



**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)**

**Doctoral (PhD) dissertation**

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**Acronyms**

SIA	Syrian Investment Agency
E.G	Electronic Government
SEC	Security
PRI	Privacy
VIA	Viability
EFF	Organizational Effectiveness
ETHIC	Organizational Ethics
OE	Organizational Efficiency
UNDP	United Nations Development Program
ESCWA	The United Nations Economic and Social Commission for Western Asia
LCU	Official Exchange Rate
GDP	Gross Domestic Product
OECD	Organization for Economic Cooperation and Development
E-GEP	E-government Economics Project
SIDS	Small Island Developing States
GCR	Government Services Rehabilitation
MoCT	Ministry of Communications and Technology
SCS	Syrian Computer Society
MCT	Ministry of Communications and Technology
NANS	National Agency for Network Services,
ICT	Information and Communication Technologies
CBS	the Commercial Bank of Syria
PICC	Planning and International Cooperation Commission
IT	Information Technology
G-C	Government to Citizen
G-B	Government to Business
G-G	Government to Government
G-E	Government to Employee
SAR	Syrian Arab Republic
ISD	Investment Services Directorate
ID	The Investment Department
LLSD, CSC	Legal and Logistic Services Department, Customers Service Center



## **Dedication**

To the great man who illuminated the mind of others through his knowledge, to the captain of a ship and to the strong tree that I lived under its shadows..... **My Father**

To the origin, who lives and prays to see me at the top. I will never forget the values that you cultivated in my soul. These values, which I always trying to convey to my children later, these values were and still, are the main pillars that I depend on them in my life.....**My Mother**

To the people who are living in my great homeland, Syria, to everybody who died for Syria, I feel I am small in front of their sacrifices because you defended Syria's soil - I bow for you..... **Syria's Martyrs**

To the wonderful, people who facilitated for me the right way and are still..... **My Brothers**

To the candle that illuminates the darkness of my life, to the one who stood beside me in order to complete my career .....**My Wife, Hyfaa**

With both of you, I feel the taste of life and happiness, to the innocent faces that I yearn to see always with love, and now they are beside me in Hungary.....**My Children: Joelle & Firas**

To the faithful people, you are all the river of pure honesty; it is my pleasure to be beside me forever on the paths of the beautiful and sad life..... **My Friends**

For all builders of generations, who provided the knowledge and are still to others.

**My Respected Teachers**

**For everyone who looking for knowledge among these papers,**

**I dedicate this thesis**



# **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, 2006a).

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.

## **1.2. 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.

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

<b>Studies</b>	<b>E-Government Measurements</b>	<b>Organizational Effectiveness Measurements</b>
AL-SHALABI and AL-) (KHAWALDA, 2016)	Viability – Security - Privacy	Organizational Effectiveness
(CORDELLA, 2010)	Viability	Organizational Effectiveness
(ZHAO et al., 2008a)	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

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.



### **1.3. 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?

## **2. OBJECTIVE TO ACHIVIES**

### **2.1. 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).

### **2.2. 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

### **2.3. 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 (2016a), 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. (2008a) 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. (2008a) 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:

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

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

**H2:** 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

**H3:** 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 2 Research hypotheses***

Source: Authors' own research (2021)

## **2.4. Research organization**

After the introductory chapter, this study proceeds as follow:

Chapter two presents research objectives and research important in addition to research hypotheses. Chapter three present the following:

- An overview of Syria, nature of human resources, moreover, It provides a discussion on the most important sectors that encouraging the Syrian economic especially that help for the recovery of the economy after the long period of the war that started in 2011, Then the study referred to the Syrian economic indicators before and after the political crisis in Syria
- The experience of developed countries represented in the European Union experience about their implementation of the E-government program with a focus on the Netherlands's experience, then compared to the experience of developing countries and focus on Kiribati's experience and on Jordan's experience as a one of the Arab countries
- The assessment the reality of E-government in Syria, what are the Syrian government institutions that regulate the work of e-government, in addition to showing what are the relevant laws and legislative decrees, the chapter also pointed to the economic effects as a result of applying the principle of E-government in Syria in its first stage by relying on official reports and a survey by the United Nations. Then, it concluded the chapter by mentioning the most important obstacles to the implementation of electronic government in Syria, also what are the main justifications for its implementation

Chapter four, presents the theoretical framework for this study, which includes a review of the literature and the development of hypotheses, whereby the research reviews the concept of E-government and its impact on organizational effectiveness from the viewpoint of researchers and the endeavor to develop research hypotheses, in addition to studying the dimensions of research variables taking into account the justifications for studying these dimensions in a way that is appropriate with study sample environment.

Chapter five, focuses on research methodology, study model, study hypothesis, and data collection tool. And this chapter highlights on the research sample, which is the Syrian Investment Agency (SIA) as it is one of the most important Syrian institutions that have applied the principle of E-government to know its impact on organizational activities that work as employees in SIA and that has filled out the questionnaire for this research in addition to personal interviews with central

managers to achieving search results. Then the chapter discussed the mechanism of work of the most important departments that deal with investors and clients, which is the One Stop Shop.

Chapter six, combines data analysis such as descriptive analyses and regression analyses in addition to results and discussion the main findings.

Chapter seven, present the conclusion and recommendations.

Chapter eight presents the new scientific results of the current study based on the objectives-hypotheses and data analysis.

Chapter nine present the summery of study.

### **3. LITERATURE OVERVIEW – COUNTRY BACKGROUNDS-SYRIA AND DEVELOPING COUNTRIES**

#### **3.1. Background and overview of research – SYRIA**

Syria or officially: "the Syrian Arab Republic" since 1961, It is an Arab country that is a central republic, the capital and largest city being Damascus. Syria is located in the Middle East region in Western Asia; Turkey, borders it to the north to the east by Iraq, to the south by Jordan, to the west by Palestine, Lebanon, the Mediterranean, Syria has an area of 185,180 square kilometers, and it has four real seasons and therefore it has a diverse plant and animal cover.

Syria is classified as the oldest site of human civilization, and derived its name according to academic theories from Ashur (ABBADI, 2009). Archaeological missions found many human museums that were buried since thousands of years ago, and Damascus is considered the oldest city in the world. The Syrian people are considered a developing people, Ethnic, linguistically and religiously diverse. The majority of Syrian people are Sunni Muslims, 63% of the total population.

The most prominent cities in Syria are: the political capital is Damascus; Aleppo is the economic capital, The Syrian economy is weak compared to neighboring countries, and the per capita income level is below average, add, The economy was socialist and then began to reform after 2000; But the Syrian economy depends on agriculture, tourism, and services, with internal wealth, mentioned later in the research (MINISTRY OF SYRIAN TOURISM, 2014).

##### **3.1.1 General Background of Syria**

The general borders with neighboring countries are 2253 km Latitude 32 - 37.5 north of the equator, and between longitudes 35.5 - 42 east of Greenwich,

**Syrian climate:** it can classify the climate in Syria into a Mediterranean climate in the coastal region and surrounding areas, In addition, it is characterized by hot and dry summers and in winter, the climate is cold and rainy in addition to the two transitional seasons, which are the autumn and spring seasons. The second kind of climate is dry which is spread in most of the internal Syrian regions, and it is less rainy, cold in winter, and very hot in summer (MINISTRY OF LOCAL ADMINISTRATION AND ENVIRONMENT, 2016).

The mountainous and highlands of Syria have moderate temperatures in summer due to the high location (MINISTRY OF SYRIAN TOURISM, 2020).

**Rainfall:** Coastal areas are characterized by high rates and up to 1200 mm / year;

However, rain in the interior regions decreases to reach between 250-550 mm / year, in the northern and eastern regions that make up 60% of the Syrian area, rainfall reaches the lowest level and arrive almost to be about 150 mm/year (MINISTRY OF ENVIRONMENT, 2020).

**Humidity:** concerning the humidity in Syria, most of the Syrian regions except the coastal areas are wet during the winter and decrease in the summer; but coastal regions are very humid during the summer due to the influence of the sea,

The average humidity during the summer ranges from 20-50% in the interior, and from 70-80% in the coastal areas, but in the winter season, the rate ranges between 60-80% in the interior and between 60-70% in the coastal areas (MINISTRY OF AGRICULTURE AND AGRARIAN REFORM, 2020).

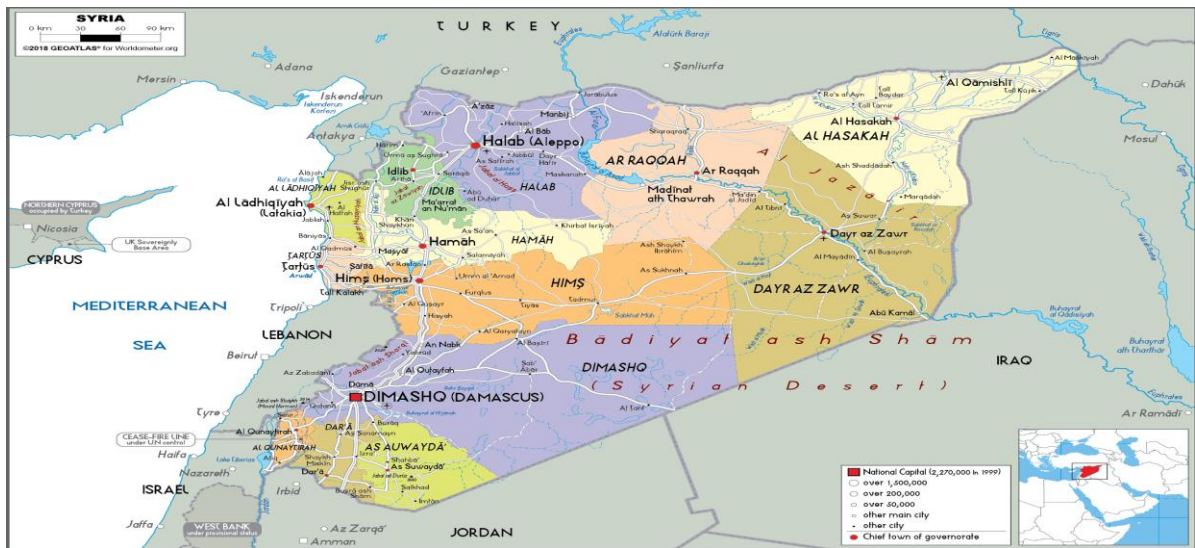
**Water Resources:** Syria is rich in water resources, whether it is rivers, lakes, or underground springs. Such as the Euphrates River 675 km, the Balikh River 460 km, the Khabur River, Dajleh River 50 km, Al Assi River, which enters Syria from Lebanon, 325 km, which is the main nerve of the agricultural areas in the Al-Ghab Plain (MINISTRY OF SYRIAN IRRIGATION, 2020).

**Population:** According to United Nations reports, in July 2017, the population was 18,270 billion people, the population growth rate was 2.30%, and the birth rate was estimated at 18.9 births per thousand people. About 56.1% of the population resides in different Syrian cities, and the rest is in the Syrian capital, Damascus. The population increased from 4.5 billion in 1960 to 23.5 billion (2010 estimates), due to an improvement in the standard of living and health status, but it negatively affected the economy and the rate of development, and there are no new statistics after 2011 due to the Syrian political crisis which was the main obstacle to determining the current population in Syria after the revolution of the Syrian immigration abroad (ZAATARI et al., 2012).

**Government's System, Leadership Ministries, and Administrative Divisions:** The system of the Syrian government is a republic and the president is elected by the people every seven years. The Council of Ministers is the executive authority, which includes 12 leadership ministries, The People's Council is the legislative authority and has 250 parliament members who are elected by the people every four years (SYRIAN PEOPLE'S COUNCIL, 2012).

The country consists of 14 governorates, the President of the Republic appoints each governor, the governorates are divided into 60 administrative regions, and each of them is divided into 280 districts. Figure 2, (SYRIAN CENTRAL BUREAU OF STATISTICS SCBOS, 2020).





**Figure 3 Syrian Administrative Division, Political Map**

Source: Ministry of Syrian Tourism, Political Map

### 3.1.2. The Reality of the Syrian economy today

Since 2011, Syria has witnessed violence and destruction unparalleled in modern history. The Syrian Observatory for Human Rights estimates the total number of deaths (from March 15, 2011, to March 15, 2019) at approximately 570,000

ESCWA (2016) The United Nations Economic and Social Commission for Western Asia conducted a detailed sectoral analysis of the economic cost of the Syrian war in 2017 and estimated losses at about \$ 120 billion. Regarding macroeconomic costs, the World Bank has estimated cumulative losses in GDP at \$ 226 billion, which means four times the Syrian GDP in 2010.

The Syrian crisis managed to destroy the economy and turned it into an exhausted economy, and consequently, most of the economic sectors and economic production collapsed, and investors and capital fled, and the gross domestic product decreased from 61.1 billion dollars. In 2010 to \$ 17.1 billion in 2017. (CARNEGIE MIDDLE EAST CENTER CMEC, 2019).

One of the effects of the crisis on the Syrian economy was on the oil sector, which is the most important sector, as it continued from mid-October 2018 to May of 2019, all of this increased the suffering of the Syrian citizen and the merchant, the cost of shipping goods increased to 50% and the Syrian pound lost more than 15% of its value (ASHARQ AL-AWSAT, 2019).

Moreover, this Syrian war created a large number of refugees internally and externally. According to the United Nations High Commissioner for Refugees, there are about 5.6 million registered refugees from Syria in neighboring countries (UNHCR, 2018).

Today ... after more than nine years of war in Syria, observers started talking about the stage of reconstruction and recovery of the economy, and the transition to a new stage and this means rebuilding the local economy.

This paragraph will focus on the most important points in the Syrian economy now:

- **Inflation:** The inflation rates increased during the current crisis, and affected directly on food prices more than 100%. Consequently, the Syrian government resorted to withdrawing the foreign currency that reserved in the central bank, which it had previously collected from selling oil in the 1990s, and the budget deficit increased from 3% of GDP in 2010 to 33%. Today, the human development index has decreased to large levels, due to international sanctions on Syria since the beginning of the war on the Syrian economic sectors.
- **Poverty and unemployment:** World Bank reports revealed that the unemployment rate rose to 78%, and there are about nine million Syrians unemployed, while prices generally increased during the war years by about 14 times, and the Syrian economy lost \$ 226 billion of GDP, in addition to destroying 7% of Housing, Buildings, and utilities fully, partly 20%, Add, the agricultural sector has lost nearly \$ 16 billion, and experts estimate that the reconstruction process may take between 10 and 15 years (THE WORLD BANK GROUP, 2019).
- **International estimates of damage:** The United Nations estimates that Syria needs \$ 250 billion for reconstruction, while the Syrian government has estimated the amount at about \$ 400 billion, and the World Bank estimates that six out of every ten Syrians live in extreme poverty, and the Syrian family needs 6 people to have a monthly income Approximately 300 thousand Syrian pounds, which is equivalent to today 400 dollars, to provide the most important supplies and living needs.

### **3.1.3. Supporting sectors of the Syrian economy**

It can say that: the Syrian economy is a developing and multiple economies, the current political crisis since 2011 has negatively affected the economic life,(CHERRI et al., 2016) and the economic indicators are the biggest evidence that led to the economic downturn, which reached about 20% (COHEN, 2016).

The Syrian unemployment rate is 8.4% of the total workforce, (ÇAKİLCİ, 2017) and it has increased after the Syrian crisis, to reach 39% in 2020 (FAKIH and IBRAHIM, 2016).

The size of the Syrian workforce is 5.5 million people, and they increase by 200 thousand people every year. In addition, 70% of the unemployed are youth. Because of this, and as a result of the recent political crisis and sanctions imposed on Syria, UN reports have estimated that half of the Syrian population is in the cycle of poverty (SYRIAN CENTRAL BUREAU OF STATISTICS SCBOS, 2017). Therefore, the Syrian markets became unable to create new and good job opportunities to bridge the unemployment gap, for these reasons, a large number of Syrian youth migrated abroad (YAZGAN et al., 2015) .

The research will refer to the most important sectors that support the Syrian economy, including:

#### **3.1.3.1, Agriculture**

Agriculture is one of the most important components of the Syrian economy; the arable land is 32% of the total Syrian area and constitutes 26% of the total national income, and about one million workers work in the agricultural field according to the 2007 official statistics (MINISTRY OF SYRIAN TOURISM, 2018). The most important crops in Syria are wheat, barley, and cotton, which are considered the tenth- largest in Syria in its production, and olives are considered the sixth globally in its production (SADIDDIN and ATIYA, 2009).

#### **3.1.3.2. Mineral and interior resources**

Syria ranks 27th in the world with oil production, which is concentrated in the eastern Syrian region, production reaches 400 thousand barrels per day, in addition to phosphates, and according to data for 2010, Syrian production was 3.6 million tons, which are exported outside Syria according to trade exchanges with other countries (MINISTRY OF OIL AND MINERAL RESOURCES MOMR, 2017).

#### **3.1.3.3. Industry**

Syria is a middle-class industrial country, and industrial investment is divided into investment in the public sector that is run by the government and investment in the private sector represented by factories and industrial companies, (MINISTRY OF SYRIAN INDUSTRY, 2020), the most prominent Syrian industries are the textile, food, and industries that depend on building and construction materials; Electrical and electronic industries (THE MINISTRY OF SYRIAN PUBLIC WORKS AND HOUSING MSPWH, 2020).

#### **3.1.3.4. Foreign trade**

According to 2010 data, Syrian exports were 10.5 billion dollars, 50% exports to Arab countries, and 30% to European Union countries in general, in relation to Syrian imports were 15 billion dollars, about 25% from the European Union, and 16% of Arabic countries, and the rest of the proportions are distributed between China, South Korea, the United States, and Turkey. It can be noted that Syria has foreign free trade agreements with Iraq, Turkey, and Iran, in addition to European partnership negotiations. But it stopped in 2011 as a result of the current Syrian crisis, And the value of external debt on Syria reached 7.7 billion dollars only for Russia (MINISTRY OF SYRIAN ECONOMIC AND FOREIGN TRADE MSEFT, 2018).

#### **3.1.3.5. Workforce**

The number of individuals who are able to work in Syria according to the statistics of 2005 is 5.5 million, and it is increasing by 4.3% annually which is a high percentage, while those who actually work compared to neighboring countries are low, which is 32% of the total population, and the first reason is: that Syrian society is a young community and the percentage of children is high, and therefore the proportion of the labor force decreases, and the second reason is the weak participation of females in the workforce, This negatively effects on the standard of living (UNDP, 2005).

Statistically, about 23.5% of the workforce is engaged in agriculture, which is a high percentage and adversely effects the development of the national economy, which decreased significantly later, as work began in large industrial companies, the service sector, and administrative work.

In the industrial sector, 12.5% of all workers work, and the reason is that 85% of industrial establishments are small enterprises and do not need workers much, The remaining sectors of the workforce are distributed according to the following ratios according to the 2001 statistics: the construction sector 11%, the tourism sector 13%, the transportation sector 5%, the money and real estate 2%, and the services 20% (MINISTRY OF SYRIAN SOCIAL AFFAIRS AND LABOUR MSSAL, 2020).

#### **3.1.4. Syrian Economic Indicators**

The Syrian economy is considered weak if it compares it with the Arab level or at the global level (ALAHMAD et al., 2012). The study relied on a set of economic indicators that are used to measure the performance of various economic sectors and to assess the economic situation in Syria, and know the extent of the economy's strength or weakness. Usually, the economic situation in the future can

be predicted from these pointers. As for economists, they use these indicators to predict where the economy is headed. So are the government and the central bank to determine future interest rate policy. The economic indicators in Syria are issued periodically- annually by the (SYRIAN CENTRAL BUREAU OF STATISTICS SCBOS, 2020), and companies can benefit from these official indicators to study, analyze and estimate their annual profits and create new job opportunities that help in moving the markets in the short and long term.

### 3.1.4.1. Real GDP and GDP per capita

Syria's economy has witnessed a major deterioration since 2011, which has negatively affected the Gross Domestic Product (GDP), which represents the market value of all final goods and services recognized at the local level, as a result of the production process in Syria during a specific period of time. Often the per capita standard of living is taken into consideration, meaning GDP per capita. Note that GDP per capita is not a measure of per capita income. As it is possible for the gross domestic product to be high, but at the same time, the real income of most individuals is low, Table 2, shows the gross product and the per capita product.

**Table 2 Reality of Real GDP and GDP Per Capita in Syria 2009- 2012**

Real GDP and GDP Per Capita			
Name	Unit	Year	Value
Real Gross Domestic Product (LCU billions 2005 base)		2009	1444.100000
Real Gross Domestic Product (LCU billions 2005 base)		2010	1490.310595
Real Gross Domestic Product (LCU billions 2005 base)		2011	1305.934055
Real Gross Domestic Product (LCU billions 2005 base)		2012	1484.695281
Real GDP Growth Rate (%)	Percent	2009	6.000000
Real GDP Growth Rate (%)	Percent	2010	3.199999

Real GDP Growth Rate (%)	Percent	2011	-21.246178
Real GDP Growth Rate (%)		2012	2.506964
Consumption (LCU billions)		2009	1508.580000
Consumption (LCU billions)		2010	1974.778626
Consumption (LCU billions)		2011	1705.483369
Consumption (LCU billions)		2012	1324.853920
Government Expenditure (LCU billions)		2009	301.790000
Government Expenditure (LCU billions)		2010	279.824000
Government Expenditure (LCU billions)		2011	355.191243
Government Expenditure (LCU billions)		2012	457.489309

Sources: BBC, Reuters, Interfax, Bloomberg, World Bank, United Nations, BMI Research, Business Insider and Roubini Global Economics

### **3.1.4.2. Exports and imports**

One of the main sources of the economy is import and export, which is represented in the process of selling or buying products between companies outside the borders of the country. This field is not limited to the owners of large capitals, as anyone can adopt this activity, which increased in the modern period in which technological and information development spread, which provided many technologies and means that facilitated the process of e-commerce.

The importance of importing and exporting increased when it became online and has many benefits, the most important of which is the ability to compare hundreds or thousands of products and prices in a few minutes. Because it is known that export is one of the most important components of the economic development of any country, big or small, meaning that it is a manufacturing country and not a consumer only. The next table 3 shows the Syrian index of the reality of export and import movement in Syria 2009- 2012

**Table 3 Reality of export and import movement in Syria (2009- 2012)**

<b>Real GDP and GDP Per Capita</b>			
<b>Name</b>	<b>Unit</b>	<b>Year</b>	<b>Value</b>
Exports (\$US billions)		2009	732.470000
Exports (\$US billions)		2010	13.920353
Exports (\$US billions)		2011	23.060037
Exports (\$US billions)		2012	31.045743
Imports (\$US billions)		2009	784.620000
Imports (\$US billions)		2010	23.786051
Imports (\$US billions)		2011	22.576432
Imports (\$US billions)		2012	22.951692

Sources: BBC, Reuters, Interfax, Bloomberg, World Bank, United Nations, BMI Research, Business Insider and Roubini Global Economics

### **3.1.4.3. Nominal GDP and components**

The real gross product differs from the nominal gross product, as the first represents the total monetary values of goods and services at base year prices, that is, at fixed year prices that are relied upon as a measure for subsequent years.

As for the nominal gross product, it is the total monetary values of goods and services at current year prices, i.e., the prices prevailing in the market, which may rise even if the volume of goods and services produced remains constant. Thus, it can be said that the nominal gross product reflects the increase in prices and takes inflation as its basic considerations. Table No. 4, shows the nominal GDP and its components in Syria 2009- 2012.

**Table 4 Nominal GDP and its components in Syria 2009- 2012**

<b>Nominal GDP and Components</b>		
<b>Name</b>	<b>Year</b>	<b>Value</b>
Nominal GDP (LCU billions)	2009	2519.160000
Nominal GDP (LCU billions)	2010	2762.614162
Nominal GDP (LCU billions)	2011	2886.484599
Nominal GDP (LCU billions)	2012	2931.159660
Nominal GDP Growth Rate (%)	2009	3.030274
Nominal GDP Growth Rate (%)	2010	9.664492
Nominal GDP Growth Rate (%)	2011	-8.363412
Nominal GDP Growth Rate (%)	2012	4.483646
Population, total (million)	2009	20.040000
Population, total (million)	2010	21.532647
Population, total (million)	2011	21.045917
Population, total (million)	2012	21.772000
Population growth (%)	2009	2.038601
Population growth (%)	2010	2.382616
Population growth (%)	2011	-1.622413
Population growth (%)	2012	-1.144206
Nominal GDP per Capita (LCU 1000s)	2009	125.720000
Nominal GDP per Capita, (LCU 1000s)	2010	3.750921
Nominal GDP per Capita, (LCU 1000s)	2011	137151.761996
Nominal GDP per Capita, (LCU 1000s)	2012	134629.7841

Sources: BBC, Reuters, Interfax, Bloomberg, World Bank, United Nations, BMI Research, Business Insider and Roubini Global Economics



### 3.1.4.4. Other Syrian economic indicators

Based on the Syrian periodic statistical reports issued by the (SYRIAN CENTRAL BUREAU OF STATISTICS SCBOS, 2017), and since the economic indicators reflect the economic reality in any country during a certain period, it can be said that the Syrian economic indicators in the period of the crisis since 2011 are weak compared to the previous period, especially in Vital sectors such as the agricultural, industry and trade sector, the great scarcity of energy resources, the great rise in prices and weak consumption capacity, all of these indicators reflected a very difficult reality for the Syrian economy, the following table No. 5, that shows the official data.

