE3: that indicated that SIA has a special database to provide employees with information in a timely manner). This means that the SIA management possesses the basics of implementing E-government. On the other hand, the question (OE 6) recorded the least responsive of the respondents. (OE 6: That indicated that it is possible to achieve the production efficiency required to obtain the maximum production with the least amount of inputs). This means that although SIA possesses the basics of E-government, it suffers from a weakness in the use of available resources at the lowest costs. This may be due to a lack of linking knowledge management capabilities, this may affect positively organizational effectiveness (SMITH et al., 2010b).

Table No. 12, shows the results of the regression analysis for models (M 7, M8 and M9) which represent the impact of E-government (Viability, Security, and Privacy) on organizational efficiency, the results show that:

- There is a positive impact of the E-government dimensions on organizational efficiency. This result is consistent with (IRFAN and IBRAHIM, 2017), who indicated that E-government can be an effective tool in improving administrative efficiency in institutions. Also consistent with (AL ZOUBI et al., 2011), who indicated that there is a statistically significant relationship between the efficiency and adoption of business for E-government. Furthermore, (RANA et al., 2013), confirmed that E-government initiatives are positively correlated with performance efficiency. (KAREEM and HASEENI, 2015), found there is a strong relationship between E-government variables and organizational performance variables in terms of efficiency.
- R<sup>2</sup> of the models (M7, M8, and M9) for the impact of E-government (VIA, PRI, and SEC) on organizational efficiency are (.103, .168, .107) respectively. It is noted that in Model (M8) the impact of privacy on organizational efficiency has the highest R<sup>2</sup>, this means that privacy is the most influential and the most explanation of the change in organizational efficiency.

- It is notable that the R<sup>2</sup> is relatively low compared to the (M4, M5, M6) which represented the impact of the E-government dimensions on organizational ethics. This may be explained due to the weakness of use of the available resources at the lowest costs as mentioned earlier. In addition to the lack of management capabilities and the absence of existence a solid business strategy.
- The organizational ethics recorded a second place in the application of the organizational effectiveness in the SIA, with an average (3.93). Where the majority of the respondents' answers (agree and strongly agree) recorded (73.34%). the question (Ethic 6) scored the largest responsive, which indicates that SIA encourages the creation of teams and workgroups with distinct competencies. On the other hand, the question (Ethic 3, Ethic 2) was less in response, (Ethic 2: indicated that the SIA sought to cover the desires and needs of its employees by motivating them and raising their morale), While (Ethic 3: indicated that the SIA implements training programs to qualify the human element within the SIA), which means that the SIA does not focus on qualifying and training the human element, and does not work to enhance the internal environment that supports employees psychologically and morally, which leading to a loss of satisfaction and functional security.

Table 12, shows the results of the regression analysis for models (M4, M5, and M6) which represent the impact of E-government (Viability, Security, and Privacy) on organizational ethics, the results show that:

- There is a positive impact of the E-government dimensions on organizational ethics ,Where R<sup>2</sup> of the models (M4, M5 and M6) for the impact of E-government (Viability, Security, and Privacy) on organizational ethics are (.63, .206, .15) respectively .It is noted that in Model (M4) the impact of viability on organizational ethics has the highest R<sup>2</sup> (.63), this means that viability is the most influential and the most explanation of the change in organizational ethics.
- At the same time, R<sup>2</sup> of Model (M4) recorded the largest value compared to other models (M1,M2, and M3 M7,M8, and M9) that represent the impact of E-government (Viability, Security, and Privacy) on the dependent variables (organizational effectiveness and organizational efficiency), which indicates that the independent variable (E-government), particularly in terms of (Viability), has a strong impact on (organizational ethics) compared to the degree of its impact on the other dimensions of the dependent variable .

