

# CONTRIBUTION OF GOVERNMENTAL E-ACCOUNTING TO THE MANAGEMENT OF COVID-19 CRISIS AND THE REDUCTION OF ITS IMPACTS ON JORDAN'S ECONOMY

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## ABSTRACT

*The study has aimed at identifying the contribution of governmental e-accounting information systems to the management of Covid-19 crisis and the reduction of its impacts of Jordan's economy. Therefore, the study has examined the importance of basic components of e -systems and the characteristics of e-systems' quality; it has also illustrated an ability of governmental e-accounting systems used in financial department to provide governmental administration with required accounting information, thereby allowing it to develop the policies and decisions required for managing health crisis and its reduce Covid-19 impacts on Jordan's economy, And provide the necessary data to parties that may contribute to reducing the impact of this need on the economy by granting loans and aid to the Kingdom, in addition to helping the Jordanian government by rescheduling loans granted to the Kingdom.*

*In order to achieve the purposes of the study, the researcher has used descriptive analytical method; relevant studies and literature of governmental accounting information systems have been examined; a questionnaire has been prepared and distributed to governmental departments of Covid-19 crisis management; 36 questionnaires have been distributed to the managers of governmental departments and the officials of information technology in order to assess the properties and components of the system and provide a necessary data.*

*The study found that the electronic government accounting system in Jordan contributed, through its characteristics and components, to managing and minimizing the effects of the Covid crisis at the beginning of the crisis, and now it contributes to providing information to its management.*

**Keywords:** Governmental accounting; Governmental e-accounting; Corona virus pandemic; Quality of national economy.

## INTRODUCTION

Corona Virus (Covid-19), originated at wuhan city of china in early December 2019, has rapidly widespread in almost every country across the world; it has become a surprised crisis affecting seriously economies of countries; clear changes of financial and non-financial transactions have emerged due to a reduction of a demand for products and services, particularly entertainment services. Consequently, the profits of a number of large and small business establishments have significantly reduced; aviation and industry sectors have been particularly severely affected by Covid-19; in addition, because of Covid-19, a number of business establishments could not achieve the requirements of continuity imposition. Moreover, Covid-19 pandemic has caused severe and acute losses in some sectors which have been not disclosed by business establishments, particularly the small business because

they did not periodically prepare financial statements or reports. Current circumstances have showed that sufficient information covering financial and non-financial status related to Covid 19 pandemic and its short or long - term impacts on business establishments and local and global economy is not available.

Accordingly, Governments have faced various challenges of maintaining economic sectors and developing plans and programs contributing to the reduction of Corona virus - related repercussions and losses. Providing information, which helps governments develop financial policies and appropriate plans and programs and set spending and support priorities, therefore, has become a necessity. Hence, governmental e-accounting information system has provided information relating to the costs of economy support programs plus the funding sources and methods which enable the governments to implement these programs. Here, the importance of governmental e-accounting system which provides quickly accurate information required for managing this crisis (Salamzadeh, 2020). In this study, an assessment of the contribution of governmental e-accounting information system to management of corona virus crisis and reduction its impacts on national economy are provided.

### **Problem of Study**

Novel coronavirus pandemic has showed the necessity of providing the information on which decisions are made and alternations are examined and chosen in order to deal with economic impacts.

Due to these impacts, private companies face direct accounting problems and indirect economic consequences affecting the industries, services and national income. As a result, modern and developed tools and methods which can be used to manage the current situation shall be provided in the light of the case of inability to provide accurate and appropriate information in a timely manner. Here, problem of study can be illustrated by the following questions:

1. Do main components of governmental e-accounting information system contribute to the management of Covid-19 crisis and reduction of its impacts on Jordan's economy?
2. Do Quality Characteristics of governmental e-accounting information system contribute to the management of Covid-19 crisis and reduction of its impacts of Jordan's economy?
3. Do governmental e-accounting information systems in the Hashemite Kingdom of Jordan meet the needs of the financial department managing Covid-19 crisis and reducing its impacts of Jordan's economy?

### **Importance of Study**

Covid-19 is new and modern topic and it is still spreading and affecting all aspects of life. Covid-19 that has swept nearly all over the world is now officially a pandemic. Global researches on Covid-19 are, therefore, conducted by researchers and professionals. In addition, managing Covid-19 crisis still need further accounting studies; and research trends which support decision - making process and help the governments overcome Covid-19 crisis, shall be determined. As a result, governmental e-accounting information systems become important since they provide accurate and appropriate information required for managing corona virus pandemic crisis and associated economic consequences pervading all countries of the world and economic sectors. Furthermore, developing recovery plans and

advancing the economy need such accurate accounting information. Hence, governmental e-accounting information system illustrates the impacts of changing various macroeconomic and financial conditions and their budgets. And it determines and measures probable liabilities and identifies to which extent they may occur. In addition, transparency of disclosing the general financial risks contributes greatly to the support of monitoring these risks and reduction of their impacts.