**Table 5 Syrian economic indicators**

Gross National Saving	17% of GDP (2017 EST) 15.3% of GDP (2016 EST) 16.1% of GDP (2015 EST)
GDP - composition, by end use	<ul style="list-style-type: none"><li>- Household consumption: 73.1% (2017 EST)</li><li>- Government consumption: 26% (2017 EST)</li><li>- Investment in fixed capital: 18.6% (2017 EST)</li><li>- Investment in inventories: 12.3% (2017 EST)</li><li>- Exports of goods and services: 16.1% (2017 EST)</li><li>- Imports of goods and services: - 46.1% (2017 EST)</li></ul>
GDP - Composition by Sector	<ul style="list-style-type: none"><li>- Agriculture: 20% (2017 EST)</li><li>- Industry: 19.5% (2017 EST)</li><li>- Services: 60.8% (2017 EST)</li></ul>
Population below Poverty line	82.5% (2014 EST.)

Labor force	3.767 million (2017 EST)
Labor force - by occupation	Agriculture: 17%
	Industry: 16%
	Services: 67% (2008 EST)
Unemployment rate	- 50 % (2017 EST.) - 50% (2016 EST)
Unemployment, youth ages 15-24	- Total: 35.8% - Male: 26.6% - Female: 71.1% (2011 EST)
Household Income or Consumption by Percentage Share	- Lowest 10%: NA - Highest 10%: NA
Budget	- Revenues: 1.162 billion (2017 EST) - Expenditures: 3.211 billion (2017 EST)
Note: Government Projections for FY2016	
Taxes and other revenues	4.2% (of GDP) (2017 EST)
Budget Surplus (+) or Deficit (-)	(-)8.7 % (of GDP) (2017 EST)
Public Debt	- 94.8% of GDP (2017 EST) - 91.3% of GDP (2016 EST)
Inflation Rate (Consumer Prices)	- 28.1 % (2017 EST.) - 47.3 % (2016 EST.)
Central Bank Discount Rate	- 0.75% (31 December 2017) - 5% (31 December 2016)
Commercial Bank Prime Lending Rate	- 14 % (31 December 2017 EST.) - 22 % (31 December 2016 EST.)
Stock of Narrow Money	- \$7.272 billion (31 December 2017 EST.) - \$4.333 billion (31 December 2016 EST.)

Stock of Broad Money	<ul style="list-style-type: none"> <li>- \$7.272 billion (31 December 2017 EST.)</li> <li>- \$4.333 billion (31 December 2016 EST.)</li> </ul>
Stock of Domestic Credit	<ul style="list-style-type: none"> <li>- \$9.161 billion (31 December 2017 EST.)</li> <li>- \$5.786 billion (31 December 2016 EST.)</li> </ul>
Market Value of Publicly Traded Shares	NA
Agriculture - Products	wheat, barley, cotton, lentils, chickpeas, olives, sugar beets; beef, mutton, eggs, poultry, milk
Industries	petroleum, textiles, food processing, beverages, tobacco, phosphate rock mining, cement, oil seeds crushing, automobile assembly
Industrial Production Growth Rate	4.3% (2017 est.)
Current Account Balance	<ul style="list-style-type: none"> <li>-\$2.123 billion (2017 est.)</li> <li>-\$2.077 billion (2016 est.)</li> </ul>

Source: (SYRIAN CENTRAL BUREAU OF STATISTICS SCBOS, 2017)

Finally. It can be concluded that the Syrian economy is beginning to recover and move to the stage of economic recovery, and entered the stage of reconstruction, Although the road to reconstruction in Syria is long and requires a lot of time and resources, therefore the Syrian government must take all measures that support the local economy towards growth, These measures represent the main factors to combat corruption and attract domestic and foreign investments, and this is done through reviewing economic and procedural laws and legislation that related to investment and fighting corruption in institutions, and seeking to implement it.

Here comes the importance of implementing the E-government project as a strategic project that controls corruption.

### **3.2. Experiences of E-government applying in developed and developing countries**

Implementation of E-government has become a basic option for all governments, and through it, long-term strategic decisions are reached, Accordingly, most developed countries have become dependent on ICT, especially the Internet, as a basic tool for communicating with citizens (GALLEGO-ÁLVAREZ et al., 2010) And there is no doubt that all business sectors are also conducted via the Internet (REDDICK and ROY, 2013). As a result, scientific research on the mechanisms of implementing the concept of E-government has increased very quickly in the past few years (HEEKS and BAILUR, 2007), and a large group of staged mathematical models related to the development of E-government has been formed (LAYNE and LEE, 2001, SIAU and LONG, 2005, WESCOTT, 2001, HEEKS and BAILUR, 2007, COURSEY and NORRIS, 2008). As for developing countries, the need to implement E-government has become a strategic necessity as a basic condition in accordance with international approaches.

In the current chapter, present the experiences of some developed and developing countries, then moves on to the next chapter to explain the reality of electronic government in Syria.

#### **3.2.1. Experiences of developed countries in implementing E-government**

The concept of E-government represents an administrative and developmental revolution for government business (FARIDA et al., 2020), because it links information technology with the tasks and responsibilities of government through clear strategies and policies that take into account all the variables related to the information industry that are reflected in government business (GIL-GARCÍA and PARDO, 2005). The success of any country in implementing E-government depends on two main factors: the first is the state's ability to secure the global internet, and the second factor is: the availability of the information infrastructure (CHEN et al., 2006). Accordingly, the countries were classified into two groups:

- Countries with an integrated technology infrastructure such as the United States of America and Japan, which are the first countries in the world to adopt an effective approach to information technology, where a billion dollars have been invested in information projects. Also among these countries are Australia, Canada, Western Europe, South Korea, Hong Kong, and Singapore, And in the Arab world, there was the United Arab Emirates - Dubai.
- Countries with a non-integrated technical infrastructure such as India, but in 1998 information technology developed and the city of Bangalore became one of the best centers active in the field

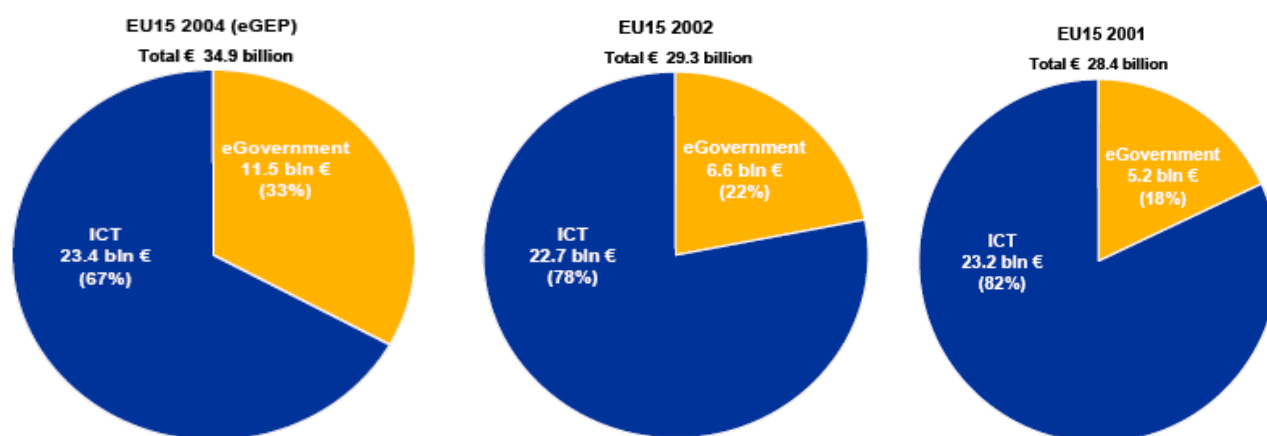
of innovation. Among the Arab countries that started the E-government project recently is Jordan in 2001, Egypt in 1998, Lebanon, and other countries. Gulf Cooperation Council, Algeria, and Syria.

### 3.2.2. E-government experience in European Union countries- the Netherlands experience

The experience of E-government in the countries of the European Union according to the E-government Economics Project E-GEP of the European Union, which is a project funded by the European Commission, indicates the importance of the economic impact of the union's initiative, and there are only five countries that have prepared a study of the economic impact of spending on E-government (Denmark, France, Netherlands, Germany, United Kingdom),(E- GOVERNMENT ECONOMICS PROJECT, 2014).

In 2004 the public administration spent 11.9 billion euros on the E-government initiative in the countries of the European Union, and this spending does not include the expenditures of the ICT sector, as the total expenditure on E-government total public spending on ICT in the European Union for 15 countries during the years: 2001, 2002, and 2004

Figure No. 4, Represents public administration spending on E-government in the European Union Countries (25 countries, 2004). Table No. 6 Present public administration spending on E-government in the European Union countries (25 countries, 2004).



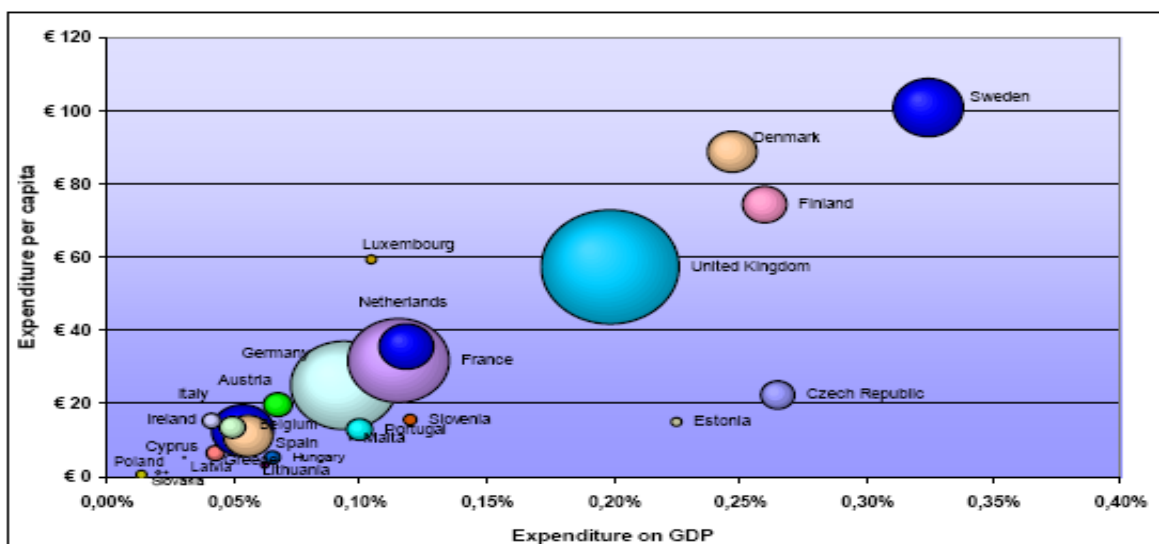
**Figure 4 E-government spending out of total public spending on ICT in the European Union (15 countries / billion euros / percentage for the years: 2001, 2002, 2004)**

Source: E-government Economics Project: expenditure study, Final version, E-government Unit, DG Information Society and Media, European Commission, 15 May 2006.

**Table 6 Public administration spending on E-government in the European Union countries (25 countries, 2004)**

<b>Country</b>	<b>Expenditure (Mio euro)</b>
Austria	160.69
Belgium	141.61
Cyprus	3.80
Czech Republic	228.50
Denmark	479.58
Estonia	20.32
Finland	389.02
France	1895.85
Germany	2065.51
Greece	71.22
Hungary	52.94
Ireland	61.76
Italy	726.00
Latvia	2.58
Lithuania	11.20
Luxembourg	26.80
Malta	4.15
Netherlands	578.21
Poland	26.78
Portugal	134.93
Slovakia	6.81
Slovenia	30.98
Spain	468.74
Sweden	904.19
United Kingdom	3408.90
<b>Total</b>	<b>11900.90</b>

Source: E-government Economics Project: expenditure study, Final version, E-government Unit, DG Information Society and Media, European Commission, 15 May 2006.



**Figure 5 Represents public administration spending on E-government in the European Union Countries (25 countries, 2004)**

Source: E-government Economics Project: expenditure study, Final version, E-government Unit, DG Information Society and Media, European Commission, 15 May 2006

Later, many studies showed that the gains from E-government initiatives were many, the most important of which are: Labor productivity improved for the public sector, providing serious services to citizens, institutions, and the business sector, Cost saving, and GDP growth (NDOU, 2004).

In addition, based on the aforementioned project, governments developed a central matrix to measure the direct impact of implementing E-government according to three dimensions: efficiency, democracy, and effectiveness, the aim were to assess a descriptive impact such as user satisfaction, which is a primary objective (STOWERS, 2004).

As for the financial impact, many studies have assessed the level of public administration spending on E-government in the period 2006-2010, which reached 59.5 billion euros, and this achieved a cumulative total GDP growth during the aforementioned period of 1.54% and this indicates an increase of 166 billion euros. . Note that many other implications were not taken into consideration regarding the previous evaluation.(ARBASH, 2010).

#### **3.2.2.1. The Netherlands experience**

By reviewing the Dutch experience in implementing e-government, it can be said that the Netherlands is one of the leading countries in the European Union in the field of E-government during the past fifteen years (UNITED NATIONS, 2001).

The Netherlands derived this development from past and current investments in telecommunications infrastructure, in addition to the availability of human capital, technical services, communications, and the Internet (UNITED NATIONS, 2010).

In December 2003, the Dutch government began archiving its paper transactions and organizing the government sector to be electronic. In 2004, the Netherlands adopted several initiatives as initial attempts to popularize the concept of E-government such as developing digital identity. In 2006, all government websites became free. For all Dutch people, the government adopted free service for some government activities, in 2007, the service of citizen became fully available, and in 2008, the government presented all government decisions regarding this service (EUROPEAN COMMISSION, 2015). The Dutch government has encouraged some administrative traditions by decentralizing activities, unlike some other European countries. Accordingly, the Netherlands did not have an approach to converting all public sectors to e-government. However, the trend was clear and a variety of local E-government initiatives were adopted in the Netherlands (ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT OECD, 2007).

All of the above-encouraged researchers to conduct scientific research on E-government in the Netherlands

ROOKS et al. (2017), Directed the light on the Dutch experience in implementing E-government practically, using actual data from the Dutch government agency "Information and Communication Technology Unite, ICTU".

This agency, which was established in 2001, is affiliated with the Ministry of Interior. It works to support other government institutions to implement information and communication technology.

The researcher distinguished specific stages of implementing E-government in the Netherlands, such as: documenting electronic information, following up the personal requests electronically, and the study was applied to 510 Dutch municipalities during the period 2004-2009 and sought to develop E-government activities.

The results showed that the progress of the E-government stages was often linear. That is one dimension is insufficient to complete the E-government implementation process. On the other hand, the study indicated that municipalities could move directly from a basic stage in implementing E-government to higher stages without going through lower stages (COURSEY and NORRIS, 2008).

As for the application of successful experiences in other countries, it is an important matter and plays a vital role because it depends on other experiences and needs to study the specific impacts that take into account all political, social, organizational, and institutional conditions (BEKKERS and HOMBURG, 2007).

### **3.2.3. the Reality of developing countries in E-government experiences**

Implementing E-government initiatives has become a mandatory option for developing country governments. Because it affects their daily operational activities and long-term strategic decisions (BROWN and THOMPSON, 2011).

As the availability of E-government and its services has become a necessity in line with the reality of business communities, Accordingly, the pressure has become great on the governments of developing countries to face the needs and desires of their citizens and society (NDOU, 2004). However, many governments may not be able to move quickly enough to follow an approach that is inconsistent with their technical capabilities, and this case fit with some developing countries which planning to apply the concept of E-government due to many human and financial challenges and technical obstacles (DADA, 2006). The study shows some of these countries:



### **3.2.3.1. Problems and challenges of E-government in Kiribati**

As a result, developed countries that rushed to implement the concept of E-government as a key factor in achieving economic and social progress, developing countries went to adopt the same project as a reform tool in their corrupt societies. Kiribati is one of the Small Island Developing States, SIDS. Which tried to implement E-government to upgrade its services with its citizens and institutions (LEE, 2017). However, Kiribati faced many circumstantial factors that hindered the implementation of the project well, as the poor infrastructure environment in SIDS countries was inadequate, in addition to the weak technical environment, duplication of the political environment, low level of social life, corruption of the economic environment, the nature of the dispersed geographical environment (CULLEN and HASSALL, 2017). In addition, NAIDU and CHAND (2018), Local technical studies have also shown that some of the problems and challenges facing E-government in Kiribati are technical problems, such as poor internet connection, lack of competencies to develop and maintain E-government website, lack of knowledge of computer literacy, lack of primitive technical means such as computers and the Internet, lack of knowledge Cultural issues, the growing digital divide, the lack of awareness of E-government services, lack of confidence in matters related to the privacy factor, in addition to special language problems. It can be noted that most studies have indicated some solutions and ways to overcome the obstacle of implementing E-government in such developing countries, such as starting to address problems through developing the infrastructure environment, training and developing official employees, and increasing people's awareness (STANFORTH, 2006).

### **3.2.3.2. Jordanian experience-**

Jordan is one of the developing Arab countries that tried to implement the E-government program and faced many challenges and complications due to the most important reasons being the Jordanian government's approach to activating democratic reform regardless of the participation of popular opinion, in addition to other reasons related to the management of ICT infrastructure (CIBORRA et al., 2000), costs of moving from traditional work to electronic work in a developing country like Jordan, the difficulty of technical control between public administrations and service centers, unclear customer requirements, different service standards. On the other hand, the Jordanian academic studies indicated that despite the application of electronic government, there is a fear of the private sector monopolizing this service.

CIBORRA and NAVARRA (2005), The government focused later on the need to empower the relationship between the private sector and the government, and this helped build a strong state and

the government remained in control, reducing the sources of foreign aid because it leads to an increase in the institutional burden. In short, all E-government initiatives in Jordan have helped strengthen the role of the state and increase its control over service centers (ALAWNEH et al., 2013). But there are better initiatives through better global experiences and achieving a strong link with economic, political, and social frameworks.

### **3.3. 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 it and strengthened the national initiative for E-government 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.

This chapter will mention to the institutions that implement the steps of implementing the E-government and law enforcement, in addition, to refer to the laws and official decrees for that, and

what are the main difficulties that facing the Syrian government in implementing the E-government, also will mention to the positive justifications for implementing this project.

### **3.3.1. Governmental institutions that manage E-government work in Syria**

The strategy of the Syrian government in implementing the E-government project has been directed from the positive vision and the main objectives as a result of implementing this project in the long term, Accordingly, the project strategy was drawn up like a map to achieve the proposed goals, and took into account the results of the evaluation of the enabling environment in Syria in terms of political, organizational, and institutional frameworks, in addition to studying the human and cultural conditions, the communication environment, financial conditions, technological infrastructure, data and information systems that are consistent with the reality of implementing the E-government. The study included the Syrian institutions that supervised the implementation of the E-government program, in addition to the laws and legal legislative decrees that encouraged this initiative.

### **3.3.2. Ministry of Communications and Technology MoCT, E-government portal project**

The Syrian E-government portal program, which aims to serve citizens and the business sector, has also been created to ensure the delivery of government services. (SYRIAN E-GOVERNMENT PORTAL, 2020). The project started with 2552 transactions, including all required documents. Most ministries in the previous stage filled a large percentage of the required data in connection with the mother portal, and work is still going on. The MoCT continued its project during the year 2020, and the project and its services are managed via mobile phones, with the possibility to share the opinion of citizens and companies with better options. (MINISTRY OF COMMUNICATION AND TECHNOLOGY, 2019a)

#### **3.3.2.1. The Syrian Computer Society, SCS**

The Syrian Scientific Society SCS was established in 1989, which aims to spread the information culture in the Syrian society and to help in achieving the organizing's process in the information technology market. The SCS seeks to introduce information technology in the various economic sectors in Syria and contributes to organizing the conferences on this. It works to upgrade the information sector and its related sectors in Syria and studies the scientific, technical, cultural, and professional aspects that help in reaching the digital knowledge society. (SYRIAN COMPUTER SOCIETY SCS, 2019)

### **3.3.2.2. National Agency for Network Services, NANS**

The National Agency was established under the umbrella of the MoCT and formed teamwork in 2010 that included experts, technicians, and administrators,

The NANS aims to provide services to companies and customers that will lead to the organization, coordination, and facilitation of work on the information network, especially the Internet, in addition to providing an enabling environment to provide advanced electronic services to customers

The mission of the commission is to provide the official authorities, customers, and companies with the necessary licenses to work in the field of electronic signature services, in addition to another set of enabling services in the information sector such as security and safety issues.(NATIONAL AGENCY FOR NETWORK SERVICES NANS, 2018)

### **3.3.3. Laws and legislation that regulates the work of E-government in Syria**

The Syrian government has focused on the project to develop the E-government program, through initiatives aimed at providing services to citizens in the best manner, speed, and high efficiency, in parallel with the lowest cost, and all this is done by using information and communication technologies. This will achieve important results such as increasing communication, transparency, building trust between the government and citizens, and trying to combat corruption.

Accordingly, the Syrian government enacted a set of laws and legislative decrees that facilitated the implementation of the E-government project in all its directions. As follows:

#### **3.3.3.1. Electronic communications law**

Information and communication technologies ICT are a major factor in the information society, this society that is life today, the electronic exchange of information through the modern communication system has become the basis for development in all economic and social sectors,

For this reason, the most important countries seek to develop national policies and strategies in the field of ICT that accompany the issuance of new laws and legislations. (BASU, 2004)

Legislative Decree No. \35\ of 2004 defining the functions of the MoCT, one of its tasks is to coordinate the implementation of the E-government in Syria in cooperation with other technical and official agencies. The MoCT relied on drafting the Communications Law on the experiences of similar Arab countries and chose international best practices in this field, in order to restructure the telecommunications sector to be modern and successful and to ensure the achievement of the country's goals in economic and social development. (SYRIAN PRIME MINISTRY, 2016)

### **3.3.3.2. Law of electronic signature and electronic network services**

This law came because of the great development in the field of information and communication technologies during the past ten years, and because of the fundamental changes in administrative and commercial transactions, it became necessary to use electronic means and information networks to accelerate and facilitate transactions, This matter requires moving from the traditional paper format to the technical ones, and accordingly, the Syrian government issued the Electronic Signature and Network Services Law under Law No. \4\ of 2009. This law supported the will of all parties in the transaction, whether client or government because it uses time and effort. In addition to ensuring the rights of customers and the availability of the safety and privacy factor after completing the required data (MINISTRY OF COMMUNICATION AND TECHNOLOGY, 2019b).

### **3.3.3.3. Electronic transactions law**

The MoCT implemented an important part of the plan's policy to develop the communications and information sector to support economic and social development in Syria.

The most important goals were to develop the communications and information sector to support economic and social development projects in Syria, such as building an enabling and legislative environment that is effective and transparent, and here came the importance of the electronic transactions law and the electronic signature law 2010, (MINISTRY OF COMMUNICATION AND TECHNOLOGY, 2018)

### **3.3.3.4. Online communication law and combating information crime**

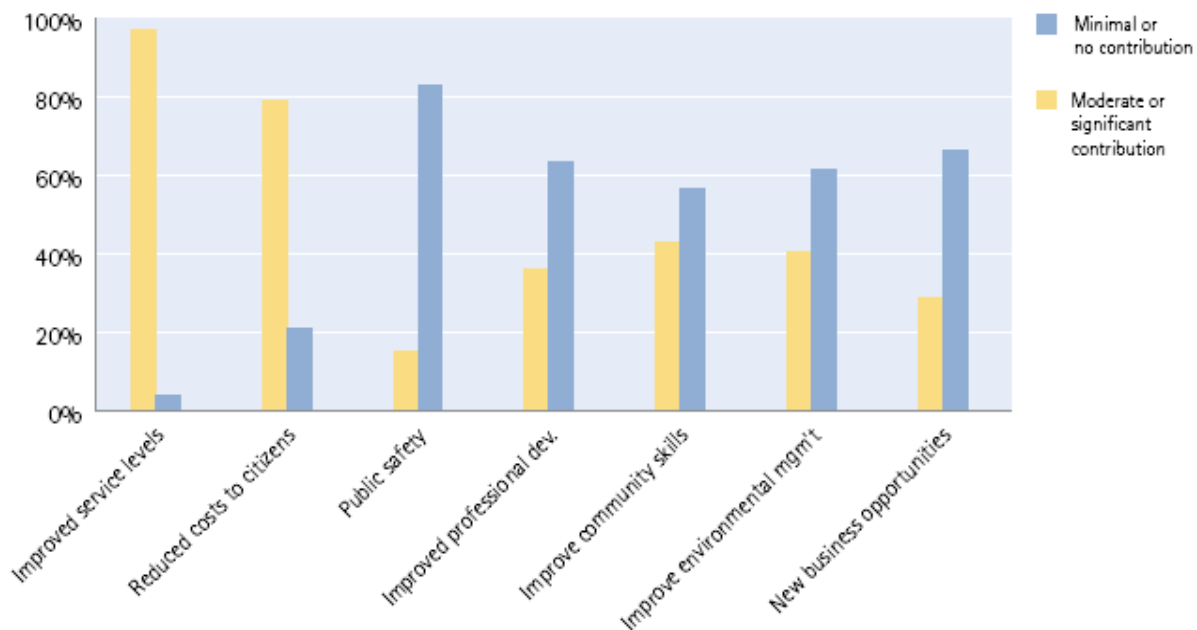
Legislative Decree No. \17\ was issued in 2012 related to communicating on the Internet and combating information crime. The decree aims to regulate online communication, combat cybercrime, define the responsibilities of service providers on informational networks, and characterize cybercrime, and then the decree specifies legal penalties for abuse (MINISTRY OF COMMUNICATION & TECHNOLOGY MOCT, 2017).