This requires concerned institutions that looking to implement E-government programs to increase paying attention to the ethical aspect in their institutions, especially the need to cover the desires

and needs of their employees by motivating them and raising their morale, in addition to implementing special training programs to qualify the human element within the SIA. Which helps in supporting employees psychologically and morally and increasing the sense of satisfaction and functional security. Where the literature indicated that there should be an increased interest in ethics as a result of recent events in the world recently, such as the collapse of large companies as a result of ethical scandals. since the behavior of the individual in the organization plays an important role in influencing the performance and behavior of the organization as a whole, as (TREVINO and NELSON, 2004), explained that the behavior of the individual and his regularity at work, besides his connection with others, and his emotions and satisfaction in the work, represent the cornerstones for evaluating the organization's behavior, where all of these behaviors are considered the nucleus of the behavior and ethics of the organization as a whole.

With regard to the dimensions of organizational effectiveness: The organizational effectiveness dimension scored the lowest average in responsive compared to the other dimensions of the dependent variable with a value of (3.88). Where the majority of the respondents' answers (agree and strongly agree) recorded (71.74%). The questions (EFF 3, EFF1) scored the largest responsive, (EFF 1: Which indicated the interest of SIA management in the participation of employees in the decision-making process within the electronic work environment), while (EFF 3: Which indicated that SIA encourages its employees who contribute to building and spreading electronic business). As for the less applied question, it was the question (EFF 4: Which referred to the amendment of SIA decisions according to the outputs of the applied electronic system in line with developments in the internal and external environment), and this indicates a weakness in the ability of SIA to survive and adapt to environmental conditions.

Furthermore, table 12, indicated the results of the regression analysis for models (M1, M2, and M3) that represent the impact of E-government (Viability, Security, Privacy) on organizational effectiveness dimension, the results show that there is a positive effect of E-government dimensions on the organizational effectiveness dimension. This result consistent with (PANDEY and GEETIKA, 2008), who indicated that E-government positively affects competitiveness as a tool for measuring organizational effectiveness in the public sector. The results of this study also consistent with (AL-SHALABI and AL-KHAWALDA, 2016), who showed that the characteristics of E-government positively affect organizational effectiveness.

• R<sup>2</sup> of the models (M1, M2, and M3) for the impact of E-government (VIA, PRI, and SEC) on organizational effectiveness dimension are (.196, .043, .10) respectively ,Where the impact of viability on organizational effectiveness has the highest value (0.196) which means this dimension is the most influential and the most explanation of the change in the organizational effectiveness dimension, while the impact of privacy on organizational effectiveness has the lowest value (0.043). it is notable that the R<sup>2</sup> is relatively low compared to the (M4, M5, and M6) which represented the impact of the E-government dimensions on organizational ethics. This may due to that SIA does not have the ability to adapt to the internal conditions of the electronic environment in terms of facing any developments, as mentioned previously.

Table 11 Comparisons of the means and the responses of the study variables

	Mean	Max/Q	Min/Q	% of respondents
Privacy, (PRI)	4.2	P1	P2,P4	77.2
Viability,(VIA)	4.2	V6,V1	V3	79.2
Security,(SEC)	4.28	S5,S1	S3	83.4
Organizational Effectiveness, (EFF)	3.88	EFF1, EFF3	EFF4	71.74
Organizational Ethics, (ETHIC)	3.93	ETHIC6	ETHIC3	73.34
Organizational Efficiency, (OE)	4.08	OE5, OE3	OE6	76.2

Source: Author's own survey (2021)

# Table 12 Comparison between the regression models

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Models	H1.1	H1.2	H1.3	H2.1	H2.2	Н2.3	H3.1	Н3.2	Н3.3
	VIB-	PRI-	SEC-	VIB -	PRI -	SEC -	VIB -	PRI -	SEC -
	EFF	EFF	EFF	ETHIC	ETHIC	ETHIC	OE	OE	OE
<b>R</b> <sup>2</sup>	.196	.043	.10	.63	.206	.15	.103	.168	.107
Sig	.000	.043	.001	.000	.000	.000	.001	.000	.001