### **Purposes of Study**

The study aims at achieving the following purposes:

1. Identifying the contribution of main components of governmental e-accounting information systems to the management of Covid-19 crisis and reduction of its impacts on Jordan's economy.
2. Identifying to which extent quality characteristics of governmental e-accounting information system contribute to the management of Covid-19 crisis and reduction of its impacts of Jordan's economy.
3. Identifying to which extent governmental e-accounting information systems in the Hashemite Kingdom of Jordan meet the needs of the financial department managing Covid-19 crisis and reducing its impacts of Jordan's economy.

### **Hypotheses of Study**

The study tests the following hypotheses:

*H1: Governmental e-accounting system has main components contributing to manage Coronavirus crisis and reducing its impacts on Jordan's economy.*

*H2: Availability of quality characteristics of governmental e-accounting information system contributes to the management of Coronavirus crisis and reduction of its impacts on Jordan's economy.*

*H3: Governmental e-accounting information system in the Hashemite Kingdom of Jordan meets the needs of the financial department managing Covid-19 crisis and reducing its impacts of Jordan's economy.*

*H4: Governmental e-accounting information system in the Hashemite Kingdom of Jordan plays an important role in managing Coronavirus crisis and reducing its impacts on Jordan's economy.*

## **THEORETICAL FRAMEWORK AND PREVIOUS STUDIES**

Coronavirus has affected people, cities, economy, facilities and governments. Examining economic consequences and figures resulted by coronavirus crisis, therefore, has become as important as medical developments. As a result, more attention has been paid to accounting systems in general and governmental accounting systems in specific since they contribute greatly to the management of economic consequences; they also provide fairly accurate figures despite of a lack of sufficient data, risk conditions and uncertainty surrounding coronavirus crisis. The most important studies on this field are reviewed as follows:

Abdel Aziz (2021) has aimed at identifying the constraints to internal and external accounting disclosure on the imposition of continuity from the point of view of the users of financial statements under Covid-19 event. The study has touched upon the concept of the imposition of continuity as well as the importance of report on the extent of entity's ability to continue as a going concern in addition to the method used by the management for assessing

the appropriateness of imposition of continuity; it has also examined international and local professional efforts which support the imposition of continuity, the requirements of accounting discourse on the imposition of continuity as one of the most important accounting repercussions of Coronavirus in accordance with international accounting standards. Furthermore, the study has analysed internal and external risks, especially associated with Covid-19 pandemic and their impacts on accounting and operational business environments. One - way analysis of variance (Anova) has been used for testing study's hypotheses. The study has reached several results; most importantly, the users of financial statement agree that there are constraints to accounting disclosure on imposition of internal continuity related to management's thought and capabilities of facility and its policies as well as imposition of external continuity related to repercussions of Coronavirus pandemic event. Finally, the study has recommended that efforts of all parties, including the country, vocational and financial institutes as well as business establishments, shall be intensified to support business sustainability and to adopt the amendments of international accounting standards regarding the requirements of disclosure related to entity's ability to continue as a going concern. It has also recommended that all business establishments shall necessarily disclose all risks and their management mechanism which reflects the quality of informational content of financial statements in a manner that serves the users of financial statements.

Hassan (2020) has aimed at identifying the impact of applying the decision No. 69 of (2019) made by Minister of investment and International cooperation, regarding the addition of Accounting standards' numbers (47) financial instruments, (48) revenues from contract with customers, (49) leases, on the quality of information stated in financial reports in Egyptian environment in the light of past, current and future impacts of coronavirus pandemic; a survey list has been designed and distributed to four groups of persons who interest in financial statements; and they have been external auditors, financial managers, financial analysts and academics. The study has found that applying the Egyptian accounting standards added in the light of Covid-19 pandemic has improved the quality of accounting information expressed by qualitative characteristics of accounting information stated in Egyptian accounting standards because recognition and measurement errors have been reduced and inconsistencies and weaknesses in the previous standards have been removed.

Mahmoud and Hussein (2020) aimed at identifying the repercussions of newly emerged crises and community issues in accounting work practises and accounting profession. Globally Spreading of Coronavirus in early 2020 and its international economic impacts reflected in accounting profession practices in addition to approved accounting procedures and rules have been emergent events. Perhaps, recognition and disclosure of subsequent events within IAS10 standard are the most important procedures. )these impacts have been considered unchangeable for the financial report prepared on December 11, 2019; these impacts have been considered events since the effect of the crisis of spreading corona virus has been unknown at the date of preparing these reports; in addition, based on fair value, as well as the effects which have resulted in changes and modifications of practices of accountant and auditor professions in terms of the decline of accounting work, and the weakness of the scope of auditor work in the process of collecting the evidence required for issuing a neutral technical opinion, the extent to which the adoption of IFRA9 standard is mandatory has been touched upon.