### **3.3.4 .The Economic impact of implementing the E-government project in Syria**

Based on the practical experience applied to one of the public sector institutions, the Commercial Bank of Syria CBS, the researcher tries to determine the returns of the e-government. The project started in 2001, but it stumbled for technical reasons and then returned to become mature in 2009, currently, CBS relies on the electronic correspondence between the public administration and 70 a branch distributed among the Syrian governorates. To determine the economic feasibility of

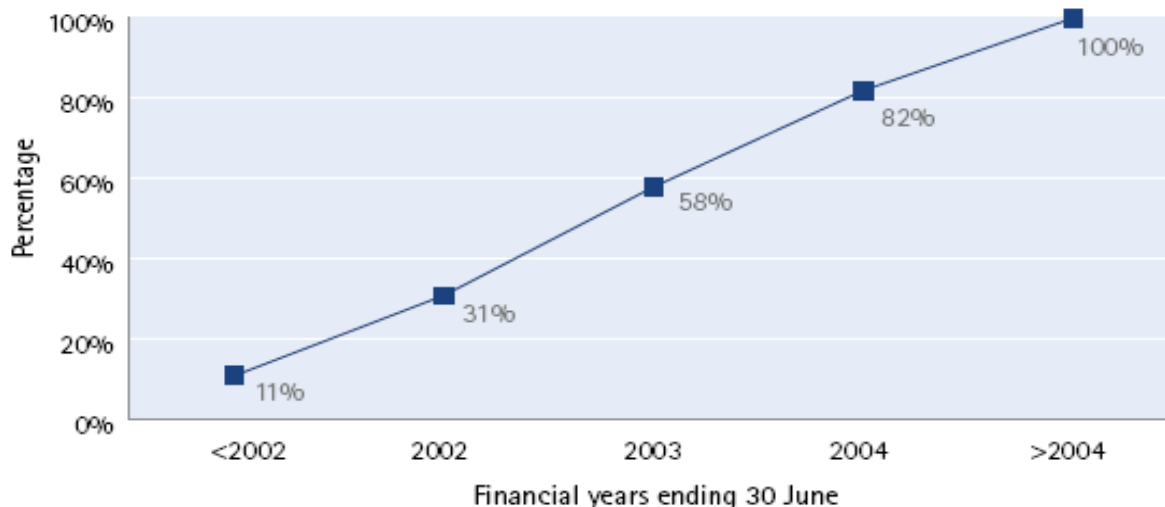
implementing the electronic system in CBS, previous studies relied on an analysis of financial costs and benefits, in addition to calculating the net present value and assessing the payback period, taking into account the risks surrounding the project (ARBASH, 2010). Previous experience, by analyzing the actual results of all implemented programs, indicated to the following returns:

- 1- The services provided to citizens have improved, as the detailed study of 38 programs showed that the services provided and the social welfare improved well, which is a major goal, and most customers with CBS discovered that the implementation of E-government had a clear impact on the social return at a rate of 80%. Figure No. 5 shows the effect of implementing E-government on the social return.
- 2- The application of the E-government system has achieved a reduction in consumers' expenditures as a result of the speedy obtainment of the required service in addition to the availability of the quality factor, the use of time, the reduction in direct costs; more than 45% of users were able to save money through the e-government.



**Figure 6 Revenue from applying the E-government program to the social impact criterion**  
Source: E-government benefits study, National Office for the Information Economy, Australia, April 2003

- 3- The financial studies that were applied to the CBS during the period (1998-2004) confirmed that it achieved savings of 1.1 billion dollars after the application of e-government, in addition to the social returns assessed by citizens. Figure No. 6, shows the financial impact of the E-government implementation.(ARBASH et al., 2010)

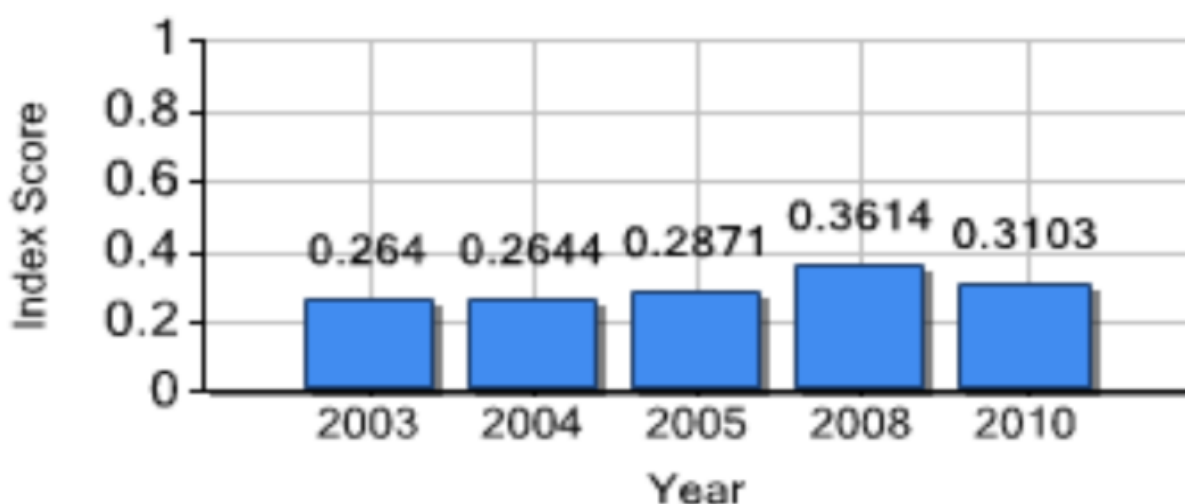


**Figure 7 Indicator of financial return as a result of implementing the E-government program (percentage)**

Source: E-government benefits study, National Office for the Information Economy, Australia, April 2003

### 3.3.5, United nations survey of the E-government program in Syria

The United Nations E-government survey in 2010 compared to the 2008 survey indicates a decline in Syria's position in the composite E-government readiness index (which includes the web measure index, infrastructure index, and human capital index). After it was ranked 119 out of 192 countries in 2008, it ranked 134 out of 184 countries in the 2010 survey, as this index for Syria reached 0.310, compared to a global average of 0.441. (SYRIAN PLANNING AND INTERNATIONAL COOPERATION COMMISSION PICC, 2011) as refer to next table No.7



**Figure 8 Evolution of the E-government readiness index in Syria (2003-2010)**

Source: UN Global E-Government Survey 2010, E government readiness,  
[http://www2.unpan.org/egovkb/global\\_reports/10report.htm](http://www2.unpan.org/egovkb/global_reports/10report.htm)

**Table 7 The E-government readiness index in Syria compared to the global average (2010)**

<b>Index</b>	<b>Human Capital Index</b>	<b>Infrastructure Index</b>	<b>Online Service Index</b>	<b>E-government Index</b>	<b>E-Participation Index</b>
Syrian Classification	0.777	0.121	0.041	0.310	<b>0.014</b>
World Average	<b>0.797</b>	<b>0.236</b>	0.286	<b>0.441</b>	<b>0.205</b>

Source: UN Global E-Government Survey 2010, E government readiness,  
[http://www2.unpan.org/egovkb/global\\_reports/10report.htm](http://www2.unpan.org/egovkb/global_reports/10report.htm)

There are other indicators such as the E-Participation Index, which reflects the quality and use of information and services provided by the country with the aim of participating in public policy-making through E-government programs, which for Syria is considered low (0.014) compared to the global average (0.20) percent (ARBASH et al., 2010).

### **3.3.6. The Obstacles and the main problems to apply the E-government in Syria**

Before discussing the obstacles to implementing E-government in Syria, it is very necessary to refer to many literatures that dealt with the obstacles to implementation in some Arab countries, for example: (AL-DULAIMI, 2006), which showed the main obstacles in the application of E-government in Iraq, Baghdad, which are:

- Fear of change.
- Overlapping responsibilities and poor coordination.
- The absence of appropriate legislation.
- Lack of funds.
- Lack of public awareness of the desired features.
- Lack of transparency and influence of special interest groups.
- Availability of appropriate means of communication.
- Internet penetration barriers such as high cost and English language.

ELSHEIKH et al. (2008), Refer to the Jordanian's obstacles in applying E-government, which are:

Many governments have not changed their traditional procedures even with the introduction of a computer, There is a big difference between the web site and integrated services that end complicated bureaucratic procedures, Financial and administrative bodies acting as if they have not any relationship to do with each other, in addition to the attention to citizens and the private sector was



not the focal point in the early government sites, and even the best management programs did not provide the required support and not the full subsidy.

AL ZOUBI et al. (2011), pointed out in a similar study conducted in Jordan some of the obstacles that played a fundamental role in implementing the E-government project in Jordan, from the point of view of internal observers, local, technical specialists.

- Different management systems even within a single organization.
- The management of the institution is not convinced of the reasons and requirements of the transformation.
- Lack of strong motivation among individuals to make the transition process successful and not feeling that they are part of the process of transformation and success.
- Difficulty accessing the integrated electronic government within organizations.
- Lack of good technical infrastructure.
- Human nature and culture of closed doors and fear of technology and its applications.
- The continuity of data updating operations with the assumption of the usual administrative burden.
- Compatibility with the usual manual work systems and their documentary courses and refused to update and change.
- Lack of confidence in protecting the confidentiality and security of personal transactions.

As mentioned above, the subject of electronic government is a modern subject. There are still deficiencies in most of its departments, including e-government, electronic document management, e-commerce, digital economy, e-cash, also internet sites,

**Now, regarding the obstacles and the challenges of applying the electronic government in Syria,** the topic can discuss the important challenges regarding the implementation of E-government programs in Syria, which are at the same time opportunities that can be exploited in the new phase in Syria, which is the reconstruction phase, the study mentions to the following challenges and obstacles (SYRIAN PLANNING AND INTERNATIONAL COOPERATION COMMISSION PICC, 2010).

**1- Weak of the administrative and economic policy:** Syria is still in the beginnings of implementing the E-government initiative programs, and this means that the demand for this service will increase logically, and for this electronic service to be mature, it needs policies, projects, and programs, which require strengthening administrative practices to evaluate and implement these projects.

Here its point out that the expansion of the application of E-government programs may face many obstacles, including those related to the economic, administrative, and organizational environment, which are the most important challenges, especially in Syria as it is shifting towards a social market economy approach, but nevertheless, this challenge can be viewed as tangible opportunities that help in the development and reform process. Administrative and economic, since the initiative will play the role of the lever for this process, especially as its implementation will require re-engineering the infrastructure and administration.

Thus, the initial bet for the actors and stakeholders involved in the initiative and the implementation of its programs appears through the optimal selection of initial projects from a wide range of projects.

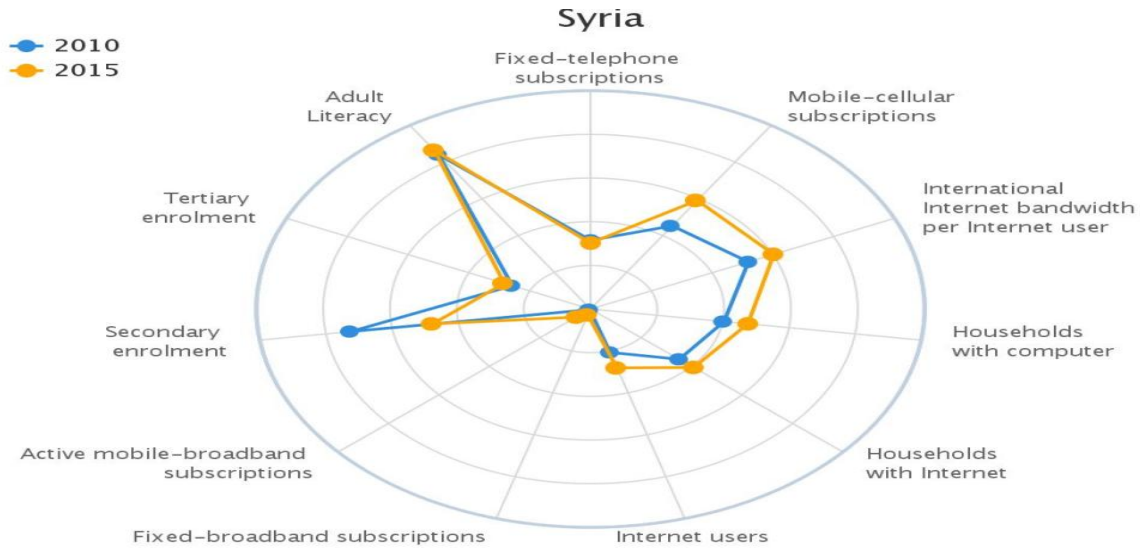
## **2- Weak financing and investment sources during the current period in Syria:**

The implementation of E-government projects requires constant and ongoing investments because the lack of financial resources is an obstacle to the implementation of electronic programs,

On the other hand, in the reconstruction phase, the Syrian government seeks to reduce this temporary obstacle by attracting new investments, taking into account the economic and social impacts facing the implementation process.

## **3- Poor infrastructure for the ICT sector and digital readiness:**

There is no doubt that Syria suffered from the current war from ten years ago and more, and there is no doubt that the level of development of the ICT infrastructure is one of the main factors that determine the degree of success of E-government programs, but at the same time, it can be said that this obstacle did not prevent the developed countries to implement the E-government. Rather, it is an encouraging factor to overcome this obstacle and develop the infrastructure. Figure No. 8 showing Syria's position according to the ICT Index.



**Figure 9 the Syria's position according to the ICT Index  
(Other world classifications)**

Source: Syrian Planning and International Cooperation Commission PICC, 2010, National Report of the General Framework of the E-government Initiative in the Syrian Arab Republic

#### **4- Weak qualified human resource:**

In the same context, the re-engineering of the administrative structure and the qualitative qualification of human resources in institutions that implement E-government programs can be considered a prerequisite for the success of these programs. Nevertheless, this challenge can be viewed as a real opportunity to develop public administrations and work teams, as the implementation of E-government programs will drive the adoption of continuous training programs, especially as the real demand grows with the actual maturity of the initiative's programs. (ARBASH et al., 2010).

#### **3.3.7. The Justifications for applying the E-government in emerging countries**

In spite of the aforementioned advantages of ICT applications in the performance and delivery of public service to citizens, and the development achieved in the type of relationship between citizens and the public service, the shift to electronic services is also not free of the risks and disadvantages that may hinder and distort the content of the service, And therefore affect the development programs in general, because the essence of public administration in the service of development trends (ISMAIL, 2007). The implementation of E-government as a mechanism to rationalize public administration is a pivotal strategy that can give positive results to the work of governmental administrative bodies and achieve a degree of credibility in the work of public service organizations. according to aims are (SHAHNAWAZ and JUYAL, 2006):

- Disseminate the necessary information to who are interested in the civil services such as advertising employment,
- Create of public service outlets of various kinds, health, commercial, education, which would achieve the citizen satisfaction about the quality of services that require,
- Eliminate the element of doubt among the citizen cause of Transparency, To reduce the severity of the negative relationship between people and the public service institutions,
- Creating effective and efficient public institutions, responding to citizens' needs, and ensuring equal access to high-quality services.

Through these concessions, it can say that the E-government project provides government agencies or organizations with positive advantages, it is not enough as a department that manages the affairs of the state and society as an alternative to traditional management, it is as a new method of administrative work to achieve a high degree of administrative maturity, facilitating the relationship between citizens and public institutions to be fast and transparent, and make it a distinctive feature of public administration within the framework of the interaction between the services and citizens that characterized by great efficiency.

This will result in a rapid change in the lifestyle of citizens and reduce the negative image of the public service concept that resulting from the complexities of the administrative structure and the increasing organizational levels in its traditional form. The transfer of citizens between the offices of the administrative pyramid to obtain the service and the resulting waste of time In costs, and a decline in performance (CORDELLA and IANNACCI, 2010).

It can be said that the concept of upgrading the services provided to individuals takes on new meanings and dimensions, depending on the global and local political and economic developments. Under the prevailing rule, great attention has been given to the concept of rationalizing the public service, which translates public administration policy and its interaction within the framework of establishing good governance at the level of service organizations and institutions And what has become known as electronic public services, imposed by the logic of e-government, as a mechanism that scientific studies proved to be effective in creating a new type of public services that supports the elements of integrity, transparency, justice, Individuals, and attention to the citizen, which represents local development axis, and activate the principle of customer orientation centers and institutions within the public service. (ISMAIL, 2007)

## **4. LITERATURE OVERVIEW- THEORETICAL BACKGROUND OF E-GOVERNMENT**

### **4.1. Introduction**

The current chapter deals with reviewing the literature on the concept of implementing E-government 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.

### **4.2. Previous Studies**

AL-SHALABI and AL-KHAWALDA (2016), examined the effect and nature of the relationship between E-government in its dimensions (ability, security, privacy) on organizational effectiveness as a dependent variable which was applied to the Jordanian Ministry of Finance. The researcher designed a questionnaire and distributed it to the study sample (70), and the study used The Statistical Program for Social Sciences (SPSS) to analyze the study data, the study concluded that: The characteristics of websites (portability, security, privacy) in the ministry are available at acceptable levels, and the ministry's websites contribute to achieving organizational effectiveness, and the study also showed that there is widespread interest from the Jordanian Ministry of Finance in the E-government project. By participating in decision-making, the ministry's performance was also distinguished by flexibility and having an effective organizational structure, as well as a clear and effective vision for the ministry. Then the study recommended a set of suggestions such as the necessity of introducing individuals working in the ministry to the concept of E-government and the importance of its application, and working to improve their capabilities to use its various programs, increasing interest in the software that helps provide adequate protection for the E-government sites used in the ministry, the need to pay attention to providing privacy for people dealers with networks used by E-government.

Several types of research mentioned how could E-government management affect Administrative Efficiency, information and communication technology (ICT) have a role as a tool and mechanism to improve effective public service delivery, in addition to transparency and stooping corruption in countries

IRFAN and IBRAHIM (2017), examine the role of -Governance in administrative efficiency and stooping corruption, in Sri Lankan perspective in specific, moreover the first objective is analyzing the current status and the practical challenges between E-governance, administrative efficiency, and corruption in Sri Lanka. The researcher examined the role of E-governance in administrative efficiency and stooping corruption, in Sri Lankan, the first objective was to analyze the current status and the practical challenges between E-governance, administrative efficiency, and discussing the administrative corruption in Sri Lanka. The used analysis of this study was qualitative and data were collected from secondary sources.

The researcher showed the main factors like the shortage of interpersonal computer users that considered as a challenge to implement the E-government project, in addition to the absence of Good Will' of politicians and bureaucrats, lack of inadequately functioning E-Government infrastructure that helps to implement the processes. However, the research confirmed the ICT challenges can be won through spreading awareness programs, sufficient training, empowerment mobile government, and make sure to provide information websites in multiple languages (English, Tamil, and Sinhala), suggested results confirmed that E-governance could be a highly effective tool in improving administrative efficiency.

But PANDEY and GEETIKA (2008), had discussed the study and shown that all endeavors to evaluate the impact of E-government applications in infrastructure and public utilities, where designed a model to show that E-government has roots in democratic values and both variables support each other. The study model had been tested in the field of power in India by using qualitative analysis, in a comparative analysis between two sectors in the power domain (Public and Private) had been made to knowing the conclusions and recommendations.

A research tool combinations “structured survey, unstructured interviews, observations and secondary source” had been used, and the major finding that had been found in the public sector have to speed up an implementation for E-government in its operations to improve user interface and ensure competitiveness.

On the contrary, KAREEM and HASEENI (2015) referred in his research that back in the 90's the term of E-government raised as new concept of digital revelation which could be described working in the era of knowledge explosion the one thing that can count on during the evolution of the organizational performance. Hence the research aims to figure out the role of E-government and to include research variables (Information technology, Electronic archiving, Electronic Control) to enhance organizational performance in the men's ready-made clothes factory in Najaf city/Iraq. The study defined the organizational performance by the organizational ability to optimally use of the available resources in a more effective way to reach to the best level of success towards the future. It is also the tool that helps the organization to reach its goals and objectives through better use as well as investing what it has, whether material, financial, or human resources), the study distributed 50 questionnaires for managers and heads of sections in labs. Data processing was using (Maitab) software, research results noted that factories desire for the application of E-government such electronic archiving and electronic controls by using information technology, further the study found that there is a strong relationship between E-government variables and organizational performance.

A set of recommendations had been found in this research were the most important is investigating the issuance of number of laws and legislations who advice and support swapping to e government, moreover to study on the advantages and positive aspects of E-government and the possible ways to use them to reach high performance with the regulatory the plant under study.

AL ZOUBI et al. (2011), examined the impact of e-government project in the business sector in Jordan, and the study aimed to: determine the status of E-government adoption among businesses in Jordan, and to examine the impact of E-government adoption on firms' performance.

For this purpose, an integrated theoretical framework for assessing E-government adoption, beyond initial adoption was developed. The response of 113 firms was analyzed to determine the relationship between organizational performance and E-government adaptation, the results showed the existence of a significant relationship between cost efficiency and time in the business E-government adoption; in addition, explicitness and accumulation of technology might help to transfer technological knowledge within the organization and might raise the adaptation of innovative technologies.

Then (RANA et al., 2013) assure that E-government able to link governmental activities with the advance technology that exists today. This technology previously shown a remarkable job to deliver efficiency in private sector by using e banking, E- business and E-procurement, And based on that its recommended by this study that governments in addition to their agencies can utilize E-government

initiatives to deliver service to citizen in closer way, which will ensure a closer relation and more efficiency in performance.

On the other hand, the experiences of some poor countries showed that there are many initiatives for information and communication technology, such as rural areas in Tanzania, where they suffered from a lack of knowledge and electricity, and this matter led to the unavailability of using mobile phones due to high prices and the lack of network necessary for operation. Therefore, in 2003, Tanzania enacted the information and communication technology policy and procedures because it felt the need to implement the E-government program, but experience after implementation and on the ground revealed that there is a difficulty in implementing it due to the loss of the political will and the wise management to confront the change towards implementing E-government programs. The study showed that Tanzanian citizens are ready for change, but it needs a long period, which can be started through the mobile phone industry as a good start. In addition, the respondents emphasized that the need to adopt information and communication technology as the beginning of a period for advancement. The study recommended increasing government officials' interest in the change related to information and communication technology. Also presenting plans to develop the project and link it to service delivery programs in the private and public sectors, as well as the study indicated that Tanzania can benefit from the experience of the information and communication technology project with the aim of converting to electronic government by focusing on good communication infrastructure, which is an important factor that may contribute to the success of the experience of providing services Online (DEWA and ZLOTNIKOVA, 2014).

#### **4.3 Electronic Government**

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 E-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). While e-governance is a new concept, it takes into account all the practices of institutions in the world, whether they relate to the public or to other institutions. E-governance has items can be categorized as features or defects which include dimensions of E-government as Employment (work), Viability, Reliability: - Electronic layers can be considered more systems than other labor force, reducing the human element and increase the dependence on the mechanization, Privacy, Security which consider it as One of the largest E-government budget, but cannot achieve 100% safe, Cost: must be taken into consideration., Psychological effects, Digital Signature, Development, Conflicts and inconsistencies: and Time: while the users will not have to wait long to complete reconciliation (KLASINC, 2017).

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.

#### **4.3.1, Theoretical framework of E-government**

Researchers used several terms and definitions of the E-government system, all of which were characterized by lack of clarity for various reasons related to the goal and vision, and therefore most of the definitions moved from a narrow and simple definition to a broad and complex concept, The following table No.8 Shows some definition of the concept of E-government.

**Table 8 Definition of the E-government 's Concept**

<b>The Narrow concept</b>	<b>The Broad concept</b>
<b>The Definition</b>	<b>The Definition</b>
It is the necessary and required technology to make all government services ready electronically (OKOT-UMA and LONDON, 2000)	It is the default version of the real government (ABBAS, 2004).
It is the set of procedures for completing the required tasks and business and transferring government services to citizens and institutions electronically (SCHEDLER and SCHARF, 2001)	It is the electronic public administration for government jobs assigned to citizens and the business sector or that are spread between public institutions and their agencies through the use of ICT systems (GHALIB, 2005).
A utility portfolio that contributes to the transfer of government services to all citizens electronically (SEIFERT and PETERSEN, 2002).	It is the best way to achieve integration and compatibility between electronic capacity and Internet speed with the government administration (MONTAGNA, 2005).
Delivery of government services via a single direct entry point (TAMBOURIS et al., 2016).	A complex set of technical applications of government economic, social, political and administrative activity (MONTAGNA, 2005).
It is every governmental activity that depends on the use of computer networks (MONTAGNA, 2005).	It is a guided vision that includes all the assumptions to reorganize and modernize the public administration (SCHEDLER and SCHARF, 2001).