INDV: (VIA) Viability, (PRI) Privacy, (SEC) Security

DV: (EFF) Organizational Effectiveness, (ETHIC) Organizational Ethics, (OE) Organizational Efficiency

Source: Author's own survey (2021)

For additional results, the researcher combines all government dimensions into one variable and tested the impact of E-government on each of the organizational effectiveness dimensions separately (efficiency, ethics, and effectiveness), as shown in appendix (No.3) the results showed that the model of the impact of the combined E-government dimensions on the organizational ethical dimension scored a higher  $R^2$  with a value of (0.673) compared to the other dimensions of the dependent variable (organizational efficiency, organizational effectiveness). This confirmed the results of previous models (M1 - M9), which separately examined the impact of E-government dimensions on organizational effectiveness dimensions.

Finally, depending on the discussions above it is better to say that the previous perceptions reflect the opinions of the employees of the Syrian Investment Authority SIA, as users of the E-government program, whose responses can be generalized to other government sectors.

# 4. CONCLUSIONS AND RECOMMENDATIONS

#### 4.1. Recommendations:

This research focused on the role of E-government in enhancing organizational effectiveness in institutions. The Syrian Investment Authority was devoted as a study sample because it is one of the rare government institutions that implemented the E-government program in Syria,

It is possible to verify through this research the possibility of implementing the E-government project on the rest of the public sector institutions that are still operating in the traditional way

Based on the results of the study, the researcher recommends the following:

- 1- To get rid of obstacles of using the system services, SIA must complete the infrastructure development of the E-government project, and link the currently applied electronic system with the rest of the SIA's branches in the Syrian governors. Concerning technical obstacles represented by the lack of electricity, which negatively affect the availability of the Internet, which is the core of the E-government program, the study recommends the necessity of providing alternative means that support the work of the program, such as generators and alternative energies when needed. The study also recommends applying the same experience for the other official governmental institutions which looking forward to implementing the E-government system.
- 2- Increase to pay attention to the availability of privacy for people who deal with SIA, by increasing the effectiveness of the principle of authority in dealing with data and information of investors who are dealing with SIA, by relying on an integrated system that allows users to enter the program through an electronic identity.
- 3- Using advanced technologies that enhance and maintain the privacy of dealers, such as encryption programs, the anonymity of the user, authentication of customer data, provision of protection walls for information, and the creation of intrusion detection systems.
- **4-** SIA shall carry out a continuous electronic monitoring process, and provide employees with periodic feedback on their performance.
- 5- The SIA and the other institutions that are heading to implement the E-government program must have a responsible authority that studies the possibility of users' access to the SIA electronic system.

- 6- Increasing interest in software that helps in securing adequate protection for the E-government website used by SIA, whether this software is related to the network's security used or that related to the security of systems and data.
- 7- The study noted a weakness in the efficiency of SIA employees. Therefore, the researcher recommends increasing the efficiency and ability of SIA's employees to accomplish the required tasks and motivate them by all available means through a periodic incentive and reward system.
- 8- Focusing on achieving SIA goals at the lowest costs, increasing rationality in the use of available human and financial resources, effective coordination between goals, human and material resources, and available information, in addition to focusing on the general objectives of the SIA being consistent with the available resources for avoiding the future failures.
- **9-** Based on the results of the study that confirmed that the E-government dimension (Viability) had the greatest impact on the organizational ethics dimension in a tangible way. Therefore, SIA and desire institutions that looking to apply the E-government project must go to:
  - interesting and focusing on behavior SIA's employees, their activities and regularity at work, improving their communication with each other and with others, and seeking to reach the degree of job satisfaction,
  - Increase awareness among employees who have resistance to change as a result of implementing E-government and increase their sense of functional security, increase employee confidence in its management and confirm its importance at work in conjunction with the existence of the E-government project.
- 10- The researcher recommends the importance of holding seminars and introductory lectures in the field of technical sciences and E-government concepts, as well as introducing the importance of implementing this program and what are its positive effects on organizational activities in institutions.
- 11- The need to pay attention to training courses and programs aimed at improving the capabilities of employees in SIA, and to focus on technical courses related to the use of E-government systems, and this will be reflected positively on the level of performance.
- 12- In order to face or adapt to any changes or developments in the internal environment conditions, the agency must lay down foundations and standards, the most important of which is the interest in sound strategic planning, which is considered one of the most important means that promote the organization, in addition to the need to analyze the internal environment of the agency in order to identify what the agency will need or what the SIA should be avoiding it.