In the study, conducted by Ruiz Estrda et al. (2019; 2020), artificial intelligence systems have been used for simulating infectious diseases including Corona virus in order to analyse the possible scenarios and measure their short-term impacts; this study has aimed at measuring the impact of corona virus on four strategic and important sectors in China, namely tourism, air transport, international trade and electricity. The study has reached a set

of results. Most importantly, this complex impact can be possibly measured by using special simulation models used in previous experiences, thereby measuring probably the impact of virus corona on chain's economy; and various analyses have indicated that a negative impact of corona virus on chain's economy exceeds the impact of Sars virus; and virus Corona's impact may extend to other economies associated with china.

McKibbin and Fernando (2020) reached a set of possible economic results of corona virus outbreak; the researchers have used possible scenarios which used as models applied to China; they also have examined the expectations of the process of evolving Corona virus next year through using modelling technology. In addition, the study has illustrated the impacts of Corona virus on macroeconomics and financial market by using general global equilibrium model. The study has concluded that despite of containing Covid-19 outbreak, the virus may result in short - term negative impacts on global economy; huge losses can be avoided by the investment of public health systems as well as all economies. Such investments can particularly conducted in developing countries since their health systems are less developed and they have high population density.

Furthermore, the following studies have touched upon to which the extent the countries' economies have been affected by the crisis. Garcia-Herrero et al. (2020) proven that world countries are vertically integrated with China; it greatly depends on intermediate goods' export and purchases small quantities of world inputs. As a result, it is greatly affected and supply chain is disrupted. In addition, the study has found that the investments in Southeast Asian countries will negatively be affected due to production disruption; and the most negatively affected sectors are electronics, cars and textiles because of the size of these sectors and huge reliance on china for inputs' supply, Scherbina (2020) has showed that the economic cost of the absence of the expanded procedures of controlling Corona virus will be 9 trillion dollar, representing 43% of gross domestic product. In addition, the study has suggested a method for calculating the cost of each alternative of prevention procedures; this method is based on the calculation of the ratio of number of persons who had symptoms to the fixed number of person infected, then multiplied by a cost average. In addition, the study has concluded that the more the procedures of control are effective, the more the opportunity of switching to a less costly policy increases, until vaccine becomes available.

Governmental e-accounting system is one of governmental administrative organization which collects, tabulates and processes the data; it also conveys financial and quantitative information to governmental financial department in order to make decisions. In addition, this information is conveyed to the users in order to achieve governmental accounting goals in the light of Corona virus pandemic; providing appropriate information contributes to the management of Covid-19 crisis and reduction of its negative impacts on national economy. In other words, governmental e-accounting information systems serve governmental administration's tasks such as planning, controlling and decision-making. But, the main goal of these systems in the light of the Corona virus pandemic is crisis management as well as reduction of its negative impacts on national economy.

In this part of the study, the researcher has discussed the following fields:

### **First: Impact of Covid-19 Pandemic on Economic Units**

Covid-19 has not only affected economic units which work directly in fields of tourism, airlines or service companies but also affected almost all economic units (Isaac et al., 2020). Covid-19 impacts on economic units can be observed through economic and financial markets significantly affected by Covid-19 outbreak and its duration; economic units face conditions which are associated with a general economic slowdown. These

conditions include, but are not limited to, financial market volatility and deterioration, credit and liquidity risks as well as increase of government interventions and unemployment plus significant decrease of consumer spending, increase of inventory levels and reduction of production due to low demand and layoffs. Accordingly, the activities of reconstructing these conditions may cause a large-scale economic downturn and may have long-term negative impacts on economic financial units which can affect economic units; these impacts can be summarized as follows:

- Decreasing demand for the goods and services As a result of the loss of markets due to the closures and the suspension of many means of shipping and the decrease or loss of income for many individuals due to the loss of their jobs.
- Disrupting global supply chains due to restrictions imposed on the movement of people and goods.
- Lack of capital investments and construction movement, thereby reducing demand for many types of goods and services.
- Falling market prices for the goods and financial assets including equity and debt instruments.