Source: Authors' own research (2021)

Note from the following table: The simple, narrow definitions of E-government focused on the basic idea of providing government services to their beneficiaries electronically.

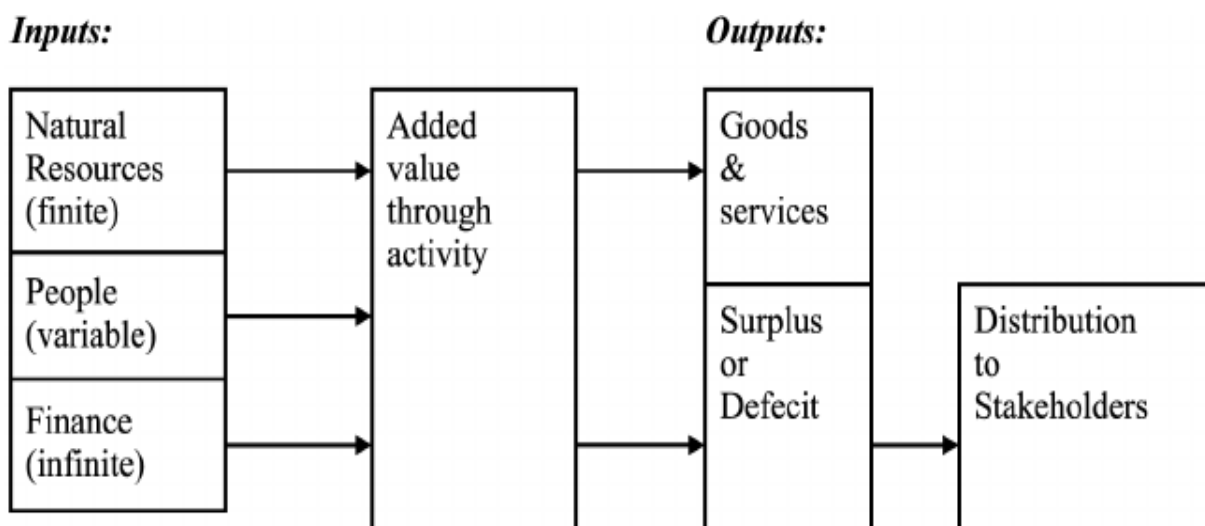
The complex and broad definitions indicate that E-government is a project that requires many organizational and institutional changes.

Also, it notes that the broad and complex definitions of E-government include many different problems about technical aspects, administrative and organizational problems.

#### 4.3.2. The Concept of Information Technology, IT

In the definition of Information Technology, most researchers ignore its core component, information, which is an important and vital core of all the tools and equipment used to store, process, retrieve, or transmit. Emphasis is placed on these tools in defining the term (PICCOLI and PIGNI, 2019).

The researcher believes that the concept of information technology can be seen from two points. The first one is information in its general framework, which is described as the human intellectual product that is included in the different types of sources of information, or messages transmitted between the sender and the receiver through various communication technologies, or ideas and concepts that are transmitted through the means of broadcasting directed. The special framework for information is described as those that have been processed, evaluated, arranged, organized and categorized using automated and manual methods. The second point of this concept is related to the techniques used in processing, transmission (BULGACS, 2013). Thus, the definition of information technology can be defined as "electronic and digital techniques used to store, process, transmit, broadcast, analyze, classify, catalog, extract and direct the use of information by users in the most convenient manner, ensuring the results of speed and accuracy." Have been subjected to a number of processes before being input into computers or messages sent using communication techniques or directed using broadcasting techniques, thus different from the concept of data commonly used by computer professionals as a description For all the facts, concepts, symbols and raw numbers that are computer inputs and are prepared for processing in order to extract them later in the form of information The difference between the two concepts can be seen in the following form figure No.9:



**Figure 10 Technical process inputs and outputs**  
Source: (TIPPINS and SOHI, 2003)

### **4.3.3 Information technology infrastructure**

Infrastructure in its general concept is all the means, equipment and constructions that can meet the basic human needs, and can prepare roads, bridges, power stations, communication lines and other traditional examples of infrastructure in any country. In the field of information technology, the concept of infrastructure includes modern telecommunications services, satellites, internet networks, personal computers, information centers and libraries, as well as resources and human resources with expertise and competence in the fields of computers, information and communications. Preparation of technical staff, training centers, technical rehabilitation and scientific research and development centers (MELVILLE et al., 2004).

The level of development of the IT infrastructure in any country can be measured by two basic methods: the first is the measurement of the means that is related to the direct study of specific features or features of the infrastructure such as the points of contact, type of network, The second method is to measure the result and measure the effectiveness or spread of the services provided by the infrastructure (ISMAIL, 2007).

If the second measure is appropriate for the developed world, which already has an advanced IT infrastructure. The first is the most appropriate way to measure the level of development of IT infrastructure in the developing world. Regardless of the level of progress of the IT infrastructure, it does not individually achieve the progress and prosperity of the communities, but it is a fundamental pillar of capacity building, skills and knowledge patterns.

If developing countries are to formulate and implement appropriate programs and policies for the investment of advanced IT infrastructure data, Applications can make a quantum leap in all sectors. Good infrastructure can provide effective tools, and can have the potential to influence and change the level of development, as well as the possibility of creating new types of applications. Tec information based on the initial infrastructure, such as e-education, E-commerce and E-government and digital libraries and national information systems (HAAG and AL, 2003), Table No. 9 refer to how the administrative schools was developed .

**Table 9 Development of Administrative Schools**

<b>Administrative Schools</b>	<b>Year</b>
Traditional school	1890
Behavioral school	1924
Quantitative input	1940
Systematical School	1951
Attitude School	1960
Learning organization	1980s
Electronic management	1995

Source: (CORDELLA and IANNACCI, 2010)

#### **4.3.4. The Technical concept of electronic government**

Many researchers discussed the transition process from traditional administrative work to the application of information and communication technologies (ICT) in the organizational structure and the use of modern technology including computer networks to link organizational units with each other to facilitate access to data and information to make appropriate decisions and accomplish the work and provide services to beneficiaries efficiently and at the lowest cost and as soon as possible. Accordingly, it can be defined, the e-management is a set of efforts that rely on information technology to provide products and services to customers through the computer and seek to alleviate the problems resulting from the treatment of beneficiaries with products to contribute to the efficiency and effectiveness of organizational performance (DAVIDRAJUH, 2004), so, it can be said; that electronic government,

- It is an integrated electronic system aimed at converting the normal administrative work from manual management to e- management using the computer, relying on strong information systems that help in making an administrative decision as soon as possible at the lowest costs (EDGE, 2005).
- In addition, the concept of electronic government goes far beyond the concept of automation of the work departments within the organization, to the concept of integration of data and information between different departments and the best uses of these data and information in guiding the policy and work procedures of the institution towards achieving its objectives and provide the necessary flexibility to respond to successive changes, both internal and external. it can say that: the process

of using administrative institutions for information and communication technologies is an important issue because E-management includes all components of management from planning, implementation, follow-up, evaluation, and motivation, but it is characterized by its ability to continuously create knowledge and employ it to achieve the goals.

#### **4.3.5. Objectives of electronic government**

The Objectives of E-government as what researcher definite (GIL-GARCÍA and PARDO, 2005):

- Developing public administration and reducing paperwork and reuse of solutions.
- Improved services: reduced mobility, connectivity anytime or anywhere, and easy access to information
- The proximity of client (employees): one interface for the citizen (employee), a unified look for citizen or employee, and easy procedures
- Improving economic competitiveness: the use of the Internet for international trade, and the opportunity for companies of medium and small size to enter the competition
- Cutting expenses: systems integration to support internal and external procedures
- Simplify administrative procedures in a way that allows them to be submitted electronically.
- Transparency and presentation of information to customers, citizens, suppliers, etc.
- Access administrative services to maximum geographical locations.

#### **4.3.6. Benefits and advantages of electronic government application**

The benefits of E-government as what the researcher classified: (GRÖNLUND and HORAN, 2005)

- Management and follow-up of various departments of the institution as a central unit.
- Concentrate the decision point in its action points with greater support in their monitoring.
- Collect data from their original sources uniformly.
- Reduce the constraints of decision-making by providing and linking data.
- Minimizing disbursements in the follow-up of various management processes.
- Use information technology to support and build a positive corporate culture among all employees.
- Providing data and information to beneficiaries immediately.
- Continuous learning and knowledge building.
- Increase the interdependence between staff and senior management, follow up, and manage all resources.

The application of the concept of electronic government has many advantages and positive effects, can be summarized in the following points: (JAEGER and THOMPSON, 2003)

- Fast performance of customers services while maintaining their quality.
- Transfer of documents electronically more effectively.
- Reduce cost as a result of streamlining procedures, reducing paperwork and reducing performance time.
- Minimize the need for service providers, especially with regard to paper transactions.
- Objective evaluation of the performance of workers and the development of an advanced system for the knowledge of the underprivileged.
- Reducing errors to a minimum, the electronic system is less prone to errors.
- Reduce the violations due to the ease and ease of the system and accuracy.
- Clarity and ease of understanding by the beneficiaries of what is required of them.
- Reduction of investments in buildings, real estate and so on.
- Reducing the impact of personal relationships on business achievement.

#### **4.3.7. Components of electronic government:**

There are many researchers who focused on the electronic government and its dimensions that are the following elements (ABERBACH and CHRISTENSTEN, 2007):

- Paperless management: relying on electronic archiving, e-mail, directories, e-books, voice messages and automated follow-up systems.
- Remote management: where electronic communication, mobile phone, new international phone and electronic conferences are other modern means of communication.
- Management with open time: where work 24 hours without continuous link night or day.
- Management without rigid organizations: work is done through network institutions and smart institutions that rely on the knowledge industry.
- To carry out a series of planning and regulatory efforts.
- Mainly rely on information technology in carrying out administrative operations.
- The human resources, information, technology and mechanism mix the appropriate mix of electronic service delivery.
- Providing products (goods, services and ideas) to customers with the required quality.
- Work towards efficiency and effectiveness.

#### **4.3.8. Dimensions of electronic government**

The electronic government consists of three main dimensions: Viability, security and privacy it deals with government functions directed at citizens or the business sector or between state institutions and agencies through the use of ICT systems and networks (ALAM et al., 2004).

##### **4.3.8.1. Viability**

The viability is Continuation of E-business which includes two elements, the first one is about E-services, which is defined as the electronic delivery of corporate information, programs and services, and by the e-governance, the business will continuance work with no risk of losing data or mistake by a human.

E-services often include E-commerce, and E-commerce is the second element of the E-government process. It is defined as the electronic exchange of money for goods and services and that is will enhance the process of continuing in business.

The final key in the E-government process is e-management. which is the use of information technology to improve the management of government; it is used for everything from streamlining business processes to improving the flow and integration of information (BADRI and ALSHARE, 2008).

##### **4.3.8.2. Security**

There is, however, one main downside that is occurring within each process under E-government: security. Even with the practice of using secure servers, security over the Internet will always be at risk. Technology will continue to improve, and so will the functions to make practices over the Internet more secure. Security processes must be as secure as technology will allow, and the users must follow the policies set to make their own actions safe (HISLOP et al., 2018).

##### **4.3.8.3. Privacy**

The enhancement of security often comes with the decreasing of privacy, and this is also true when it comes to the E-government system. The growing volume of digital interactions between public, citizens and consumers in the past decades has caused the privacy and confidentiality concerns is identified as a key challenge to policy, regulatory and legislation in the 21st century (YANG et al., 2016). Moreover, E-government systems collect a lot of confidential information about the citizens, employees, customers, products, research, and financial status using electronic computers. The



compromise of such information will lead to the loss of citizens' trust and confidence, development and business opportunities, financial gains, and the overall social gain (LIU and CARTER, 2018). Therefore, information sharing and the continuous communication between the E-government departments and users always raise concerns on privacy issues, such as identity and confidential business information thefts. These threats cause massive distractions on E-government systems and the corresponding information assets in smart cities (YANG et al., 2016).

There are many privacy concerns on government in the appropriate capturing and use of personal and other sensitive information gathered to monitor the citizens, which is considered by many as an act of invading their privacy.

The concerns are not nonsense, and a number of serious information leak happened in the near past. In 2015, the United States (US) government suffered a massive cyber-attack into the government systems exposing sensitive information of about 21.5 million people, including employees and their family members (Bloomberg, 2018) The attacks resulted into theft of personal information such as social security numbers, fingerprints, credit card information, addresses, health and financial records and other private information. This is an obvious evidence that citizens would lose their faith against E-government systems. The US cyber-attacks present a call to other nations in the world to take the initiative actions in safeguarding E-government critical infrastructure against cyber-attacks that can cause information security breach of any scale. Additionally, that in the US, some state and local E-government sites posted citizens' names, social security numbers, property tax records and other private information on the web and attacker could access these information without requiring user login ID or password (AL-JAMAL and ABU-SHANAB, 2015). This information leak situation could get worse when the E-government system is fully employed in a smart city environment. It is therefore the responsibility of the government to make sure that citizens information is properly secured without the loss of privacy, during data collection, processing, store, and exchange. The introduction of smart cities to be managed by an E-government system is coming up with new privacy vulnerabilities. Smart city applications collect a wide variety of sensitive information from the users, and eventually it will control and influence user's life in the future. The open and ubiquitous nature of information of technology devices used in the smart city make it vulnerable to privacy leakage and information inferring by attackers during information collection, transmission and processing. The disclosed data contain private information such as personal identity, location, health data, lifestyle inferred by surveillance and online analysis and other related data. Privacy preserving techniques such as

encryption, user anonymity and access control mechanisms are necessary measures to maintain information privacy (YANG et al., 2016).

To address the privacy issues in e-government, both technical and policy measures are required. E-government network must be secured using appropriate technology such as firewalls and intrusion detection and prevention systems. Mechanism as introduced in the last section such as encryption and authentication of user's data is required to provide access control by making sure that data can only be accessed by an authorized user. Privacy policy and laws are required to enhance user's trust while using E-government websites by stating why the data is being collected, the purpose of the collected data and the action that will be taken in case of privacy violation (LIU and CARTER, 2018).

#### **4.3.9. The Relevant stakeholders in the E-government**

The research noted from the definition of E-government that it requires serious participation by many parties inside and outside the government. These parties are called stakeholders in e-government, and these parties are (AL-SHALABI and AL-KHAWALDA, 2016):

##### **4.3.9.1. Beneficiaries in E-government**

The tasks of the production process are divided into several parts in order to finally reach to the beneficiary, who is the final consumer. As for e-government, it begins with the beneficiaries, who are the individuals who use services, E-government and they benefit from it the beneficiaries of E-government can be divided into four types:

- Citizens: They are the individuals who benefit from E-government services to support their administrative transactions and are referred to as the Government - Citizen G-C
- Business: It is every business sector that benefits from e-government services, whether a private or public company and referred to as a government-business relationship G-B
- Governmental agencies: they are all the general governmental sectors that benefit from E-government services and are referred to as the government relationship - G-G government.
- Workers / employees: they are the internal work team that also benefits from E-government services and is referred to as a government-employee relationship G-E
- Political leaders: They are also one of the main stakeholders of E-government services, as political leaders are individuals and they are the ultimate owners of E-government (LUK, 2009).

- Government: The government plays a leading role in E-government as a user or as a beneficiary of the service in addition to its role as a maker, director and regulator of policy, as it is the main provider of electronic services.
- The E-government program: These programs are the savior and helper for implementing and following up the E-government because it is responsible for providing and supporting all technical services
- Partners and Providers: They are the individuals and companies that support and provide the infrastructure needed to design and implement the electronic network (MOHAMMAD et al., 2009).

#### **4.3.10. Strategies of E-government success according to its goals**

The successful implementation of E-government according to the broad concept depends on basic and multiple pillars, states and governments must prepare it according to specific plans based on the experiences of countries that have successfully implemented the e-project, where the formulation of E-government strategies must be effective and complementary among themselves to achieve this success (AL-SHALABI and AL-KHAWALDA, 2016).

It can be said that: Strategies for implementing E-government differ in the operational foundations, and the degree of change. But at the same time, most strategies generally adopt and start from (SYRIAN PLANNING AND INTERNATIONAL COOPERATION COMMISSION PICC, 2010):

Clarifying and describing the E-government and defining its outputs that seeking the government to reach it.

- Accurate identification of success requirements in terms of assessment and readiness.
- Knowing the plan of the concerned authorities in the government and defining the goals and objectives of each step
- Focus on policies that support the implementation of this program

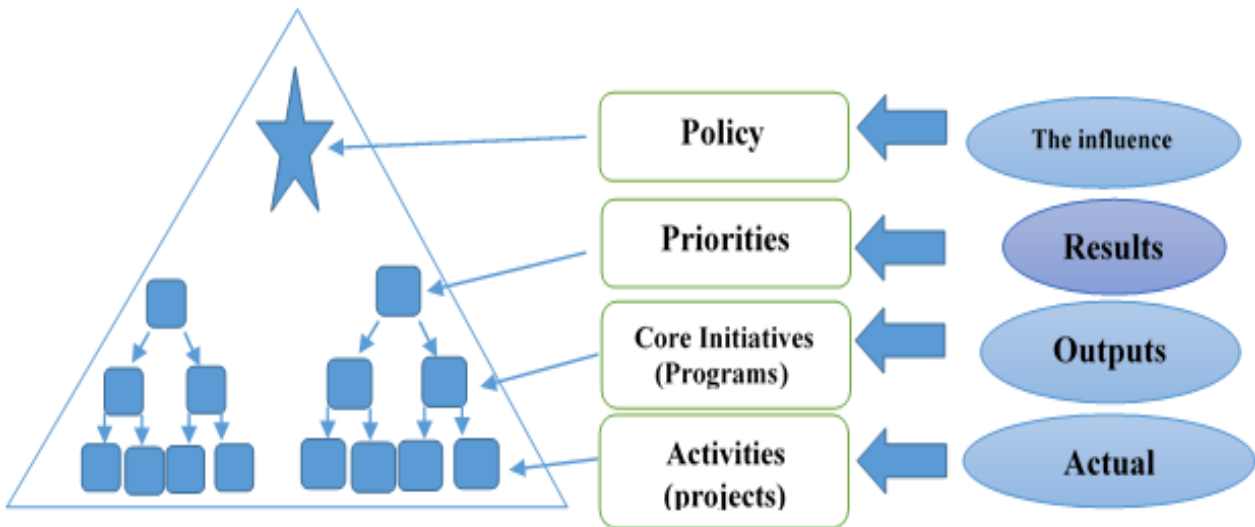
The following table No.10 shows the success strategies of E-government according to the detailed frameworks:

**Table 10 Strategies of E-Government**

Strategies	Action Plan
<ul style="list-style-type: none"> <li>• Planning and management strategies</li> </ul>	<ul style="list-style-type: none"> <li>- Adjusting the government agenda</li> <li>- Providing a supervisory body to follow up</li> <li>- Smart plans and goals</li> <li>- Re-engineering work procedures</li> <li>- Building a legal environment</li> </ul>
<ul style="list-style-type: none"> <li>• Service accessibility service strategies</li> </ul>	<ul style="list-style-type: none"> <li>- Societal Inclusion</li> <li>- Reducing the cost of accessing the service</li> </ul>
<ul style="list-style-type: none"> <li>• Content Strategies</li> </ul>	<ul style="list-style-type: none"> <li>- Rewrite government content</li> <li>- Development of standard forms for government transactions.</li> </ul>
<ul style="list-style-type: none"> <li>• Technical strategies</li> </ul>	<ul style="list-style-type: none"> <li>- Developing the necessary infrastructure for the project</li> <li>- Start with the E-government portal</li> <li>- Confidence in the confidentiality of information</li> <li>- Enable online payment</li> </ul>
<ul style="list-style-type: none"> <li>• Public participation and awareness strategies</li> </ul>	<ul style="list-style-type: none"> <li>- Comprehensive awareness programs about an E-government program</li> <li>- Respect for privacy</li> <li>- Holding training courses</li> </ul>

Source: Authors' own research (2021)

Attached figure No.10 Shows the indicators for measuring the extent of achieving the strategic goals according to the different levels,



**Figure11 Indicators to measure the extent to which the strategic objectives of the E-government are achieved**

Source: An 'E-strategy pyramid', E-Strategies Monitoring and Evaluation Toolkit, World Bank, 2010

#### **4.3.11 The Transition from traditional management to electronic government**

Administrative schools have witnessed profound and wide-ranging changes in the level of administrative thought, as these administrative schools have begun to develop and mature. This has affected the efficiency and effectiveness of the administrative process. (CHOI and LEE, 2002)

Thus, the department has come to characterize the idea that guides, manages and uses technology as a tool and means to a new idea with the advent of modern technology, the idea that comes with new capabilities, new areas and new value that guides everything, including management (ELSHEIKH et al., 2008). Therefore, the administration in its traditional concept based on hierarchy and division based on planning and orders at the top is not necessary and there is no need for a manager and staff supervised by the person has become self-management and not management of others and there is no need to return to the Director To obtain the information where it has become dependent on the Internet and databases and therefore it can be said that electronic government has worked on the following (FOUNTAIN, 2002):

- Remove the gap between management and employees.
- Eliminating the traditional division of management, personnel, and consultants where the person is the worker, manager, and consultant at the same time.
- Restructuring of roles and functions, which turns decision-making management into a consultative department.

The idea of employing information in the administration has developed considerably. This recruitment began in the form of reports of "what actually happened" within the institutions. It then evolved to analyze these reports to find out why the variables "why happened." The techniques moved to the process of using information to predict what "will happen", then evolved into the collective vision of information and the different influences of decisions. Then, it moved on to the more advanced stage of using information to achieve the goals or "what we want to happen." (KAMARCK, 2000).

#### **4.3.12. E-government structure**

The E-government architecture consists of five main elements (ARBASH, 2010):

- Procedure structure: It includes the plan of the main activities that the E-government program will implement it and support it.
- Technology structure: It defines the mechanism for connecting computers with the E-government project and also defines the software that will be implemented by the computers
- Data structure: It includes a comprehensive plan for the data items needed to provide E-government services and the relationships between them.
- Data management structure: it defines the functions of data entry, processing, storage and output.
- Management structure: It includes policies, standards, human resource systems, administrative structures and financial systems that are required to support E-government projects.

It is necessary to mention that the unified structure of the various E-government agencies is working to create the possibility for the different government agencies to move to share data, similar services and infrastructure (NDOU, 2004).

#### **4.3.13. Reasons for transformation of E-government**

The shift to e-governance is not a path of luxury, but an imperative imposed by global changes. Time is one of the most important areas of competitiveness among enterprises. Reasons for electronic transformation can be summarized in the following points (LONG, 2002):

- Complex procedures and processes and their impact on increasing the cost of business.
- Immediate decisions and recommendations that will cause an imbalance in an application.
- Need to consolidate data at the enterprise level.
- Difficulty standing on performance measurement.
- The necessity of providing data for the employees of the organization.

- The tendency to employ the use of technological development and reliance on information in decision-making.
- Increasing competition between institutions and the need for mechanisms of excellence within each institution seeking to compete.
- The inevitability of continuous communication between workers on the breadth of work.

#### **4.3.14. Electronic application requirements**

In the beginning, there is no doubt that the implementation of the E-government project requires the first letters of the alphabet, which are using computer networks, Internet, Extranet.

One of the most important considerations to be taken into account for the organization's successful transition to electronic government are the following (LANVINE, 2004):

- Interest in administrative areas, not only the technical issue but in the first instance is an administrative issue based on the thought of the management of sophisticated and conscious management leadership.
- Dependence on scientific methods that require expertise and leading disciplines to be transferred to the electronic organization, takes time in preparation and planning.
- The use of communication and information technologies to provide opportunities for the application of modern management systems based on software verification and prevent contradiction and achieve the requirements of high-quality performance and efficiency (ELIA et al., 2003).
- Developing models of interaction and inter-relations between the electronic parts of the organization internally and externally.
- Provide an electronic payment mechanism to be used to pay fees for obtaining various services. As a natural result of electronic transactions.
- Improve the level of service, rationalize the use of resources and control performance. This transformation also requires simplifying organizational structures, reducing the preparation of jobs and using fewer numbers of more qualified and highly trained workers.
- To sensitize customers and acquaint them with everything related to the ways of dealing and how to obtain services, to ensure their interaction with the requirements of electronic government.
  - Development of legislation and regulations governing the work of the Organization with a view to simplifying and harmonizing them with the requirements of electronic transactions through

networks. This requires a legislative revolution that excludes all forms of complexity, with the use of technologies that ensure the protection of electronic transactions from counterfeiting (ONIBOKUN, 2001).

- Develop a corporate-wide strategy to this end. In order to shift from traditional management to electronic government, the following stages must be achieved:
  - Automate the organization with all its branches and sections and convert all information and data into electronic information.
  - Securing the necessary infrastructure to connect all sections and branches to a single information network and exchange of information between different entities (PORTE et al., 2002).
  - Determine all transactions between the institution and all its customers, employees, customers, suppliers, government, etc., and turn them into electronic transactions.