# 4.2. Suggestions

The topic of this thesis may be a starting point for researchers and academics to provide the local library with other studies related to the concept and dimensions of E-government and its direct effects. Therefore, the study suggests the following:

- Re-study the current research topic that was applied in the Syrian Investment Agency SIA to the rest of the institutions implementing the E-government project with the aim of supporting or rejecting the research hypotheses that studied the role of E-government in enhancing organizational effectiveness
- Re-study the effect of E-government implementation on organizational effectiveness using other dimensions such as productivity rate, growth rate, profitability rate, and job satisfaction level.
- Supporting the local Arab library with research that enhances the impact of E-government on the organizational ethical dimension
- Study the role of E-government and its impact on the Syrian economy.
- Study the effect of applying the E-government project on the behavior of individuals and their job skills in institutions
- Study the role of applying E-government to infrastructure in Syria
- Study and evaluate the reality of E-government in Syria according to the latest available data.
- Conducting study on the role of E-government in combating the administration corruption.
- Presenting academic studies on linking the E-government project to combating administrative corruption in Syria
- Study the impact of linking administrative capabilities with corporate strategy on organizational effectiveness in Syria.

# 5. NEW SCIENTIFIC RESULTS OF THE CURRENT STUDY

This research presents new results based on the role of E-government to enhancing the organizational effectiveness in Syrian contest as follows:

- There is a positive impact of implementing the E-government program as an independent variable on organizational effectiveness (the first dimension of the dependent variable).
- There is a positive impact of applying the E-government program as an independent variable on organizational efficiency (the second dimension of the dependent variable).
- There is a positive impact of applying E-government as an independent variable on the organizational ethical dimension (the third dimension of the dependent variable), where the explanatory power of the E-government impact model on (organizational ethics) was the highest compared to other impact models, specifically in Model No. 4 that represents the impact of Viability for organizational ethical value (.63).
- Further, when examining the effect of the E-government dimensions- as a combination (Viability, Security, and Privacy) as an independent variable, the data recorded the highest explanatory value on the organizational ethical dimension with a value of (.673), which confirms the importance of this dimension. In doing so, this result contributes to a new addition to the literature on the impact of E-government on organizational effectiveness.
- Respondents in the SIA showed that the organizational efficiency dimension is most applied within the SIA with an average response rate of 4.08, as the majority asserted that the SIA has effective communication systems to increase the efficiency of its employees and has a special database to provide employees with information in a timely manner. While there is a weakness in using the inputs to obtain the maximum output.
- Respondents showed that the organizational ethical dimension ranks the second place in the application within SIA with an average response rate of 3.93, as the majority asserted that the SIA uses the available resources optimally, and it encourages the establishment of teams and workgroups with distinct competencies, while the respondents expressed their vision of the SIA's management not seeking to available the needs its employees, and does not seek to motivate them and raise their morale, and the SIA's management does not implement distinct training programs to advance the human element.

- Respondents in the SIA showed that the organizational effectiveness dimension ranked third place in application with an average response rate of 3.88, as the majority confirmed that the SIA is concerned with the participation of employees in the decision-making process within the electronic work environment and encourages its employees who contribute to building and publishing electronic business, while the management does not take the care of the outputs The electronic system in formulating its decisions, and this is evidence of SIA's weakness in staying and adapting to environmental conditions.
- Respondents in the SIA expressed that there is an application of the E-government dimensions (Viability, Security, and Privacy) with averages respectively: (4.28, 4.2,4.2), most of them indicating the presence of an official legal person who can intervene in the electronic system and make the appropriate modification when it is necessary and each SIA employee has specific authority to access in the electronic system, in addition to the SIA's ability to face difficulties in implementing the electronic system, and it is working to motivate investors by converting all their traditional business into electronic business to facilitate their procedures. Also, most of the respondents answered that they have a special e-mail to document their electronic business and this system has high privacy when dealing with it, on the other hand, a good percentage of the respondents indicated that there is no specific authority in the SIA that grants the authority to access the electronic system, and SIA does not invest the services of the electronic system optimally.

In summary, the study confirmed that there is a weakness in the training and qualification of human resources in the SIA and the lack of an internal supportive environment for employees psychologically and morally,

Whereas, the results of the study showed that the application of E-government had the largest impact on the organizational ethical dimension.

Then the SIA management must go towards increasing interest in training and qualifying human resources, enhancing employee communication with others internally and externally, increasing job satisfaction, providing an internal environment that supports employees psychologically and morally, which encourages improving employee behavior and raises their level of performance and thus reflects positively. In strengthening the ethical aspect, where the behavior of the individual in

the organization plays an important role in influencing the performance and behavior of the organization as a whole, it is the cornerstone in evaluating the behavior of the organization.

Table 13, below shows the relationship between each hypothesis with new results.

Table 13 Linking between	the hypotheses with new results
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	New results	
		Rejected
H1.1	There is a significant impact for viability on organizational effectiveness	Accepted
H1.2	There is a significant impact privacy for on organizational effectiveness.	Accepted
H1.3	There is a significant impact for Security on organizational effectiveness	Accepted
H2.1	There is a significant impact for viability on organizational ethics	Accepted
H2.2	There is a significant impact for privacy on organizational ethics	Accepted
H2.3	There is a significant impact for security on organizational ethics	Accepted
H3.1	There is a significant impact for viability on organizational efficiency	Accepted
H3.2	There is a significant impact for privacy on organizational efficiency.	Accepted
H3.3	There is a significant impact for security on organizational efficiency	Accepted

Source: Author's own survey (2021)

# 6. SUMMARY

# **6.1 Introduction**

The aim of the research is to study the role of the E-government in terms of (Viability, Security, and Privacy) on the organizational effectiveness in terms of (Efficiency, Effectiveness, Ethics) that were applied for the Syrian Investment Agency, SIA. The data were collected using a questionnaire that was distributed to the study sample employees in various job sites .

## **6.2.** Literature review

The researcher reviewed literature and previous studies related to the concepts of E-government and organizational effectiveness and their various dimensions, in addition to the impact of E-government on organizational effectiveness. For the purpose to construct the study model and develop the research hypotheses, which are nine hypotheses. The literature has shown that there are a positive relationship and impact of E-government on organizational effectiveness, as most studies did not study the effect of E-government in its dimensions (privacy, viability, security) on organizational effectiveness in its dimensions (efficiency, ethics, and effectiveness), and the literature also showed there is a lack regarding the impact of E-government on the organizational ethical dimension, especially in the Syrian context.

This study was distinguished by studying the impact of E-government in its three dimensions (privacy, viability, security) on organizational effectiveness with its three dimensions (efficiency, ethical, and effectiveness), and it covered the gap regarding the organizational ethical dimension.