#### **4.3.15. Transition stages towards to E-government**

The complete transformation towards E-government requires a set of stages, which include two main dimensions: The first dimension is the transformation of internal activities and processes into activities that are executed electronically through electronic means, and the second dimension represents the role that the administration plays and its relationship with the beneficiaries, and this matter requires prior planning for these activities and their implementation through a set of integrated stages according to the following (AL-ABOUD, 2003):

- The first stage: Dissemination of Information, this stage includes making government information available digitally to the beneficiaries, and the information takes a linear path that starts from the website and ends with the customers.
- The second stage: Interaction, this stage includes the establishment of advanced information networks that are effective, confidential and have high research capabilities. The linear movement of information is two-way, as the government benefits from the feedback received from the beneficiaries through various methods.
- The third stage: Dealing, This stage includes displaying government services and providing them electronically to beneficiaries through various websites such as search, inquiry, reply, E-mail.
- The fourth stage: Integration, It is achieved at this stage between the internal operations of the organization with its external operations and the transformation of all traditional activities into electronic activities.



#### **4.3.16. Conclusion**

It is possible to conclude that there is a difference between researchers in the relationship of these terms: (E-management, E-government, and E-business) with each other as follows:

- E- Business means the management of business electronically at the level of projects or private organizations, while E-government means electronic public management, E-management is the framework that includes both e-business to indicate the e-business management, and E-government to indicate the e-management of the government works, both of them directed for citizens, business or directed at various government institutions and departments. (OTIKE, 2013)
- E-Government is more general and comprehensive than E- management. But, it is the first and main path towards to the e-government. (KAREEM and HASEENI, 2015)
- E-Management is one of the branches of e- business. (MELVILLE et al., 2004)
- Some researchers believe that electronic commerce in its narrow sense is the process of buying and selling via the Internet, But in its broad sense, it means electronic business (RUDZKIENE and MARTINAITYTE, 2010).

#### **4.4. Organizational Effectiveness**

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?

#### **4.4.1. Organizational Efficiency**

Efficiency in its general sense represents the process of comparison between production in the current situation and what can be produced and achieved later, using the same available resources, such as financial resources, efforts exerted, time, and others. As for the strategic organizational competence in the institutions, it is the integration between the individual skills that are coordinated through specific mechanisms and which contribute in an interpretive manner in determining the added value of the final product.

##### **4.4.1.1. Definition of efficiency**

The most important definition of the world of linguistics "Chomsky" that: the knowledge is the basis of efficiency, which represents an evolutionary mix of experiences, values, and information, which in turn constitute a framework for the evaluation and integration of new experiences and information. This latter intervention as an essential element in efficiency (MINTZBERG, 1993).

From a strategy perspective, efficiency can be defined as "the sum of practical knowledge that ensures competitive advantage in the market. Core efficiency enhance the competitive position of the enterprise, Thus, an institution that has efficiency means that it has a competitive advantage that is one of the strengths.

Efficiency can be defined by the angle in which it is viewed (ZHAO et al., 2008b):

- **Definition of efficiency from the worker point of view:**

*"Is the capacity shown by the individual to put his knowledge into effect?"*

Efficiency is also defined as "the capacity to accomplish a set of specific, clear and measurable tasks within the framework of the activity".

It can also be defined as "the rational use of available resources in the form that achieves the most cost-effective by satisfying the needs and desires of working individuals and raising their morale to enhance their desire and their rush to work."

Therefore, organizations that cannot create degrees of job satisfaction among their members within the moral framework, and seek to invest their financial resources only, this leads to the disruption of the energies of the Organization and reduce efficiency in investing human efforts, material, financial and informational manner (SMITH et al., 2010b).

The organization is composed of many parts. It is essential that each part works well for the organization to be effective. Each part must be consistent and work side by side with other parts in order to optimize the performance of the organization. In an organization that is known for excellence, these parts are aligned so that the entire organization is more effective than the sum of the parts (LEE and SUKOCO, 2007).

- **Definition of efficiency from the management point of view:**

"It is the system that can reduce the costs of resources crisis to achieve the goals set and desirable without sacrificing the outputs of the system"

In the sense that it is the ability to perform things correctly, and hence it is based on the concept of input and output is an efficient system able to achieve outputs beyond the inputs used.

As known as «C.Saure» and «D.thierry» efficiency management as: design (development),

Implementation and follow-up of harmonized action plans with a view to reducing the differences between needs and resources of the Foundation.

Administrative efficiency is defined as: the efficient completion of administrative tasks

“Good management has a good level of public expertise in the areas of planning, organization, guidance and control” (RUDZKIENE and MARTINAITYTE, 2010)

- **Definition of efficiency from the owner point of view:**

It is the criterion of rationality in the use of the available physical, financial, human and information resources. The organization that aims at growth and development must ensure that human, material, financial and information flows can continue to function effectively and continuously. The reality of the contemporary environment is characterized by limited resources. It is difficult to obtain the resources mentioned in the quantities and qualities required for the performance of their activities. Therefore, the owners of the organization must rely on the method of guidance in optimizing the use of available resources, Coordination between the objectives and what they have available human resources and material and financial information. And the direction towards the excessive achievement of objectives, with insufficient resources available, makes the organization's owners suffer from severe failures in their overall activities (GHOSH and SCOTT, 2006).

#### 4.4.1.2. Efficiency approaches

The approach of Efficiency is the sum of the collective knowledge and accumulated experience over time and the ability to exploit that knowledge and experience under different professional circumstances. From this logic, efficiency is made up of capital and knowledge and the skills of good conduct (GHOSH and SCOTT, 2006). The management approach assumes that the readiness of the efficiency for mobilization and exploitation high in front of any situation and spectral potential, and therefore the efficiency in this perspective is a sophisticated tool and inherent for the professional status of the worker in the performance of his functions (DFID, 2002).

Efficiency as an integrated system is the responsibility of each of the human resources "individuals and groups" because of their knowledge and experience and management, which is responsible for providing the appropriate regulatory environment and the incentive system.

There are many necessary concepts which enrolling under the efficiency's approaches like:

- **Operational approach:** From the perspective of the practical approach, "efficiency is the result of the continuous interaction between group training, organizational process and technology, the ability of the institution to maximize the positive interaction between them, and the competitive advantage of efficiency can only be achieved through continuous interaction between these components (GHOSH and SCOTT, 2006). The ability according to the practical approach is not individual but collective, not absolute, but relative and variable, such as the ability of the group to control of available technology and the ability to adapt and interaction (AUJIRAPONGPAN et al., 2010).

- **Strategic approach:** In accordance with the strategic approach, the efficiency of the institution achieves a competitive advantage through the completion of projects and the achievement of strategic objectives. Efficiency is determined in those cognitive, practical and organizational capacities that are difficult to imitate by competitors or compensate them with a new technological pattern or compensate them by creating ways Regulatory or another similar efficiency (AWAN, 2008).

#### 4.4.1.3. Efficiency types

- Classified efficiency: the efficiency divided as: The first, Individual Efficiency:
  - Whatever the level of individuals in the organizational structure, the positions they occupy require a certain efficiency to perform their tasks in a manner that meet the institution's objectives and then show the efficiency that should be available in individuals.
  - Perseverance and ability to work and adapt to changing circumstances and ambiguous.

- Ability to learn quickly and control technological techniques.
- Employing talent, dealing positively with subordinates.

The institution can also have individual efficiency by adopting local standards and principles in the recruitment process, in addition to the training process that is given by them in parallel with the jobs they occupy (SHAHNAWAZ and JUYAL, 2006).

- The second classify is Collective Efficiency: which is one of the growing areas of interest for institutions, they are created through synergy and collaboration of individual efficiency, through communication, information exchange, cooperation and conflict resolution (SCHONBERGER and HURLEY, 2002).
- Strategic efficiency: The efficiency and capabilities of the employees should be defined and compared with those required to achieve the strategic objectives of the institution.

The strategic efficiency of the institution is not only linked to human resources because the individual's efficiency consists of the sum of the individual qualities of "knowledge, skill, behavior" while efficiency as an ability to function effectively is not related to one individual but are based on mechanisms of cooperation within the establishment of mutual influence relationships (TADROS and ASSEM, 2006b).

In other words, strategic efficiency comes from the way in which the integration of individual efficiency and coordination mechanisms is created.

Also, the strategic efficiency can be divided to three types of resources:

- Physical resources (equipment, technology, buildings ... etc..)
- Human resources (capacities, skills, knowledge, etc.)
- Organizational resources (structure, control, etc.)
- Organizational efficiency: is related to the extent to which changes in the environment are affected. The changes in the competitive environment and their degree of complexity and instability impose on the economic institutions' high flexibility in the flow of their human resources in order to give them the freedom to innovate and develop their individual or collective efficiency. Flexible institutions are organizations that are often efficient in allocating their material and human resources (WILKINSON and CAPPEL, 2005).

#### 4.4.1.4. Efficiency measurement indicators

For the purpose of measuring efficiency, there are many indicators and standards used in this regard, including:

- Direct "Benchmarks" Indicators: These criteria include measuring the organization's operations by comparing outputs "goods and services" with "resource used" inputs over a given period of time, including (ZACK et al., 2009):
  - Total measures of efficiency: (e.g., net wind, that relative to total assets or ownership)
  - Partial measures of efficiency: (e.g., sales volume compared to the number of employees in the sales department)
  - Qualitative measures of efficiency: such as (height of product quality using the same resources) Such indicators may be unable to provide accurate measurements, especially in some service activities where such measures cannot be used.
- Indirect "Criteria" Indicators: The direct criteria suffer from inefficiency in some organizations for the following reasons (ZACK et al., 2009) :
  - The inaccuracy of input and output data compared with the requirements for achieving the required measurement methods for efficiency.
  - The inaccuracy of the comparisons that are the focus of the measurement of efficiency, as well as the difficulty of conducting them between the different units and sections of the organization.
  - In some areas, indirect measurements are considered a better way of measuring efficiency by measuring the desire to work, identifying the degree of satisfaction of working individuals, and morale, in addition to studying and analyzing the possibility of rational investment of human and material resources. Finance and information available (THOMPSON et al., 2005).
  - It is clear from the above that high efficiency means the optimal use of the resources of the organization "inputs" with the maximization of outputs. "Goods and services"
  - Efficiency is measured by the ratio between outputs and inputs,  
$$\text{Efficiency} = \frac{\text{Outputs}}{\text{Inputs}}$$
  - Efficiency is generally measured by the output ratio of the system "outputs" to "input" resources used to achieve these outputs.

As a result, efficiency can be increased by any of the following alternatives:

- Increasing the quantity of outputs while keeping the quantity of input constant.

- Increase the quantity of outputs at a higher rate than the increase in the quantity of inputs.
- Decrease in the quantity of inputs while the quantity of output remains constant.
- Lower quantity of inputs at a higher rate than the low quantity of outputs.

#### **4.4.2. Organizational Effectiveness**

Since effectiveness is important in the life of organizations as a result of the great development and the fierce competition for survival and continuity, a number of researchers and interested to find a theory adopted by the organizations to be effective, but the subject of effectiveness is a complex issue of the complexity of the organizations themselves and this led To the many differences on the definition of the concept and control of indicators and measurement and may be due to the difficulty of identifying the phenomena surrounding the effectiveness of the organizations(STEIGER, 2007).

##### **4.4.2.1. Definition of effectiveness**

Despite the importance of effectiveness in the life of organizations, it did not achieve consensus on the definition of effective organization, some believe that the effectiveness of organizations is determined by the extent to which they can achieve their goals. There are those who defining the effectiveness of the organization as: "The ability of the organization to achieve its objectives and adopt this ability and used standards in its measurement on the used model in the study of organizations"

(PEDRAZA, 2014) Defined it as "*the degree to which the organization can achieve its goals*"

AL-DULAIMI (2006) also pointed out that effectiveness means "*the ability of the organization to survive, adapt and grow regardless of the goals it achieves*" This concept focuses on the environment, the more the organization adapts to its internal and external conditions, the more it remains an effective organization (SHARABI and HARPAZ, 2010). Efficiency is also defined as the ability to achieve goals no matter what the potential. It represents the relationship between the achieved goals and the objectives set and the relationship is given as follows = goals achieved.

A successful organization is able to focus its resources on activities that shows in results (effectiveness). Therefore, it adopts the value of doing the right things. Effectiveness is determined by a similar binocular analysis (PAUL and ANANTHARAMAN, 2004) defined effective organizations as: those organizations that produce more and better quality. And adapt more effectively to environmental problems when compared to other similar organizations, this definition does not focus on a particular organizational aspect and only compares between similar organizations (EGBU, 2004).

In their definition of effectiveness, some researchers were interested in the ability of the organization to provide various resources (individuals, materials, equipment ...). Both (LEE and SUKOCO, 2007), identified them as "*the organization's ability to exploit opportunities in its environment to acquire scarce resources of performing their functions*". From the above, it becomes clear that it is difficult to agree on a specific definition of effectiveness. Not all dimensions of effectiveness are equally important in measuring the effectiveness of the Organization (MINTZBERG, 1993).

In short, organizational effectiveness can be defined as "the organization's ability to achieve long-term and short-term objectives that reflect the balance of power of the influential bodies and the interests of the stakeholders involved in the assessment",

#### **4.4.2.2. The Difference between efficiency and effectiveness**

The difference between efficiency and effectiveness is demonstrated by highlighting the meaning of both. "Effectiveness is usually seen from the angle of results reached by the passers. Management is then described as effective if it achieves the established goals and is less effective if it cannot achieve them". From this concept, it can distinguish between efficiency and effectiveness. It can say that efficiency is the exploitation of available resources in achieving the specific objectives, namely, that it is concerned with achieving results, while effectiveness is the means or used method to reach the results or achieve the objectives (PAUL and ANANTHARAMAN, 2004).

The concept of efficiency is inherent to the concept of effectiveness but should not be used interchangeably. The organization may be effective but not efficient, i.e., it achieves its objectives but with loss. The inefficiency of the organization adversely affects its effectiveness. The higher the costs of achieving a goal. Both of efficiency and effectiveness must be taken into account in terms of the success of an organization. Effectiveness is the achievement of the right thing or work. Efficiency is the achievement of the right work (SHARABI and HARPAZ, 2010).

The organization may be efficient but not as effective as in the case of an organization producing a commodity for which there is no demand. The Organization may be effective but not as efficient as in the case of the Organization achieving its objectives, regardless of the costs it incurs.

Efficiency refers explicitly to the economic dimension of goal setting and the ratio of outputs to inputs. The organization must achieve the objectives set by existing resources, which are limited resources that need to be managed economically, while efficiency refers to the ability to succeed in achieving the goals (PAUL and ANANTHARAMAN, 2004).



#### **4.4.2.3. Elements and indicators to judge the organization's effectiveness**

Although the dimensions of effectiveness and interrelationship between them are not so clear yet, but it is agreed that the final test of organizational effectiveness is whether the organization is able to support its continuous survival in the environment work. Jason referred that the last measure of organizational effectiveness is the time factor where, In the short term, possible indicators include (OKPARA, 2004):

- **Production:** Reflects the organization's capacity to produce (whatever) the quantity and required quality.
- **Efficiency:** It can be defined as the output ratio of inputs. It uses several measures such as unit cost, return on capital, rate of materials loss, lost time and similar efficiency indicators.
- **Satisfaction:** The recognition of the organization as a social system requires attention to the obtained benefits by the member of the organization and the benefits that can accrue to its customers. This criterion is called satisfaction and its standards include the rate of absence, delay and complaints. The indicators of effectiveness are:
  - **Adaptation:** refers to the extent to which the organization can respond to changes that arise within or outside the organization.
  - **Growth:** The organization must to invest its resources through its activities and the goal of growth is to support the organization's long-term viability. This can include training programs for other staff or organizational development efforts.

In the beginning, the standard of survival and the institution's ability to continue was the most important condition for the success of the institution, but in reality, there are many institutions that are not successful and ineffective but are viable.

#### **4.4.2.4. Indicators of governance on the organizations effectiveness**

Can be divided into internal and external indicators as follows:

- **Internal indicators:** and related to the inputs of the organization and its operations, including (MAJCHRZAK et al., 2013):
  - **Planning and setting goals:** the organization's ability to set goals and plan the path through which these goals are achieved.

- Social skills of the managers: The availability of social skills of the organization's members and the of managers ensures the provision of support and also support to the subordinates when faced with obstacles in the work.
- Practical skills of the manager: In order to achieve organizational effectiveness, the members of the organization must have the managers with the skills and technical expertise related to the completion of the work.
- Control of events within the organization: emphasizes the need to control the behavior of individuals within the organization with the distribution of power to a number of individuals rather than the focus of one person.
- Participation in decision-making: Many researchers and managers see that the participation of decision-makers leads to the strengthening of the effectiveness of the organization.
- Training and development of the capabilities of individuals: The training programs are very important in the development of the capabilities of individuals and therefore the high level of performance in the work.
- Delays and absences among workers: This can be measured by the number of hours lost due to excuses, accidents or occupational diseases.
- Efficient use of available resources: the cost is low compared to the returns of outputs.
- Job satisfaction: The satisfaction of employees within the organization is an important indicator in determining the level of effectiveness of the performance of individuals and the overall performance within the organization, most researchers and managers consider that this factor is productive more than others are.
- **External indicators:** It is mainly related to the outputs and the relationship of the Organization to the external environment and these indicators (CHOI and LEE, 2002):
  - Production of goods and services: Providing the organization with its environment with outputs of goods and services and increasing demand confirms its presence as an active element in society.
  - Quality: The high level of quality of the organization's output is a necessary indicator of its effectiveness.
  - Profit Making: The organization's profits enable it to grow and continue without achieving profit.
  - Achieving new goals: The effective organization seeks to achieve new and important objectives.
  - Preparedness for completion: the organization's readiness to complete special tasks immediately.
  - Social responsibility: It is the organization's serious attempts to solve social problems.

- Survival: When the organization succeeds in staying for a long time. It means that the products of the organization are appropriate to the environment in which they live.
- Adaptability and Adaptation: It is the degree to which the organization responds to change in its internal and external conditions by obtaining information on changes and fluctuations in the environment.
- Development: The growth of the organization through the introduction of elements of technology and the introduction of training programs for individuals and the development of products of the Organization in line with scientific development.

Through the above, it is clear to us the interdependence and overlap between the various indicators and the achievement of any indicator that can contribute to the achievement of another indicator, for example: the satisfaction of workers may lead to improved production, raise the quality, and thus achieve profits. As it pointed, the standards deferent according to the opinion of the thinkers who believe that efficiency means achieving the goal and reaching the outputs that the organization wants to produce, but at the same time there are five factors called intermediate factors, which lead the organization to have the desired result, And these factors are considered more serious components of effectiveness than measures, and these factors are (KANNABIRAN et al., 2005):

- Productivity: The ratio of outputs to inputs.
- Consistency of conduct: acceptance by employees of the conduct's rules that established by the organization
- Morale Spirit: which reflects the satisfaction and motivation of employees.
- Adaptation: organization response to change the policies x, particularly the change of the organization's relations with its internal and external environment.
- Stability of the organization: This means acceptance of society and its policy and desire for its products.

It is important to note that it is not necessary to measure the effectiveness of the organization through all these indicators. It is only suggested indicators as a result of many studies and research. There is no agreement between the writers and the researchers around them. There are therefore no specific indicators from which to measure effectiveness, but there are indicators that have been and are still being used more widely than others such as: productivity, satisfaction, profitability, efficiency, adaptation, survival... etc.

#### **4.4.3. Organizational Ethics**

The ethics of the institutions and organizations have become the main source for increasing interest in recent years due to several reasons, foremost of which are the increasing moral scandals and criticism of business.

##### **4.4.3.1. The Concept of the institution 's ethics**

Ethics generally refers to the values and ethical standards on which members of society are based to distinguish between what is right and what is wrong. where the old societies have been adhering to ethical standards. but it became a strict standard of the present because the moral responsibility of these times is an individual responsibility (CONDRUZ- BACESCU, 2011).

- If it wants to give a specific perception and definition of the ethics of the enterprises, It is applied for individual ethical standards in different business situations.
- Another definition is presented by (VAN DER POST et al., 1998) which shows that business ethics only study and systematic analysis of the processes through developing the administrative decisions to be a moral choice taking into account what is true and good for the individual and the groups and the organization.
- The researcher "Wiley" explained that business ethics are a set of principles and moral values that represent the behavior of an organization and determinants its decisions.

The behavior of the individual plays an important role in influencing the performance and behavior of the organization as a whole. And also, it is the cornerstone to evaluate the organization's behavior. Individual's activities in the organization, his regularity in work, his contact with others, and his emotions and satisfaction with work, all these behaviors represent the first nucleus of the conduct and ethics of the Organization as a whole (TREVINO and NELSON, 2004). it is evidence that the individual's moral behavior is influenced by both his personal characteristics and his work environment.

##### **4.4.3.2. The Importance of the institution's ethics**

The commitment to moral principles and behavior, at the individual level in the job, in a specific profession, in a group or in business organizations, is of great importance to the different segments of society. Because it enhances the commitment to the principles of honest work and distinguishes the organization from seeing its interests, Except for financial considerations.

In the developing societies and Islamic societies, in particular, Islam is considered a cultural and human vessel that raises high moral concepts in various areas of life, and if reality indicates a gap between this cultural vessel and the actual practices of these individuals and organizations (LEONARD et al., 2004). In general, if the study wants to refer to the most important benefits that business organizations can get by virtue of their commitment to this ethical perspective in the work that gives importance to this commitment, it can point to the following:

- The traditional view of work cannot be accepted which sees a conflict between the realization of the business interests of the physical benefit and between adherence to ethical standards and which has been presented as inefficient in this traditional perspective, But in the modern perspective, there is a positive correlation between the moral commitment and the material commitment that return of the organization, and if not in the short term, it will certainly be clear in the long term (CONSTANTIN, 2010).
- Business organizations may have a lot to pay for ignore the ethical standards. Here comes the moral behavior of the organization to face many legal issues and in some cases, criminal .cases (SIMS, 2000).
- Strengthening the Organization's reputation in the local, regional and international environment, which has a positive impact on the Organization (CONSTANTIN, 2010).
- The acquisition of international certificates and special work privileges is accompanied by the commitment of the Organization to many ethical standards in the framework of production, distribution, consumption, honest work, mutual trust, accuracy and validity of information.(LEONARD et al., 2004). In other words, international certification of compliance with technical standards in the production of goods and services carries should have the important moral and social content that demonstrated by the international business organization. (SIMS, 2000).

#### **4.4.3.3. Sources of ethics in the organizations**

Based on the ethical standards adopted by managers in their various decisions, which take into account what is right and what is wrong, it concludes that the ethics and behavior of managers are based on norms, standards, and beliefs in society as well as applicable laws. The same can be said for other members of the organization.

Here, it can identify sources of work ethic that are reflected in good or bad moral behavior as follows (CONSTANTIN, 2010):

- **Personal Ethics:** No doubt, everyone has a set of beliefs and personal values that convey them to the organization in which they work, where these values and personal beliefs are translated into internal ethical behaviors and decisions within the organization (SHODIPO, 2009).
  - Family and home education: where the family represents the first nucleus to build behavior (OKPARA, 2004).
  - The culture of the society and its values and habits: The behavior of the individual is influenced by many external influences, the most important is the culture of society and human societies, which is different in the type of culture, and also there are other inherited customs and traditions (SHODIPO, 2009).
  - School and education system: which plays an important role in society and in the formation of moral values and the development of moral behavior in the individual (OKPARA, 2004).
- **Administrative Organization:** that effects on the organizational ethics. Each of the systems of attracting individuals and their training, the formal organizational structure, policies, rules, rewards and compensation systems all of them contribute to the formation of the ethics of the organization and therefore the behavior of the workers in the organization. In all its components to individuals and change their morals and impose new behaviors on them (OJO, 2010). The laws and regulations of the government and legislation affect the ethical behavior where the laws and the acceptable standards in the field of work define and direct the workers and managers, and the existence of these laws is a deterrent to unacceptable behaviors, Authorities of accepted and unacceptable practices. Thus, the impact of government laws and regulations is evident in the rooting of ethical codes in society and in business organizations (SCHEIN, 2004a). Also, the Code of Ethical Conduct (ethical codes), which are guidelines for the manager's work of and employees. These laws aim to guiding the managers in the unclear areas of professional behavior, Reminding employees and managers of legal and ethical requirements, Announcing the ethical principles of the organization, Strengthening the self-discipline of the organization with the rules of ethical conduct (CORDELLA and IANNACCI, 2010).
- **Organizational Culture:** The culture of the organization represents a set of values, Habits, traditions, visions and aspirations that form a framework that defines the behaviors of workers at different levels. Organizations that are inherent in their culture and have constant values in their work as well as a language common to all directly affect the behavior of the workers and the decisions they make. This type of organization prides itself on its organizational culture among companies, making them an educational reference for other companies (PAUL and ANANTHARAMAN, 2004).

#### **4.4.3.4. The Impact of the organization's ethics**

The study can divide the relationships that influence the institution's ethics as next:

- **Impact of the relationship between workers and management:**

It is well known that trust between employees and management is directly related to increasing worker productivity. The employee who knows that the management of the organization will appreciate his efforts in the near and long term, he dedicates in his work (OJO, 2010). However, when an employee feels that the management of the organization does not keep its promises with its employees, the employee becomes without motivation to develop work, creativity and efficiency. Therefore, the principals' commitment to honesty, justice, loyalty and compassion with employees will lead to employee confidence in management and will motivate them to work. Time wasted in rumors, doubts and negotiation (UCHE, 2012). Compare two cases: the case of management committed to work ethics and management is not committed of it. In the first case you find that the promises of managers to the workers certified, while in the second case, the promises are not certified, but the doubt is almost in the relationship between workers and management (OJO, 2010).

In the first case, you find many workers continue in their work for many years as long as the income is acceptable, while in the second case you find workers are constantly looking for a replacement work even if the income is high. In the first case, the worker is happy in his work and he has loyalty to this respectable organization. In the second case, the relationship is based on rapid reaction because the long-term counterpart is not guaranteed (OJO, 2010). Moreover, in the operational framework of the Organization. An organization that deals morally with its employees attracts labor market efficiencies, while an organization that does not care about these matters alienates many of those competencies. The details show the organization's capabilities as it affects the organization's vision for applicants and competencies Which accept to work (PAUL and ANANTHARAMAN, 2004).

- **Impact of the relationship between workers:**

The first case: When honesty, cooperation and respect are the official reciprocal treatment of workers, this leads to the explosion of the energies of the workers in favor of work.

The second case: Although the culture of deception, hypocrisy and mistreatment of colleagues is dominant, each worker is cautious of his colleague and cooperates with him largely and hides much of the information that may lie in the reports written by the president and so on (SHODIPO, 2009).

#### **4.4.3.5. Establishing the organization's business ethics**

Ethics is a basic duty and everyone must take it into account. The management of the organization will not only depend on the employees' commitment to work ethic according to their personal convictions, but also must adhere to specific controls as part of the business requirements. As I explained, because lack of commitment to work ethics would affect the performance of the Organization (UCHE, 2012).

It is therefore necessary to define what is moral and immoral in the traditions of institutional action to be adhered to by all. In the absence of these ethical rules and duties, each employee will act in accordance with his / her personal criteria, which varies from person to person. Here it is necessary to deal firmly with every violation of this morality (STEIGER, 2007).

#### **4.5. E-government and organization effectiveness**

ICTs have opened up many new areas of social, economic and political transformation. Although these transformations are concentrated in developed countries, they gradually move to other areas and on their way to the more developed information society, which uses information widely as long-term development areas that require massive technological change and the emergence of new means to perform government functions, (DUTTON, 2004) including information and communication technology, public administration of developed countries under the E-government logic.

This trend has been reflected in the race of governments around the world to create and establish E-government or digital government. In every region of the world, from developed industrialized countries to developing countries, where national and local governments in developing countries seek to develop their information on the sciences of communications and the Internet. This mechanism was used to simplify the previously complex procedural processes to be more close and interactive with their citizens via electronic means (AL-HALO, 2009).

The enthusiasm associated with this trend is partly due to the belief that modern technology transforms the negative form of active government into an active and interactive form of government, citizens and corporations. In many places, many citizens see that their governments do not respond to their urgent needs and that the spread of information technology has contributed to modern communication in changing the traditional style of government and also contributed to the provision and development of services to citizens (AL-DULAIMI, 2006).



Internal governments continue to contribute to the electronic work to simplify and improve the democratic aspects of the government associated with both citizens and companies (GROVE, 1996).

E-government is also known as the government agency or agency that uses advanced technology, especially computers, internal networks, external networks and the Internet, which provide a variety of sites to support and enhance access to government information and services. In a transparent, effective and impartial society (HAZLETT and HILL, 2003).

The philosophy of E-government is also linked to effective government as a source of information and services. The Government deals with citizens, companies and institutions in the community as clients or beneficiaries who wish to benefit from this information and government services.

All of the above represents a fundamental change around the culture of the implementation of services and government transactions and the perception of citizens and companies towards them. The strategic goal of E-government is to support and streamline government services to all stakeholders: government, citizens and business. The use of information and communication technology (ICT) helps to link all three parties together and promote activities and processes. This means that E-government supports electronic means and contributes to the quality of work it provides to the three parties involved. With regard to the goals of e-government, the objectives of both internally generated and externally generated processes can be distinguished from the public (AL-DULAIMI, 2006).

#### **4.5.1. Organizational effectiveness in the E-government logic**

E-government plays a role in influencing organizational effectiveness by changing the environment within which the public service operates, by introducing new concepts and methods in its operations, changing the relative importance as well as the relations between the elements of e-government, and focusing on the most important areas of influence (AWAN, 2008):

##### **4.5.1.1. The Citizen's Axis**

The most important principle within the principles of E-government is the focus on the provision of public services to the customer without a doubt. According to this principle, public services must be designed to meet the needs of citizens and assist them in fulfilling their civic obligations.

The rationalization of the public service leads to the need to adopt the principle of the work of citizens' service centers, "which is based on the existence of centers capable to communicate with all the departments of the state, on behalf of the citizens to follow all their transactions, including those transactions through more than one administration, that prevent the citizen to move from one

department to another to pursue his transactions. The move towards public electronic services leads to building confidence between public organizations and citizens and thus speeding up the delivery of services directly, thus saving effort, time and cost, which will solve the problems of the queue and the various bureaucratic obstacles, A high priority to provide services to the average citizen directly according to the principle of the customer citizen first, more than attention to services provided to the business sector (LEONARD et al., 2004).

#### **4.5.1.2. Information as a public resource**

The development of information technology has led to the attention of information in the framework of E-government as a primary resource, in addition to financial and human resources. Because the basis of E-government is the flow of information to and from government institutions. Advanced technologies allow the building of electronic information management that allows for the long-term use, storage, retrieval, dissemination, protection and removal of information. As well as the information storage (database building) of previous decision-making as an accumulated experience, that can be used to make new decisions (DEWA and ZLOTNIKOVA, 2014).

Transparency is a new way of dealing with the problems that facing the supply of information and government services to the public of beneficiaries because they represent complete clarity in decision-making, planning and policies, and allowing those affected by administrative decisions to work with the facts and processes that contributed to decision-making. For that, the reforming of administrative processes is the first step in a successful of transition to e-government. Although the reform of operations is considered desirable, it is important to create new processes and procedures that lead to radical changes in administrative methods, especially in their relations with citizens and businesses (MINTZBERG, 1993).

#### **4.5.1.3. New skills and relationships**

The introduction of modern communication technologies into public administration has led to changes in their environment, such as the introduction of computers, word processing programs and the World Wide Web. This contrasts with the environment that was known before this transformation. , The adoption of electronic technologies in management is a great adventure especially that related to learning and organizational adaptation (OKPARA, 2004).

Therefore, E-government requires the need to adapt to new relationships, and to provide leaders and officials with skills and methods of work that commensurate with the magnitude of changes.

#### **4.5.1.4. Impact on accountability and management models**

The E-government approach to customer service is changing the relationships between the public, the public administration and elected representatives in practical practice and also raises questions at the level of principles and, at a minimum. This preference for good service to the public would provide priorities for officials who tend to support their politicians." Therefore, these dynamics must be taken into account when trying to build a successful public administration (WILKINSON and CAPPEL, 2005). From the above, it can be said that the impact of the application of E-government on the prospects of rationalizing public administration is based on main elements that will help us to achieve the desired goals.

#### **4.5.2. Impact of the applying of E-government,**

Most of the literature referred that the applying of E-government has different aspects in influences, as follow,(ZENG, 2016b):

- The Profitability of the public service: There are direct benefits if the institutions applied the E-system in their transactions especially if the reality services are bureaucracy.
- Reduced service costs: by connecting the citizens through the e-line without moving between the institutions and access to the required service through the one windows (one-stop-shop) reduces the costs, resulting from electronic mobility between the gates of public service.
- Responsiveness and timeliness: It utilizes the one-stop-shop technology for similar administrative activities, to gain time and push the management to Fulfillment of its commitments through achieving and implement the required services immediately.
- Accuracy: According to the electronic services management model, to achieve the work according to the standards that set through the information processing systems, that reduces administrative errors, and prevents abuses during the provision of service.
- Ease of accounting and clarity of service: Based on the full use of information technology in the performance of public service, this leads to the possibility of accounting for all the components of those tasks and activities, through the electronic publishing of all phases of the service, there is no room to hide transactions and other files, whereas when the interest becomes public that means the service will be public.

## **5. MATERIALS AND METHODS**

### **5.1. 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.

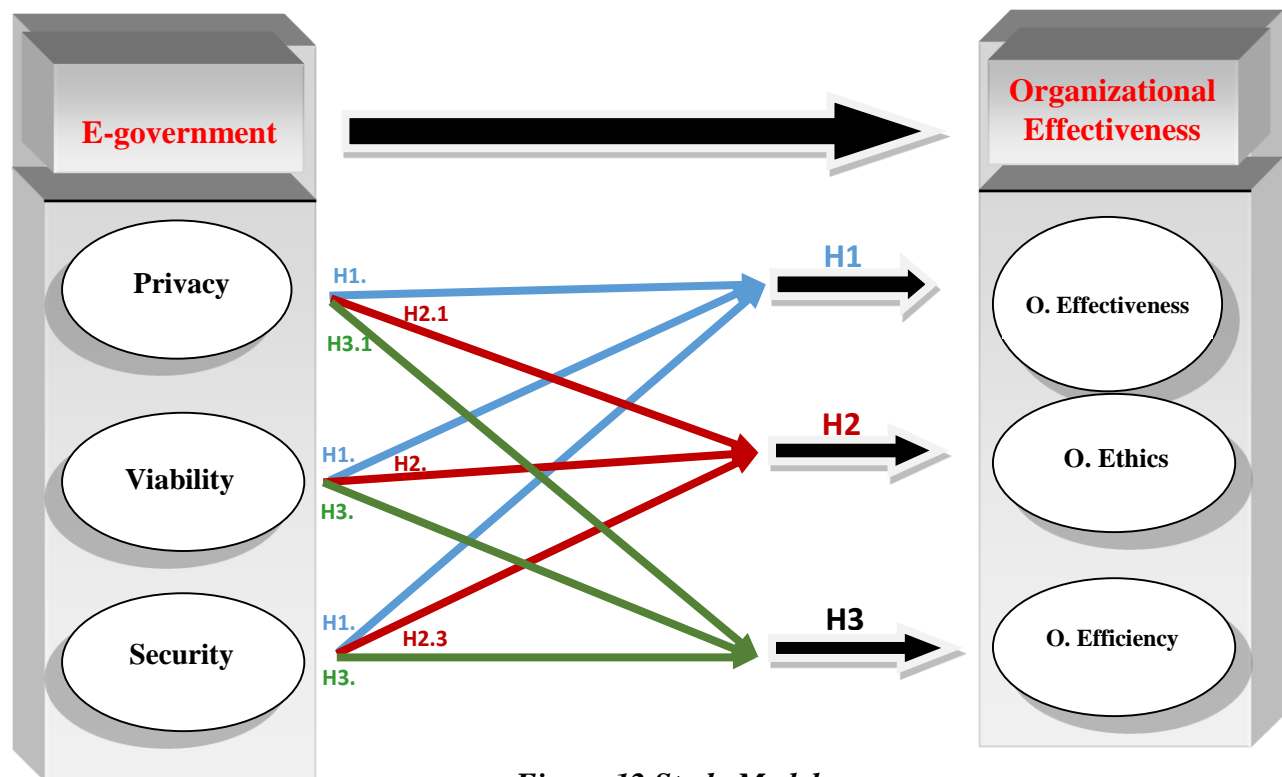
This chapter continues as follows: It describes the criteria for selecting the sample used. How the data were collected, defines the statistical techniques that should be used to test hypotheses that related to the research questions.

#### **5.1.1. 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 No. 11, 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



**Figure 12 Study Model**  
Source: Author's design (2021)

This model of three variables dimensions was discussed by (CORDELLA and WILLCOCKS, 2012), (ZHAO et al., 2008a), (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 (Efficiency OE, Ethics ETHIC, and Effectiveness EFF).

**Organizational Effectiveness =**

$$a + \beta1 \text{ Privacy (PRI)} + \beta2 \text{ Viability (VIA)} + \beta3 \text{ Security (SEC)} + e$$

**Table 11 Study variables**

Independent Variable	Dependent Variables
<ul style="list-style-type: none"> <li>Privacy (PRI)</li> <li>Viability (VIA)</li> <li>Security (SEC)</li> </ul>	<ul style="list-style-type: none"> <li>Organizational Effectiveness (EFF)</li> <li>Organizational Ethics (ETHIC)</li> <li>Organizational Efficiency (OE)</li> </ul>

Source: Author's own survey (2021)

### **5.1.2. 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 other phenomenon.

#### **5.1.2.1. Study sample**

The study population is represented by SIA, The main aim understand 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.

#### **5.1.2.2. Study limitations**

The research limits were as follows:

- Geographical boundaries: This study covers employees at the SIA
- Permissions: the management of the SIA took so much time to give permissions, which made us take so much time to start the analysis.

#### **5.1.2.3. 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.

#### 5.1.2.4. Arbitration and validation of the questionnaire:

The questionnaire was based on previous studies (SMITH et al., 2010a), (ZACK et al., 2009), (SCHEIN, 2004b), (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 five 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 No. 12,

***Table 12 Rate of the distributed and received questionnaires in SIA***

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

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.

#### **5.1.2.5. 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, 12 illustrates the statistical tests that will be used in the current study and the target of usage for each one.



STATISTICAL TEST	USED FOR
Cronbach's alpha	Check the reliability
Normality,(Skewness)	Check if the data are normally distributed (Symmetric or asymmetric)
Normality,(Kurtosis)	Measure of peakedness of a distribution
Descriptive analysis	Frequencies, Means, standard deviation Standard deviations
Correlation Test	determines the correlation relationships between the study variables
Regression model	$R^2$ : (Explanatory Power), Represent the prediction of variance in DVs that can be explained by the IVs
ANOVA (F ratio)	Check the fitness of data

**Figure 13 Statistical tests and the purpose of usage**

Source: Authors' own research

## 5.2. 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.

### **5.2.1. General objectives of the SIA**

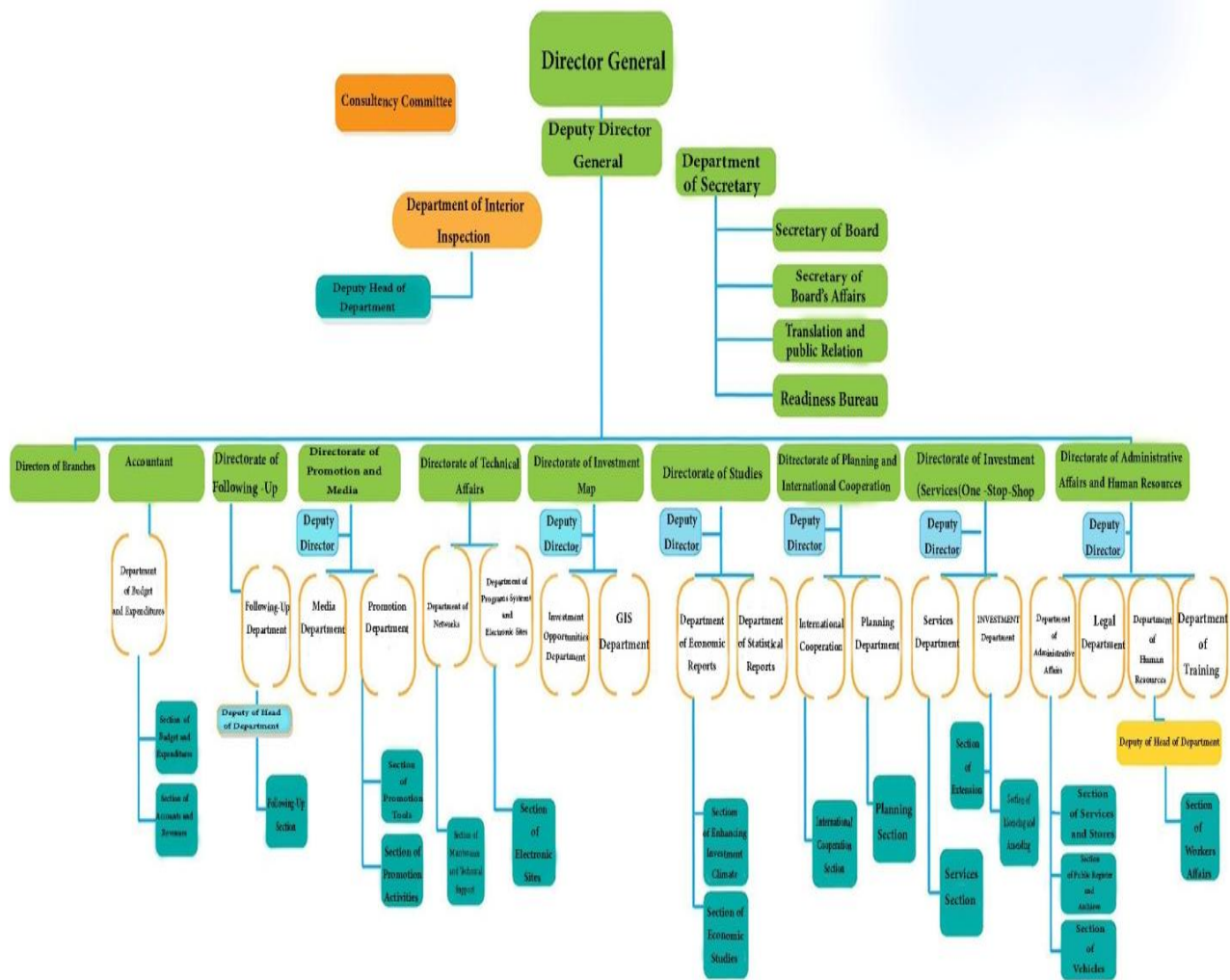
The Agency aims to implement the national policies for investment and development of the investment environment in Syrian Arab Republic (SAR). In doing so, it may perform the following tasks (SYRIAN INVESTMENT AGENCY SIA, 2014):

- Setting the principles and standards that related to investment to simplify and facilitate the procedures.
- Preparation of the investment map in coordination with the relevant authorities within priorities that take into account investment projects of strategic importance and work to promote them internally and externally.
- Provide advice, provide information and data to investors, and issue relevant evidence.
- Participation in the preparation of draft investment conventions and protocols.
- Follow up the implementation of projects and trying to overcome on the obstacles that hindering their implementation and the continuation of their work.
- To carry out all promotional activities to attract and encourage investments, including seminars and conferences, organizing and exchanging visits and meetings.

### **5.2.2. The Administrative and organizational structure of SIA**

SIA is one of the governmental institutions which applying the electronic system and working under the laws and regulations, in addition, the board of directors and the general manager are plying as a supervisor's role to follow up the implementation. The administrative and organizational structure of the SIA consists the following directorates in the central management as shown in the next figure No. 13, in additional to seven Syrian investment branches which distributing in the Syrian governors (SYRIAN INVESTMENT AGENCY SIA, 2014):

• Human resources dept.	• Follow-up projects dept
• Investment services (one window- one stop shop) dept.	• Promotion and media dept.
• Planning and international cooperation dept	• Technical affairs dept.
• Economic studies and periodical reports dept.	• Internal control dept.
• Investment map dept.	• Secretariat service dept.



**Figure14 Structure of Syrian Investment Agency (SIA)**

Source: (SYRIAN INVESTMENT AGENCY SIA, 2015)

### 5.2.3. 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, distributing of employees as shown in the table No. 13, and it's important to refer that 69 Males that equal 46 % of employees, and 81 Females that equal 54 %, and

**Table 13 Distribution of human resources of SIA**

Place of Work	Total No.
Damascus (Central Administration)	110
Lattakia	10
Tartous	8
Asswieda	10
Raqqa	(0) Because of Political Crises
Hamma	5
Qunaitra	4
Daraa	3
<b>Total</b>	<b>150</b>

Source: (SYRIAN INVESTMENT AGENCY SIA, 2015)

#### **5.2.3.1. Categories of HR in SIA**

Employees of SIA distributed as the following categories:

- The first category: They are holders of university degrees bachelorette, diploma, master, doctorate, they are 77 employees, or 51.33 % of the total number of employees, most of them are Economics, Law, Engineering (Environment, Mechanics, Computer, Agriculture, Architecture, Civil and Electrical), Political Science, Sociology, English Literature, French Literature, Education, translation.
- The second and third category: who have secondary education certificate, add medium institutes, the number of workers in this category is / 38 / employees, or 25.33 % of the total number of employees.
- The fourth and fifth Category: The number of workers is 22, or 14.6 % who have a basic certificate and primary education,
- In addition, it is very important to refer to the 13 employees or 8.6 % who have a higher certificate from the public administration institute and they are categorized according to the first level.

#### **5.2.4. Service's quality of SIA after applying the E-government**

Investors receive their services in the SIA through one window (the one-stop-shop), Investment Services Directorate, ISD, it is the official and the main gate for investors to facilitate and manage their missions,

SYRIAN INVESTMENT AGENCY SIA (2018),planned and implemented E- system to support the investors and shortcut their time and cost, ISD is the responsible directorate too dealing with the customers, ISD, managed by a manager, teamwork composed of different sectors through authorized

representatives employees who are working behalf of their ministries to help and support the investors, all of them have full access to register of investor's licenses, grant approvals, giving the required certificates, follow-up implementation, and identify the obstacles of investment, finding the solutions with the recommendations(SYRIAN INVESTMENT AGENCY SIA, 2015), Where the number of employees in this directorate is 9 employees, in addition to 15 ministries' representatives.

Most of the SIA's directorates are important and has administrative targets, but the ISD remains the main gate for investors. This study will focus on the ISD for the next reasons:

#### **5.2.4.1. Missions of the ISD (One Stop Shop) in SIA**

The ISD is divided into three main departments and their tasks are consistent to achieve the required service for the investor in a better and faster manner (SYRIAN INVESTMENT AGENCY SIA 2018),

##### **5.2.4.1.1. The Investment Department (ID)**

Undertakes the following tasks:

- Receiving the investor's orders for their investment projects, then collect the amendment, expansion, and development requests according to the approved model electronically.
- Completion of the investors' studies and complete the requested approvals, then coordination with ministries' representatives in SIA, to help the investors.
- Prepare the appropriate decisions to facilitate an investor's business in the shortest possible time.
- Save the assets of documents and the formal approvals and archived them electronically.
- Set the required time to complete the transactions, prepare the investor's manual, and update it continuously.
- Develop the mechanism of appropriate working consequently.
- Participate in laying the foundations and criteria related to the investment process to simplify the procedures.

##### **5.2.4.1.2. Legal and Logistic Services Department (LLSD)**

Undertakes the following tasks (SYRIAN CENTRAL BUREAU OF STATISTICS SCBOS, 2017):

- Making the requested legal modifications of the investors' orders, such as approvals to importing the raw materials, machines, and other related to the investment projects according to the investment's laws

- Contribution to Complete the legal approvals by ministries' representatives and public institutions
- Auditing imports of canceled investment projects.
- Address the administrative obstacles, which may impede the implementation of projects.
- Carry out the duties and different missions in accordance with the laws and regulations.
- Save the legal documents and archive them electronically.
- Provide statistical data and necessary information for the completion of appropriate periodic reports.
- Delivery of decisions relating to investment projects to their owners.

#### **5.2.4.1.3 Customers Service Center (CSC):**

Mechanism of CSC dividing to, Front office, which provide with the next services electronically

- Inquiry Service of documents through the E-website,
- Electronic registration service of costumers,
- Electronic approval service of costumers,
- Electronic payment service for fees,
- SMS and promotional services through direct communication with costumers.
- Electronic archiving for all documentations and transactions

Back office: which including a group of highly experienced employees in addition to a group of ministries' representatives who are studying the customers' documents, and provide them with the final approvals. This office already equipped with a number of communication systems and modern technology to deal with costumers' demands and complete the required work electronically through the exchange of documents and data electronically between the employees in the concerning institution.

#### **5.2.5. Conclusion**

The research choose SIA, because it is one of the best governmental institutions that applied the E-government, and this research looking forward to generalize its results for other public institutions that still applying the traditional system in their transactions with the customers, but after knowing the Strengths and weaknesses points to implement the e-management, then to apply the E-government for the traditional institutions for reconstruction phase in modern Syria.

Based on, the research depend on the SIA's employees to survey their opinions concerning of how the E-government influencing on the organizational effectiveness through structured questioners and structured interviews, for that it is very necessary to know the nature of employees, also the research needs to know organizational structure of SIA,

Briefly, the SIA is (COMMERCIAL BANK OF SYRIAN CBS, 2015):

- Young institution in terms of employees' age, the percentage of employees who are under 40 years of age are 62% of the total number of employees.
- The total number of human resources in the SIA is (150) distributing in the Syrian investment centers.
- Most of the vacancies have been filled by employees who have a high experience, also has a high level in education.
- There is a clear interest in the training courses that are necessary for employees to develop their skills, especially the technical courses that help them to deal with the E- system successfully,
- During 2017-2019, the total number of implemented training courses in SIA was 156 courses, most of them concentrated for the technical courses, which supported the specific teams
- In another side, SIA logistically provide the investors with all services electronically through the single window- a one-stop shop, that been established for simplifying the procedures, improving the services, add to save the time and cost. (COMMISSION OF SYRIAN STATE PLANNING SOSSP, 2005)

Depend on the initial surveys, the research looking forward to implementing the experiment of CSC in SIA for all the other traditional institutions in Syria to be the only gate for the customers to get the required services electronically,

The main objectives of these kind of services can be summarized as follows:

- Standardize the receiving gate for all transactions of different customers.
- Facilitate the application process for customers.
- Improve administrative procedures and increase their effectiveness, in accordance with internal, regulations.
- Increase the level of customer's satisfaction by providing fast, sophisticated services through one electronic website.