## 63. Results

The study found that the characteristics of E-government in its three dimensions (Viability, Security, and Privacy) are available in the study sample SIA, where the dimension of security was the most applied, and the results also showed the characteristics of organizational effectiveness in its three dimensions (Efficiency, Effectiveness, Ethics) are available in the study and the dimension of efficiency was more In application,

It was also found that there is a weakness in the application of some characteristics related to the study variables, as mentioned previously, the most important of which are:

• The SIA does not optimally benefit from the services of the available electronic system despite the availability of sufficient human resources to implement the program,

- There is no continuous electronic monitoring and there is no employee feedback about their performance.
- There is also a weakness in the SIA's ability to draw its decisions based on the outputs of the electronic system in line with the developments of the internal and external environment.
- There is a weakness in training and habilitation of the human resources in SIA and the lack of an internal supportive environment for the employees psychologically and morally, which if it is available will support the employees' behavior and improve their level of performance, which reflects positively on enhancing the ethical aspect, as the behavior of the individual in the organization plays an important role in influencing the performance and behavior of the organization as a whole it is the cornerstone of an organization's behavior assessment (TREVINO and NELSON, 2004).
- The SIA suffering from the lack of usage of available resources at the lowest costs, despite the existence of the basics of E-government.
- Regarding the results of linear regression, the results showed that: The impact of E-government in its three dimensions (Viability, Security, Privacy) is the most influential on the organizational ethical dimension.

The current study differed from others in that it collected the three dimensions of E-government (Viability, Security, Privacy) and studied their impact on the three dimensions of organizational effectiveness (Efficiency, Ethics, Effectiveness), and most importantly, it contributed to adding the dimension of ethics as one of the dimensions of organizational effectiveness, which was not previously studied in Syria, through the above, the study tried to fill the gap in the literature in this regard.

### **6 4. Conclusions and recommendations**

the study concludes there is an application for E-government in SIA on the organizational effectiveness and there is a positive impact for the ethics dimension, but at the same time the study concluded there is a weakness in this applying due to some obstacles, as the study mentioned before.

Based on the results of the study, the researcher present recommendations regarding the study sample SIA, that contribute to overcoming weaknesses and strengthening the positive points represented by the implementation of the E-government program in addition to motivating other government institutions to adopt the E-government project, in addition to the researcher presented some suggestions for related future studies. The most important of these recommendations that the SIA management must:

- Increase the attention and Focus on employees' behavior and activities and their regularity to work,
- Enhancing the employees' communication with the others internally and externally,
- Increasing job satisfaction.
- Supporting employees' behavior through improving their performance, which enhancing the ethical aspect, since employee behavior plays an important role in influencing the performance and behavior of the organization as a whole, so it is the cornerstone of evaluating the behavior of the organization.

#### APPENDICES

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# **Appendix 2: the publications of the author in the research field**

#### **Journal Publications:**

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- 2. AHMAD, JURATLI; MAJD, KHOUDARI: The Impact of the Practice of Management by Walking on Administrative Empowerment: Practical Study on the Syrian Hospital Sector, International Journal of Business and Management, 6: 10 pp. 60-71., 11 P. (2018)
- 3. AHMAD, JURATLI: Evaluating the Economic Impact of the E-Government Project, Analytical Study on the E-Government Initiative in Syria, International Journal of Business Studies (IJBS), e-ISSN: 2622-4585| p-ISSN:2580-0123, indexed by Google Scholar and creative commons, (Febrauary,2021), Under Publish
- **4.** AHMAD, JURATLI: The impact of E- government in enhancing the organaizational ethics, the Syrian investment sector, Vadyba/Journal of Management (Lithuania), indexed by the international databases: EBSCO, IndexCopernicus, CEEOL. SCOPUS, (March, 2021), Under Process

## **Conference Proceedings (full papers)**

- JURATLI, AHMAD: The mutual relationship between intellectual capital and organizational effectiveness - literature reviews - financial and investment sectors in third world countries, In: P., Suresh (szerk.), Proceedings of the THE IRES - 158th International Conference on Science, Technology and Management (ICSTM), Hamburg, Germany : IRAJ Research Forum, (2019), pp. 32-35., 4 p.
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- 2. Godollo, Hungary ,( 13-14\ June- 2019), 9<sup>TH</sup> International Conference on Management
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