## **6. RESULTS AND DISCUSSION**

### **6.1. 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.

### **6.2. Sample valid responses**

The chapter will analyze and interpret the results and test hypotheses regarding the impact of implementing the E-government program on organizational effectiveness.

The study sample includes a number of employees of the SIA, (155) employees. The research looked forward to a greater number of respondents from the rest of the Syrian government institutions that applied the principle of E-government such as the Commercial Bank of Syria and some private banks, but the prevailing security conditions in Syria prevented this from being implemented.

Consequently, the study was applied for (99) respondents, where (110) questionnaires were distributed to most of the distributed employees in the General Administration and in the branches which spread in the Syrian governorates (99).responses valid for statistical analysis were received, which represents approximately 90 %. Whereas, through the direct distribution method .

### **6.3. Sampling demographics and frequencies**

This section provides the sampling feature, whereby the study population was distributed to 99 users of the E-government program in SIA, according to the following:



### 6.3.1. Demographic profile of respondents – Gender

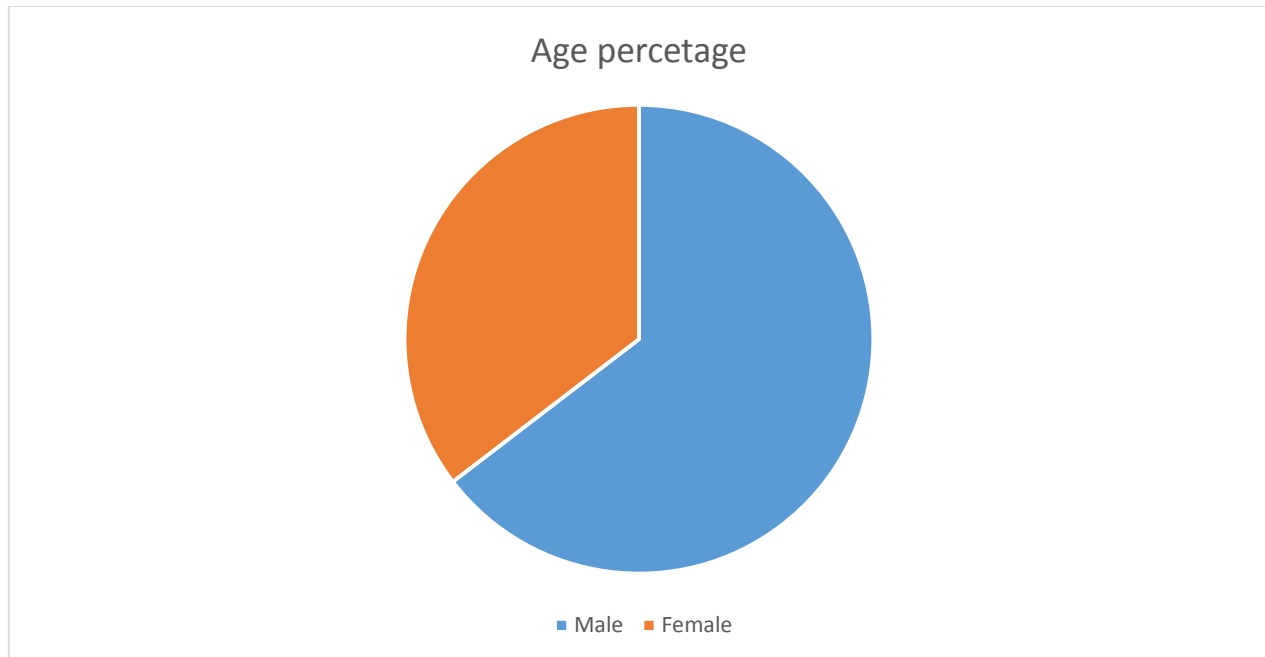
Table No.14, shows the number and percentages of gender in the SIA for 99 respondents, it shows that 64.6% are male and 35.4 % are female.

**Table 14 Respondents' Gender**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	64	64.6	64.6	64.6
	Female	35	35.4	35.4	100.0
	Total	99	100.0	100.0	

Source: Author's own survey (2021)

As it present in figure No.14, that showing the percentage of respondents male more than female in the sample study



**Figure15 Respondents' Gender**

Source: Author's own design (2021)

### 6.3.2. Demographic profile of respondents – Experience

Table 15, shows the number and percentages of experiences in the sample study are 34.3 % of respondents are who have experience more than 10 years, and 30.3% of respondents who have experienced between 5 - 10 years, and the rest of them are 35.4% of respondents who have experience less than five years.

**Table 15 Respondents' Experience**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than five years	35	35.4	35.4	35.4
	5 - 10 years	30	30.3	30.3	65.7
	More than 10 years	34	34.3	34.3	100.0
	Total	99	100.0	100.0	

Source: Author's own survey (2021)

The figure No15,that showing the different percentages of the respondents' experience in the SIA



**Figure16 Respondents' Experience**

Source: Author's own design (2021)

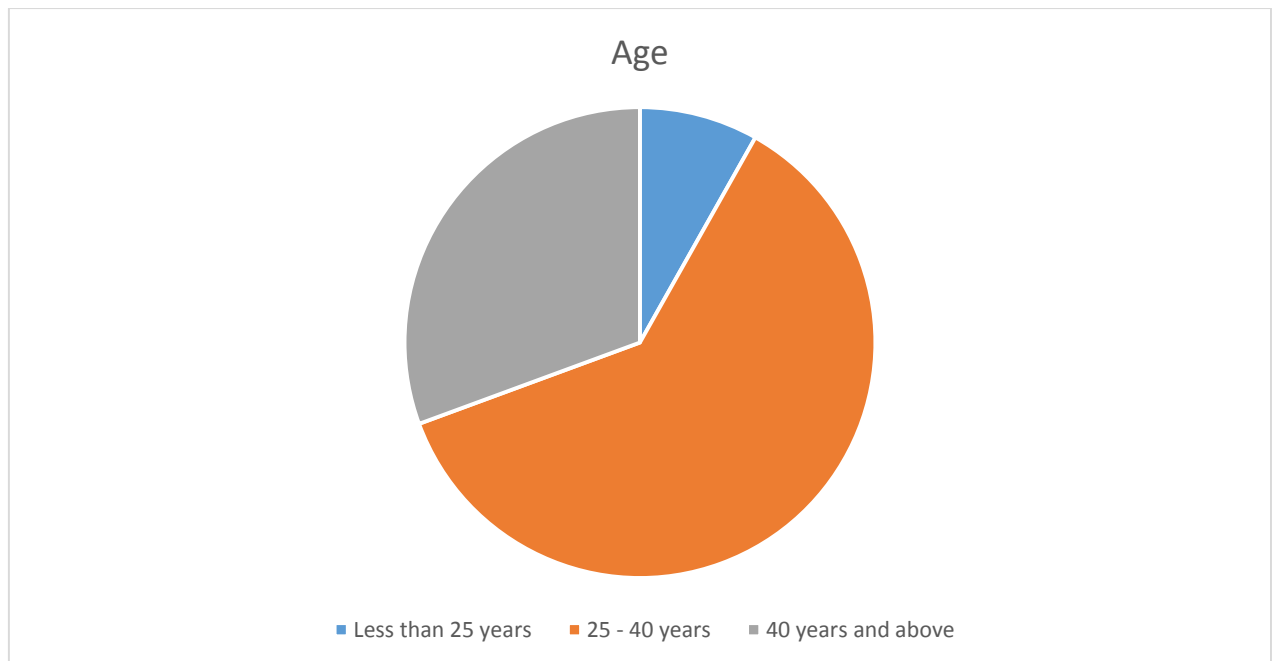
### 6.3.3. Demographic profile of respondents – Age

Table 16, present the number and percentages of the age of respondents in the SIA as the next: 9.1% of respondents less than 25 years, 60.6 % of respondents their ages between 25 - 40 years, 30.3 % have 40 years and above,

Table 16 Respondents' Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 25 years	8	9.1	9.1	9.1
	25 - 40 years	60	60.6	61.2	69.4
	40 years and above	30	30.3	30.6	100.0
	Total	99	99.0	100.0	

Source: Author's own survey (2021)

Figure 16, present that the biggest percentage is for the respondents who have ages between 25 - 40 years,



**Figure17 Respondents' Age**

Source: Author's own design (2021)

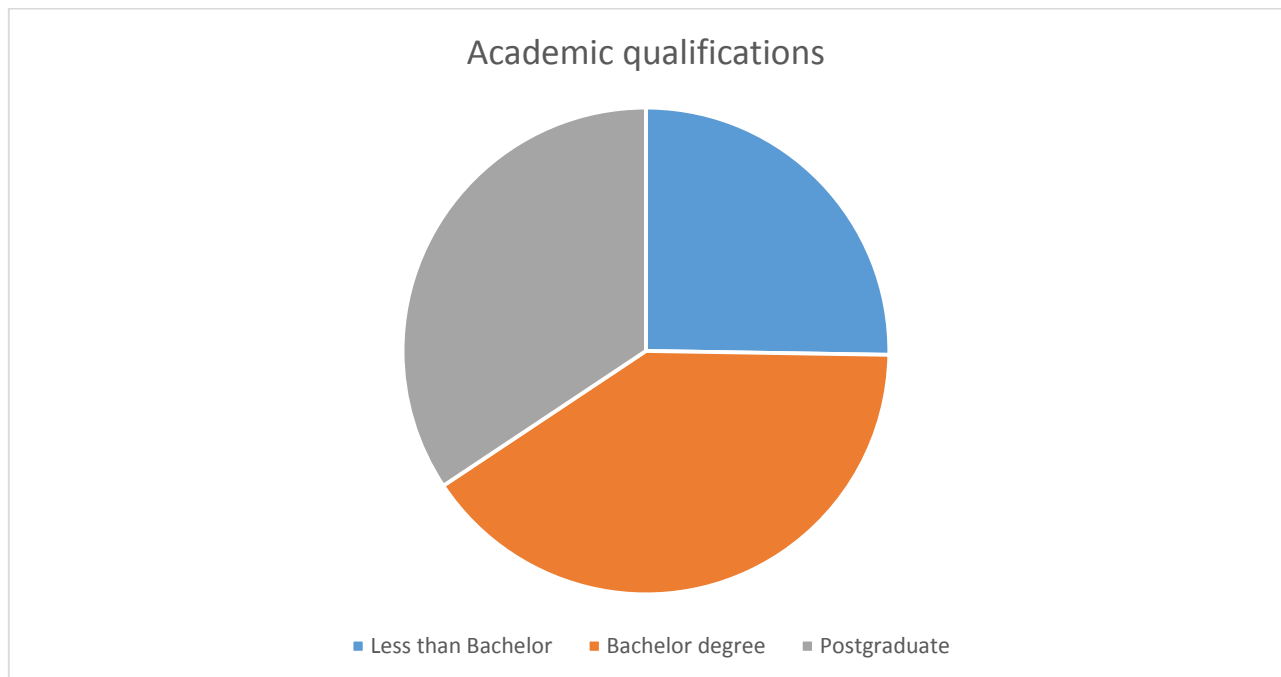
#### 6.3.4. Demographic profile of respondents – Academic qualifications

Table 17, shows the number and percentages of respondent's academic qualifications in the sample study, 40.4% of respondents have a bachelor degree, 34.3 % Postgraduate, and 25.3% are who has less than a bachelor

Table 17 Respondents' Academic Qualifications					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than Bachelor	25	25.3	25.3	25.3
	Bachelor degree	40	40.4	40.4	65.7
	Postgraduate	34	34.3	34.3	100.0
	Total	99	100.0	100.0	

Source: Author's own survey (2021)

Figure 17, shows the previous values,



**Figure18 Respondents' academic qualifications**

Source: Author's own design (2021)

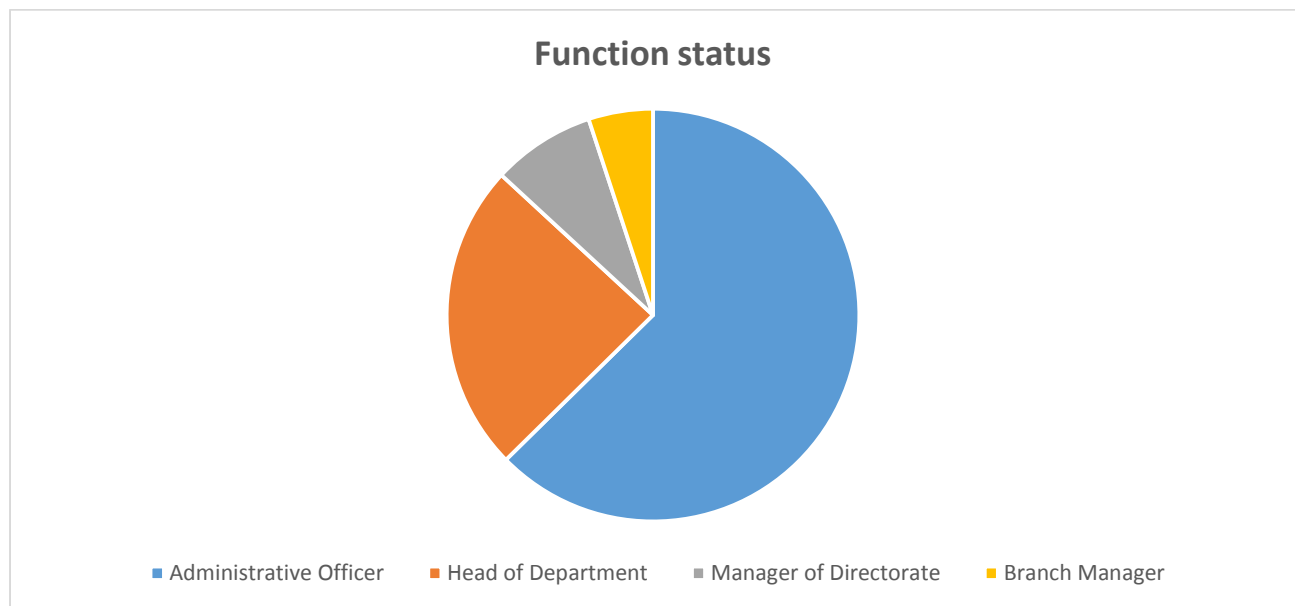
### 6.3.5. Demographic profile of respondents – Function status

Table 18, shows the function status of respondents in SIA. And present the percentages and number of respondents who have different function status in the SIA, the results were: 62.6 % of respondents are administrative officer, the second level was 24.2 % are heads of departments, then 8.1% are managers of directorates, and 5.1 % are branch managers in the Syrian governors

Table 18 Respondents' function status					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Administrative Officer	62	62.6	62.6	62.6
	Head of Department	24	24.2	24.2	86.9
	Manager of Directorate	8	8.1	8.1	94.9
	Branch Manager	5	5.1	5.1	100.0
	Total	99	100.0	100.0	

Source: Author's own survey (2021)

Figure 18, shows the different distribution of the study sample in terms of function status,



**Figure19 Respondents' function status**

Source: Author's own design (2021)

#### 6.4. Questionnaire design

The research relied on collecting primary data related to the practical part of this study on the questionnaire form as the main tool for the study, which represents a method for collecting the necessary data, and after reviewing many previous studies and research related to the study variables that it referred to in the research methodology chapter, and accordingly, A questionnaire form was designed for a sample of employees of the Syrian Investment Agency SIA, which is one of the government institutions that implemented the E-government program.

Where the form included some explanatory information related to the study title and its objectives, then some of the demographic questions for each respondent, after that moving to (35) questions directed to respondents according to Likert's five scales, which starts from the degree of disagreement strongly to the degree of strongly agree, as in the following table No.19

**Table 19 Scale scores of researches questionnaires**

<b>Standard</b>	Strongly Disagree	Not Agree	Neutral	Agree	Strongly Agree
<b>Degree</b>	1	2	3	4	5

Source: Author's own survey (2021)

It found in the questionnaire available in the appendix entitled: "A survey questionnaire on a sample of the employees of the Syrian Investment Authority to demonstrate the role of E-government in enhancing organizational effectiveness," which is divided into two main parts:

The first part: includes introductory and demographic questions for respondents, (5 questions,)

And the second part: which focuses on the independent and dependent study variables with their detailed dimensions, where the dependent variable is the organizational effectiveness variable, which includes the first axis that consists of (5 questions) in order to measure the organizational effectiveness dimension. The second axis (8 questions) to measure the organizational ethical dimension, the third axis (7 questions) to measure the organizational efficiency dimension

As for the second variable that represents the independent variable, it is the E-government variable, which includes the fourth axis (questions 6) to measure the viability dimension, the fifth axis (questions 4) to measure the dimension of privacy, and finally the sixth axis (questions 5) to measure the security dimension. As in the following table No.20

**Table20 Questionnaire design**

Main Variables	Sub Variables	Dimensional Sequence	NO. of Questions
Identifiable & Demographic Info			5
• O. Effectiveness	• O. Effectiveness	4	6
	• O. Ethics	5	4
	• O. Efficiency	6	5
• E-government	• Viability	1	5
	• Security	2	8
	• Privacy	3	7
Total			35+5

Source: Author's own survey (2021)

### 6.5. 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:

#### 6.5.1. 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 .

### 6.5.2. 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 21, 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 21 Alpha Cronbach and cross correlations**

Variables	M	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 No.21



## 6.6. 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)

### 6.6.1. 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 22 Skewness**

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

Source: Author's own survey (2021)

As present in the previous Table No.22, 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),

### 6.6.2. 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 23 Kurtosis**

	Efficiency	Ethics	Effectiveness	Security	Privacy	Viability
<b>Kurtosis</b>	2.267	1.517	2.036	1.840	.770	2.260
<b>Std. Error of Kurtosis</b>	.481	.481	.481	.481	.481	.481

Source: Author's own survey (2021)

Table No.23, 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.

## 6.7. Descriptive analyses

This topic will describe and diagnose the variables of the study that were referred to in the hypothetical model that adopted by the study. Where starting with describing and diagnosing the dimensions of the E-government variable that chosen by the research as an independent variable, then describing and diagnosing the dimensions of the organizational effectiveness variable as a dependent variable.

### 6.7.1. Dimension of viability

The data in Table No.24, Regarding of the frequency distributions, the arithmetic means, and the standard deviation of the dimension (Viability) indicate that:

The highest percentage of respondents agree that the E-government program in the study sample SIA, achieving the viability at a high rate, which is (79.2%), and in the same direction, it notes that (11.97) of the respondents somewhat agree about the existence of this dimension. While the study found that (8.8%) of the respondents indicated that they did not agree with the availability of the viability dimension in the E-government variable. Among the most prominent questions that contributed to enriching this variable are ( $v_1$ ,  $v_6$ ), and this is evidence of the positive ability to motivate investors by converting all their traditional business into electronic business, in addition to that the SIA administration has the ability to face the difficulties in implementing the electronic system.

These answers came according to the following table, with an arithmetic mean (4.20) and a standard deviation of (0.764) .

**Table 24 Frequencies, Mean, St.D of Viability**

Items	Reponses										S. Deviation	
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree		Mean	
	F	%	F	%	F	%	F	%	F	%		
V <sub>1</sub>	58	58.5	20	20.2	13	13.1	4	4.1	4	4.1	4.50	.719
V <sub>2</sub>	33	33.3	51	51.5	6	6.1	8	8.1	1	1	4.08	.900
V <sub>3</sub>	19	19.2	51	51.5	27	27.3	1	1	1	1	3.87	.765
V <sub>4</sub>	34	34.3	46	46.4	8	8.1	5	5.1	6	6.1	4.16	.779
V <sub>5</sub>	35	35.4	47	47.3	6	6.1	4	4	7	7.1	4.21	.732
V <sub>6</sub>	56	56.5	21	21.2	11	11.1	5	5.1	6	6.1	4.57	.688
Σ	39.17	39.53	39.33	39.68	11.83	11.97	4.50	4.57	4.17	4.23	4.20	.764

Source: Author's own survey (2021)

### 6.7.2. Dimension of privacy

Results of the table No.25, show that (77.2%) of the respondents agree that the agency's website has the advantage of privacy for all dealers. the study also shows that (13.63) of the study sample to somewhat agree on that. While it notes that (9.15) of the respondents do not agree on the availability of the privacy feature in the technical program that available in SIA,

These answers came with a mean (4.2) and a standard deviation of (0.814) ,

The element ( $P_1$ ) contributed to enriching this variable, which indicates the availability of a special E-mail for each employee to document his electronic business.

**Table 25 Frequencies, Mean, St.D of Privacy**

<i>Items</i>	<i>Reponses</i>										<i>S. Deviation</i>	
	<i>Strongly agree</i>		<i>Agree</i>		<i>Neutral</i>		<i>Disagree</i>		<i>Strongly disagree</i>		<i>Mean</i>	
	<i>F</i>	<i>%</i>	<i>F</i>	<i>%</i>	<i>F</i>	<i>%</i>	<i>F</i>	<i>%</i>	<i>F</i>	<i>%</i>		
<b><math>P_1</math></b>	45	45.3	32	32.3	13	13.1	4	4.1	5	5.1	4.35	.756
<b><math>P_2</math></b>	34	34.4	38	38.3	14	14.1	5	5.1	8	8.1	4.14	.860
<b><math>P_3</math></b>	43	43.4	35	35.3	10	10.1	6	6.1	5	5.1	4.15	.854
<b><math>P_4</math></b>	35	35.4	44	44.4	17	17.2	1	1	2	2	4.14	.787
<b><math>\Sigma</math></b>	39.25	39.63	37.25	37.58	13.5	13.63	4	4.08	5	5.08	<b>4.21</b>	.814

Source: Author's own survey (2021)

### 6.7.3. Dimension of security

Through the statistical program that has adopted in analyzing the available data from the survey of respondents' opinions. It appears in the table No.26, the results that related to the second dimension of the E-government variable, which is Security, as follows:

(83.4 %) of the respondents agree about the interest of the SIA management in the security feature, Where distributed (44.46%) of the respondents were agree strongly. While (38.94 %) of respondents indicated for the degree of agree. While the study found that (9.92%) of the respondents indicate to somewhat agree. and (6.7%) do not agree on the availability of the security feature.

The value of the arithmetic mean was (4.28) and a standard deviation (0.750) .

Among the most important questions that contributed to enriching this variable are (S<sub>5</sub>), which indicates to presence of an official legal person who can intervene in the electronic system and make the appropriate modification when necessary, followed by the next question (S<sub>1</sub>), which indicates to existence of a specific authorities for each employee in the electronic system.

**Table 26 Frequencies, Mean, St.D of Security**

<i>Items</i>	<i>Reponses</i>										<i>S. Deviation</i>	
	<i>Strongly agree</i>		<i>Agree</i>		<i>Neutral</i>		<i>Disagree</i>		<i>Strongly disagree</i>		<i>Mean</i>	
	<i>F</i>	<i>%</i>	<i>F</i>	<i>%</i>	<i>F</i>	<i>%</i>	<i>F</i>	<i>%</i>	<i>F</i>	<i>%</i>		
<i>S<sub>1</sub></i>	55	55.6	30	30.2	9	9.1	4	4.1	1	1	4.43	.745
<i>S<sub>2</sub></i>	51	51.5	30	30.3	2	2	9	9.1	7	7.1	4.31	.900
<i>S<sub>3</sub></i>	26	26.3	53	53.5	15	15.2	1	1	4	4.1	4.09	.671
<i>S<sub>4</sub></i>	31	31.3	49	49.4	15	15.2	1	1	3	3.1	4.14	.700
<i>S<sub>5</sub></i>	57	57.6	31	31.3	8	8.1	2	2	1	1	4.45	.732
<i>Σ</i>	44	44.46	38.6	38.94	9.8	9.92	3.4	3.44	3.2	3.26	4.28	0.750

Source: Author's own survey (2021)

#### 6.7.4. Dimension of organizational effectiveness

The following table 27, indicates to the results of the respondents 'answers regarding of the organizational effectiveness dimension, as (71.74%) of the respondents agree on the interest of the SIA's management in this dimension. The answers were distributed to (28.28%) of the respondents who strongly agree. While (43.46%) agree only as a degree.

In addition, the table showing that (19.16%) of respondents to somewhat agree. And (8.9%) do not agree that there is organizational effectiveness in the agency as a result of the application of e-government,

The value of the arithmetic mean is (3.88) and a standard deviation (.992)

The best element that contributed to enriching this variable are (EFF<sub>1</sub>), which indicates that the SIA's management participates with its employees in making decisions that related to the electronic work environment, followed by the question (EFF<sub>3</sub>), which indicates that the SIA's management encourages its employees who are contributing in developing the electronic work.

**Table 27 Frequencies, Mean, St.D of organizational effectiveness**

Items	Reponses										Mean	S. Deviation
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree			
	F	%	F	%	F	%	F	%	F	%		
EFF <sub>1</sub>	37	37.4	39	39.4	14	14.1	7	7.1	2	2	4.03	.994
EFF <sub>2</sub>	22	22.2	46	46.5	23	23.2	5	5.1	3	3	3.80	.947
EFF <sub>3</sub>	33	33.3	35	35.4	22	22.2	5	5.1	3	3	3.89	1.058
EFF <sub>4</sub>	21	21.2	47	47.5	22	22.2	5	5.1	4	4	3.77	.978
EFF <sub>5</sub>	27	27.3	48	48.5	14	14.1	7	7.1	3	3	3.90	.985
Σ	28.0	28.28	43.00	43.46	19.00	19.16	5.80	5.9	3	3	3.88	.992

Source: Author's own survey (2021)

### 6.7.5. Dimension of organizational ethics

When surveying the employees of the SIA, it discovered according to Table No.28, That (73.34%) of the respondents agree on the existence of the organizational ethical advantage in the sample study, the answer was divided among (27.51%) of the respondents who strongly agree. While (45.83%) of the respondents gave an agree degree. Whereas, it found that (20.08%) of the employees surveyed indicate to somewhat agree. and (6.97%) do not agree on the availability of organizational ethics. The mean value was (3.93) and a standard deviation (.8920), among the most important questions that contributed to enriching this variable is (*Ethic<sub>6</sub>*), which indicates that the agency's management encourages the establishment of work teams and groups with distinct competencies.

**Table 28 Frequencies, Mean, St.D of organizational ethics**

Items	Reponses										Mean	S. Deviation
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree			
	F	%	F	%	F	%	F	%	F	%		
Ethic <sub>1</sub>	29	29.3	40	40.4	27	27.3	1	1	2	2	3.94	.89
Ethic <sub>2</sub>	23	23.2	45	45.5	24	24.2	5	5.1	2	2	3.83	.915
Ethic <sub>3</sub>	18	18.2	43	43.4	31	31.3	6	6.1	1	1	3.72	.869
Ethic <sub>4</sub>	40	40.4	44	44.4	10	10.1	3	3	2	2	3.96	.885
Ethic <sub>5</sub>	28	28.3	40	40.3	21	21.2	6	6.1	4	4.1	3.95	.862
Ethic <sub>6</sub>	35	35.4	38	38.4	16	16.2	7	7.1	3	3	4.18	1.04
Ethic <sub>7</sub>	21	21.2	57	57.6	14	14.1	5	5.1	2	2	3.91	.858
Ethic <sub>8</sub>	21	21.2	56	56.6	16	16.2	5	5.1	1	1	3.92	.817
Σ	26.8	27.51	45.38	45.83	19.88	20.08	4.75	4.83	2.13	2.14	3.93	.892

Source: Author's own survey (2021)

### 6.7.6. Dimension of organizational efficiency

In the following table No.29, the respondents' answers appear as follows: (76.2%) of the respondents agree that the organizational Efficiency is available in the SIA, and the rate is (36.1%) of the respondents strongly agree. and (40.1%) chose agree.

While the study founds that (13.3 %) of the agency's employees to somewhat agree, and (7.2%) of the respondents did not agree on the existence of the optimal organizational efficiency,

The value of the arithmetic mean was (4.08) and a standard deviation (0.9) .

The most important elements that contributed to enriching this variable are ( $OE_5$ ) that refer the Agency has effective communication systems to increase the efficiency of its staff, followed by the question ( $OE_3$ ), which indicates the Agency has a special database to provide staff with timely information.

**Table 29 Frequencies, Mean, St.D of organizational efficiency**

Items	Reponses										Mean	S. Deviation
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree			
	F	%	F	%	F	%	F	%	F	%		
OE <sub>1</sub>	30	30.3	48	48.5	11	11.1	9	9.1	1	1	3.98	.937
OE <sub>2</sub>	40	40.4	40	40.4	11	11.1	7	7.1	1	1	4.15	.885
OE <sub>3</sub>	39	39.4	39	39.4	14	14.1	4	4	3	3	4.17	.821
OE <sub>4</sub>	39	39.4	39.4	38	38.4	10	10.1	10	2	2	4.09	.949
OE <sub>5</sub>	48	48.5	35	35.4	11	11.1	4	4	1	1	4.26	.887
OE <sub>6</sub>	29	29.3	41	36.3	17	17.2	10	10.1	7	7.1	3.94	.946
OE <sub>7</sub>	25	25.3	42	42.4	18	18.2	6	6.1	8	8.1	3.95	.825
Σ	35.7	36.1	40.6	40.1	17.2	13.3	7.2	7.2	3.3	3.3	4.1	0.9

Source: Author's own survey (2021)

## 6.8. 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:

### 6.8.1. 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 following table 30.

**Table 30 The Correlation coefficient between dimensions of study variables, (N = 99)**

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

\*\*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.

### **6.8.2. 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:



### 6.8.2.1. Viability and organizational effectiveness

Table No. 31, shows that viability has a significant positive impact on organizational effectiveness. Moreover, as it is seen in ANOVA analysis in the table No. 32, the model was significant ( $p < 0.01$ ), and the F value was (23.713) with a freedom degree (1, 98).

**Table 31 Impact of Viability on organizational effectiveness**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.260	.375		6.022	.000
Viability	.427	.088	.443	4.870	.000

a. Dependent Variable: organizational effectiveness.

Source: Author's own survey (2021)

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.

**Table 32 ANOVA Analysis, impact of viability on organizational effectiveness**

ANOVA <sup>a</sup>						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.398	1	5.398	23.713	.000 <sup>b</sup>
	Residual	22.082	97	.228		
	Total	27.481	98			

a. Dependent Variable : organizational effectiveness

b. Predictors: (Constant), viability

Source: Author's own survey (2021)

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.*

### 6.8.2.2. Privacy and organizational effectiveness

As shown in table No. 33, shows that privacy has a significant positive impact on organizational effectiveness. Moreover, as it is seen in ANOVA analysis in the table No. 34, the model was significant ( $p < 0.01$ ), and the F value was (4.211) with a freedom degree (1, 98).

**Table 33 Impact of privacy on organizational effectiveness**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.396	.333		10.188	.000
Privac	.160	.078	.204	2.052	.043

a. Dependent Variable : organization effectiveness

Source: Author's own survey (2021)

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

**Table 34 ANOVA Analysis, impact of privacy on organizational effectiveness**

ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.143	1	1.143	4.211	.043 <sup>b</sup>
	Residual	26.337	97	.272		
	Total	27.481	98			

a. Dependent Variable : organizational effectiveness

b. Predictors: (Constant), Privacy

Source: Author's own survey (2021)

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.*

### 6.8.2.3 Security and organizational effectiveness

As shown in table No. 35, shows that Security has a significant positive impact on organizational effectiveness. Moreover, as it is seen in ANOVA analysis in the table No. 36, the model was significant ( $p < 0.01$ ), and the F value was (10.769) with a freedom degree (1, 98).

**Table 35 Impact of security on organizational effectiveness**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.731	.412		6.637	.000
Security	.313	.095	.316	3.282	.001

a. Dependent Variable : organizational effectiveness

Source: Author's own survey (2021)

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  $R^2$  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

**Table 36 ANOVA Analysis, impact of security on organizational effectiveness**

ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2.746	1	2.746	10.769	.001 <sup>b</sup>
Residual	24.735	97	.255		
Total	27.481	98			

a. Dependent Variable : organizational effectiveness

b. Predictors : (Constant), Security

Source: Author's own survey (2021)

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*

#### 6.8.2.4 Viability and organizational ethics

Table 37, shows that viability has a significant positive impact on organizational ethics. Moreover, as it is seen in ANOVA analysis in the table 38,, the model was significant ( $p < 0.01$ ), and the F value was (168.435) with a freedom degree (1, 98).

**Table 37 Impact of viability on organizational ethics**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.315	.281		1.120	.265
Viability	.854	.066	.797	12.978	.000

a. Dependent Variable : organizational ethics

Source: Author's own survey (2021)

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

**Table 38 ANOVA Analysis, Impact of viability on organizational ethics**

ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	21.570	1	21.570	168.435	.000 <sup>b</sup>
Residual	12.422	97	.128		
Total	33.992	98			

a. Dependent Variable: organizational ethics

b. Predictors: (Constant), viability

Source: Author's own survey (2021)

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.*

### 6.8.2.5. Privacy and organizational ethics

As shown in table 39, shows that privacy has a significant positive impact on organizational ethics. Moreover, as it is seen in ANOVA analysis in the table 40, the model was significant ( $p < 0.01$ ), and the F value was (25.133) with a freedom degree (1, 98).

**Table 39 Impact of privacy on organizational ethics**

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.266	.337		6.716	.000
	Privacy	.395	.079	.454	5.013	.000

a. Dependent Variable : organizational ethics

Source: Author's own survey (2021)

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 (SEKARAN and BOUGIE, 2016).

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

**Table 40 ANOVA Analysis, impact of privacy on organizational ethics**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.995	1	6.995	25.133	.000 <sup>b</sup>
	Residual	26.997	97	.278		
	Total	33.992	98			

a. Dependent Variable: organizational ethics

b. Predictors: (Constant), Privacy

Source: Author's own survey (2021)

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.*

### 6.8.2.6. Security and organizational ethics

Table No. 41, shows that 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) with a freedom degree (1, 98).

**Table 41 Impact of security on organizational ethics**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.113	.445		4.749	.000
Security	.426	.103	.387	4.133	.000

a. Dependent Variable: Organizational Ethics

Source: Author's own survey (2021)

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 (SEKARAN and BOUGIE, 2016).

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

**Table 42 ANOVA Analysis, impact of security on organizational ethics**

ANOVA <sup>a</sup>						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1 Regression	5.091	1	5.091	17.085	.000 <sup>b</sup>	
Residual	28.901	97	.298			
Total	33.992	98				

a. Dependent Variable: organizational ethics

b. Predictors: (Constant), Security

Source: Author's own survey (2021)

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.*

### 6.8.2.7 Viability and organizational efficiency

As shown in table No. 43, shows that viability has a significant positive impact on organizational efficiency. Moreover, as it is seen in ANOVA analysis in the table No. 44, the model was significant ( $p < 0.01$ ), and the F value was (11.165) with a freedom degree (1, 98).

**Table 43 Impact of viability on organizational efficiency**

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.843	.614		3.002	.003
	viability	.479	.143	.321	3.341	.001

a. Dependent variable: organizational efficiency

Source: Author's own survey (2021)

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 (SEKARAN and BOUGIE, 2016).

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.

**Table 44 ANOVA Analysis, Impact of viability on organizational efficiency**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.802	1	6.802	11.165	.001 <sup>b</sup>
	Residual	59.095	97	.609		
	Total	65.897	98			

a. Dependent Variable : organizational efficiency

b. Predictors: (Constant), viability

Source: Author's own survey (2021)

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.*

#### 6.8.2.8. Privacy and organizational efficiency

In the Table No. 45, shows, that privacy has a significant positive impact on organizational efficiency. Moreover, as it is seen in ANOVA analysis in the table No. 46, the model was significant ( $p < 0.01$ ), and the F value was (19.633) with a freedom degree (1, 98).

**Table 45 Impact of privacy on organizational efficiency**

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.773	.481		3.687	.000
	Privacy	.498	.112	.410	4.431	.000

a. Dependent Variable : organizational efficiency

Source: Author's own survey (2021)

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

**Table 46 ANOVA Analysis, impact of privacy on organizational efficiency**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.093	1	11.093	19.633	.000 <sup>b</sup>
	Residual	54.804	97	.565		
	Total	65.897	98			

a. Dependent Variable : organizational efficiency

b. Predictors: (Constant), Privacy

Source: Author's own survey (2021)

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.*



### 6.8.2.9. Security and organizational efficiency:

As shown in table No. 47, shows that security has a significant positive impact on organizational efficiency. Moreover, as it is seen in ANOVA analysis in the table No. 48, the model was significant ( $p < 0.01$ ), and the F value was (11.596) with a freedom degree (1, 98).

**Table 47 Impact of security on organizational efficiency**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.731	.635		2.727	.008
Security	.500	.147	.327	3.405	.001

a. Dependent Variable : organizational efficiency

Source: Author's own survey (2021)

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 (SEKARAN and BOUGIE, 2016).

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.

**Table 48 ANOVA Analysis, Impact of security on organizational efficiency**

ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	7.037	1	7.037	11.596	.001 <sup>b</sup>
Residual	58.860	97	.607		
Total	65.897	98			

a. Dependent Variable : organizational efficiency

b. Predictors: (Constant), Security

Source: Author's own survey (2021)

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.*

#### 6.8.2.10. Model 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. 49

**Table 49 ANOVA**

	Model	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 50 Coefficients**

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
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. 50, putting all the variables together in the regression model, to predict organizational effectiveness from E-government (Privacy, Security, and Viability).

$$\text{Organizational Effectiveness} = a + \beta_1 \text{ Privacy (PRI)} + \beta_2 \text{ Viability (VIA)} + \beta_3 \text{ Security (SEC)} + \epsilon$$

$$\text{Organizational Effectiveness} = .717 + (.191 * \text{PRI}) + (.458 * \text{VIA}) + (.115 * \text{SEC}) + \epsilon$$

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

Multiple regression is run to predict organizational effectiveness from E-government (PRI, SEC, VIA), these dimensions significantly predicted organizational effectiveness (Organizational Efficiency, Organizational Ethics, and Organizational Effectiveness),  $F(3,95) = 44.131$ ,  $p < 0.001$ ,  $R^2$  value explained 58.2 % of the changes that occurred in organizational effectiveness. All the three dimensions added statistically significant to the prediction,  $p < 0.05$

## **6.9. 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 efficiency, 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 No. 51, 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 No. 51, 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 51, 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 to business strategy. Whereas, if the business strategy is related to knowledge management capabilities, this may affect positively organizational effectiveness (SMITH et al., 2010b).

Table 52, 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.
  - $R^2$  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  $R^2$ , this means that privacy is the most influential and the most explanation of the change in organizational efficiency.
  - It is notable that the  $R^2$  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 No. 52, 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  $R^2$  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  $R^2$  (.63), this means that viability is the most influential and the most explanation of the change in organizational ethics.
- At the same time,  $R^2$  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 No. 52, 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.

- $R^2$  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  $R^2$  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 51 Comparisons of the means and the responses of the study variables**

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

Source: Author's own survey (2021)

**Table 52 Comparison between the regression models**

Models\	Model 1 H1.1	Model 2 H1.2	Model 3 H1.3	Model 4 H2.1	Model 5 H2.2	Model 6 H2.3	Model 7 H3.1	Model 8 H3.2	Model 9 H3.3
	VIB- EFF	PRI- EFF	SEC- EFF	VIB - ETHIC	PRI - ETHIC	SEC - ETHIC	VIB - OE	PRI - OE	SEC - OE
<b>R<sup>2</sup></b>	<b>.196</b>	.043	.10	<b>.63</b>	.206	.15	.103	<b>.168</b>	.107
<b>Sig</b>	.000	.043	.001	.000	.000	.000	.001	.000	.001
<b>INDV:</b> (VIA) Viability, (PRI) Privacy, (SEC) Security <b>DV:</b> (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 Agency (SIA), as users of the E-government program, whose responses can be generalized to other government sectors.

## **7. CONCLUSIONS AND RECOMMENDATIONS**

### **7.1. 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.

## **7.2. 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

## **8. NEW SCIENTIFIC RESULTS OF THE CURRENT STUDY**

Based on the objectives-hypotheses and data analysis, this research presents new results based on the role of E-government to enhancing the organizational effectiveness in Syrian context 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 No. 53, below shows the relationship between each hypothesis with new results.

**Table 53 Linking between the hypotheses with new results**

	New results	Accepted / Rejected
<b><i>H1.1</i></b>	There is a significant impact for viability on organizational effectiveness	Accepted
<b><i>H1.2</i></b>	There is a significant impact privacy for on organizational effectiveness.	Accepted
<b><i>H1.3</i></b>	There is a significant impact for Security on organizational effectiveness	Accepted
<b><i>H2.1</i></b>	There is a significant impact for viability on organizational ethics	Accepted
<b><i>H2.2</i></b>	There is a significant impact for privacy on organizational ethics	Accepted
<b><i>H2.3</i></b>	There is a significant impact for security on organizational ethics	Accepted
<b><i>H3.1</i></b>	There is a significant impact for viability on organizational efficiency	Accepted
<b><i>H3.2</i></b>	There is a significant impact for privacy on organizational efficiency.	Accepted
<b><i>H3.3</i></b>	There is a significant impact for security on organizational efficiency	Accepted

Source: Author's own survey (2021)

## **9. SUMMARY**

### **9.1 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 .

### **9.2 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.

### **9.3 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.

#### **9.4 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

### Appendix 1: Bibliography

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## Appendix 2: Questionnaire

Ladies and Gentlemen of the Syrian Investment Agency-SIA,

This survey is the fulfillment of the requirements for the degree of Doctor of Philosophy at Hungarian University of Agriculture and Life Sciences MATE, entitled:

***"The Role of E-governance in Enhancing the Organizational Effectiveness" Survey Study in the Syrian Investment Agency, SIA"***

Please give us some of your valuable time to answer the attached questionnaire, your participation in the survey is voluntary and all of your responses will be kept confidential, the answers will be used for scientific research purposes only. Your cooperation will help us to complete PhD degree, and we will be happy to share the results of the study later if you wish.

Thank you for your time to complete this questionnaire. With high respect and appreciation

Ahmad Juratli, PhD Candidate, SZIU

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### ***Section One: Personal information of respondents in SIA***

This section is related to respondents' personal information

**1- Gender:**

☐ Male

☐ Female

**2- Years of experience:**

☐ Less than five years

☐ 5 - 10 years

☐ More than 10 years

**3- Age:**

☐ Less than 25 years.

☐ 25 - 40 years

☐ 40 years and above

**4- Academic Qualification:**

☐ Less than Bachelor

☐ Bachelor degree

☐ Postgraduate

**5- Functional status:**

☐ Administrative Officer

☐ Head of Department

☐ Manager of Directorate

☐ Branch Manager

### ***Section Two: Respondents' perceptions towards the employees of SIA***

For each of the following questions below, you can choose the appropriate response that best describe how you perceive the statement, where:

Strongly Disagree   1                      2                      3                      4                      5   Strongly Agree

**Employee's responsibility towards the organizational effectiveness:**

- 1- The Agency's administration is interested in expanding the participation of employees in the decision-making process within the environment of electronic work.

1☐                  2☐                  3☐                  4☐                  5☐

- 2- Staff share information and technological knowledge and they are open for new ideas.

1☐                  2☐                  3☐                  4☐                  5☐

- 3- Employees who contribute to the construction and dissemination of electronic work are encouraged.

1☐                  2☐                  3☐                  4☐                  5☐

- 4- The decisions of the SIA shall be amended according to the output of the applied electronic system to be suit with the developments in the internal and external environment.

1☐                  2☐                  3☐                  4☐                  5☐

- 5- Employees are given the opportunity to explain and clarify the methods that they have discovered to develop their electronic systems.

1☐                  2☐                  3☐                  4☐                  5☐

**Employee's responsibility towards the organizational ethics:**

- 6- The SIA has the capacity to exploit the available opportunities for growth and sustainability

1☐                  2☐                  3☐                  4☐                  5☐

- 7- The Agency's management seeks to cover the desires and needs of employees by motivating them and raising their morale sprite.

1☐                  2☐                  3☐                  4☐                  5☐

- 8- The Agency's management carries out outstanding training programs to promote the human element within the Agency?

1☐                  2☐                  3☐                  4☐                  5☐

- 9- The Agency shall take into account the efficient exploitation and optimal distribution of its available resources. Obtain its resources from the best sources of information

1☐                  2☐                  3☐                  4☐                  5☐

- 10- The Agency assists its staff to adapt with the new and critical situations during work pressure?

1☐                  2☐                  3☐                  4☐                  5☐

**11-** The Agency's policy is to create cohesive teams and working groups with distinct competencies.

1☐                      2☐                      3☐                      4☐                      5☐

**12-** The SIA works to encourage the Initiative and the Innovations among staff

1☐                      2☐                      3☐                      4☐                      5☐

**13-** The Agency is keen to obtain its resources from the best sources of information

1☐                      2☐                      3☐                      4☐                      5☐

**Employee's responsibility towards the organizational efficiency:**

**14-** The Agency sets clear and stated objectives for all staff

1☐                      2☐                      3☐                      4☐                      5☐

**15-** The Agency's management has a vision for the future, which in turn translates into actionable plans and programs?

1☐                      2☐                      3☐                      4☐                      5☐

**16-** The Agency has a special database to provide staff with timely information.

1☐                      2☐                      3☐                      4☐                      5☐

**17-** The agency is working to improve its image and reputation for investors to ensure continuity

1☐                      2☐                      3☐                      4☐                      5☐

**18-** The Agency has effective communication systems to increase the efficiency of its staff

1☐                      2☐                      3☐                      4☐                      5☐

**19-** Achieve the required and efficiency productive to obtain the maximum output with minimal input?

1☐                      2☐                      3☐                      4☐                      5☐

**20-** The agency pays particular attention to monitoring internal operations to ensure that the goals are achieved?

1☐                      2☐                      3☐                      4☐                      5☐

**Employee's responsibility towards the viability:**

**21-** Different investors are motivated by converting all their traditional businesses into e-business that facilitate the procedure.

1☐                      2☐                      3☐                      4☐                      5☐

**22-** Managers have the speed to respond, to take initiative and to carry out their administrative duties

1 ☐      2 ☐      3 ☐      4 ☐      5 ☐

**23-** The management benefits from the services of the electronic system in an optimal manner according to (volume of transactions, details and needs of the customers).

1 ☐      2 ☐      3 ☐      4 ☐      5 ☐

**24-** With electronic work, staff has enough time to do additional work if needed.

1 ☐      2 ☐      3 ☐      4 ☐      5 ☐

**25-** Management supports employees to develop their skills so they can work on the electronic system

1 ☐      2 ☐      3 ☐      4 ☐      5 ☐

**26-** Management has the ability to face difficulties in implementing the electronic system.

1 ☐      2 ☐      3 ☐      4 ☐      5 ☐

**Employee's responsibility towards the privacy:**

**27-** The employee has his own e-mail to document the electronic business.

1 ☐      2 ☐      3 ☐      4 ☐      5 ☐

**28-** There is a great deal of confidentiality in dealing with the electronic system

1 ☐      2 ☐      3 ☐      4 ☐      5 ☐

**29-** The electronic system has a high privacy when dealing with it.

1 ☐      2 ☐      3 ☐      4 ☐      5 ☐

**30-** Through e-mail, the Department conducts continuous electronic monitoring, providing employees with feedback on their performance

1 ☐      2 ☐      3 ☐      4 ☐      5 ☐



**Employee's responsibility towards the security:**

**31-** There is a limited access to E-government for each employee

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

**32-** There is no any part of the system open to the public or to an anonymous class of users

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

**33-** There is an identified authority that approves requests for access to this system

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

**34-** There are uniquely identifiable accounts for all users requiring access

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

**35-** There is an access for a specific administrator to make the necessary adjustment in a timely manner

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

### Appendix 3: Regression modals

#### 3.1 The impact of E-government on O. Effectiveness

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.464 <sup>a</sup>	.215	.190	.47647	1.930

a. Predictors: (Constant), Sec, Pri, viability

b. Dependent Variable: EFF

**ANOVA<sup>a</sup>**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	5.914	3	1.971	8.683	.000 <sup>b</sup>
Residual	21.567	95	.227		
Total	27.481	98			

a. Dependent Variable: EFF

b. Predictors: (Constant), Security, Privacy, viability

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.862	.466		3.998	.000		
viability	.358	.100	.372	3.599	.001	.773	1.294
Privacy	.019	.079	.024	.241	.810	.820	1.219
Security	.142	.104	.144	1.365	.176	.747	1.339

a. Dependent Variable: EFF

#### 3.2 The impact of E-government on O. Ethics

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.821 <sup>a</sup>	.673	.663	.34185	1.797

a. Predictors: (Constant), Sec, Pri, viability

b. Dependent Variable: Ethics

**ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	22.890	3	7.630	65.293	.000 <sup>b</sup>
Residual	11.102	95	.117		
Total	33.992	98			

a. Dependent Variable: Ethics

b. Predictors: (Constant), Sec, Pri, viability

Coefficients <sup>a</sup>							
Unstandardized Coefficients			Standardized Coefficients			Collinearity Statistics	
Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	-.102	.334		-.305	.761		
viability	.784	.071	.731	10.968	.000	.773	1.294
Privacy	.185	.056	.213	3.287	.001	.820	1.219
Security	-.016	.075	-.015	-.219	.827	.747	1.339

a. Dependent Variable: Ethics

### 3.3 The impact of E-government on O. Efficiency

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.471 <sup>a</sup>	.221	.197	.73488	1.482

a. Predictors: (Constant), Sec, Pri, Via

b. Dependent Variable: OE

ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	14.592	3	4.864	9.007	.000 <sup>b</sup>
Residual	51.304	95	.540		
Total	65.897	98			

a. Dependent Variable: OE

b. Predictors: (Constant), Sec, Pri, Via

Coefficients <sup>a</sup>							
Unstandardized Coefficients			Standardized Coefficients			Collinearity Statistics	
Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	.392	.718		.546	.587		
viability	.233	.154	.156	1.516	.133	.773	1.294
Pri	.368	.121	.303	3.036	.003	.820	1.219
Sec	.219	.160	.143	1.368	.175	.747	1.339

a. Dependent Variable: OE

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