## **Second: Role of Main Components of Governmental E-accounting Systems in Managing Corona Virus Crisis**

Governmental e-accounting information systems rely on a set of components contributing to the achievement of their goals. The components (Al-kasswina, 2012) include modern and high efficient devices and equipment which process, operate and save the data as well as software which has a high ability to process and interpret the data and study the alternatives. It can be noted that the developed countries such as the United States and China have depended on artificial intelligence systems in order to examine the expected scenarios of the Corona pandemic and to choose the best alternative of these scenarios. Furthermore, regulations and instructions are considered basic components of government e-accounting information system; Corona virus pandemic is created in an independent legal environment. Defence orders, therefore, have been issued in the Hashemite kingdom of Jordan; some of these order have protected Jordan's economy; other orders have aimed at preventing institutes or companies from dispensing employees in order to control unemployment rate which is considered one of global negative economic impacts of the Covid-19 pandemic.

Information technology department which exists in each governmental institute directly affected by the Covid-19 pandemic has managed information technology and modified the programs in order to be appropriate for remote work and switch to provide governmental e-services through e-applications. Many units have activated a large number of e-services and applications during pandemic's period. For example, the General Customs Department have launched electronic platforms in order to complete customs transactions and maintain supply chains during closure period. In addition, taxes and customs duties have been paid through e-payment systems activated by the central bank and commercial banks during the pandemic period. Thus, existing e-infrastructure in Jordan has contributed to the acceleration of process of electronic transformation. Furthermore, controls are considered main components of e-accounting systems because they protect strongly these systems from penetration and misuse, thereby ensuring the safety and accuracy of data operation and success of process of crisis management.

### **Third: Quality Characteristics of Governmental E-accounting Information Systems and the Extent to which they contribute to the Management of Corona Virus Crisis and Reduction of its Impacts on Jordan's Economy**

Accuracy of data processing, absence of errors and provision of accurate information without contradictions represent quality characteristics of governmental e-accounting information systems which are used in a comparison between the systems (Al-kasswna, 2012). In the light of the Covid-19 pandemic, providing accurate information has been and still is necessary for managing the crisis and reducing its impacts on Jordan's economy. In addition, speeding up the processes of entering, processing, retrieving and preparing the reports is one of important characteristics of quality, especially since governmental e-accounting information systems may work under pressure during corona virus crisis; these systems may be used by more than one sector. It is, therefore, necessary to speed up the processes of entering and processing the data as well as retrieving the required report. In addition, information shall be quickly transferred via communication networks. Moreover, System efficiency refers to the ability of system to provide information and services in a short time as well as various alternatives to manage the crisis.

System effectiveness means that the current system meets all goals and requirements determined by the users to be able to manage the Covid-19 crisis and provide appropriate information which can be modified and developed in a manner that is in line with the requirements of crisis management; laws issued and proposed programs (Al-kasswna, 2012).

Furthermore, data extracted from the system shall be reliable and integrity in order to be used in the processes of crisis management and decision making. In addition, the data provided shall be characterized by the appropriateness and secondary data shall be excluded.

In order to achieve previous characteristics, data security shall necessarily be provided since data confidentiality shall be available, powers shall be identified; data base shall be protected, and data can be retrieved in a case of its loss.

### **Impact of Corona Virus Pandemic on Jordan's Economy and Role of Accounting Information System in Crisis Management**

It is expected that Corona virus crisis will result in a long-term repercussions which require further accounting consultations regarding spending levels, financing options, budget readjusting and remote work support. Corona virus pandemic has stopped the processes of administrative and financial reform which Jordan witnesses because this pandemic has significantly affected important sectors such as tourism and foreign financial flows. It can be, therefore, said that expected direct impacts of local spread of Corona virus are connected with various threats related to insufficient health care, budget pressures and deterioration of different sectors due to the closures; the indirect impacts of the Covid-19 are related to global economic stagnation, especially manufacturing field, due to supply chain disruption, decrease of growth rates and oil prices, problems of pharmaceutical sector as well as increase of uncertainty and surrounding risks which result in the so-called economics of fear affecting macroeconomics, especially exchange prices (Al-kasswna, 2021), consumption trends, inflation rates as well as investment tendencies and stock market performance. Jordan has taken various procedures in order to encounter the Covid-19 pandemic. For example, health spending has increased, and monetary procedures such as exemptions from rent allowance during the ban period, tax and customs exemptions, and expansion of scope of social benefits for middle and poor classes have been taken to protect vulnerable groups and sectors. In addition, Jordan has taken financial procedures in order to increase liquidity and improve aggregate demand; it also has greatly sought to provide electronic services, thereby ensuring

business continuity. Governmental information system provides information required for making previous decisions and reducing the Covid-19 impacts on Jordan's economy.

## METHODOLOGY OF STUDY

### Resources and Method of Data Collection

An analytical descriptive method has been used in this study; in order to collect the data, the researcher has relied on primary sources such as books, periodicals and journals and secondary sources in which a questionnaire has been designed and distributed to study sample in order to test hypotheses of study.

### Population and Sample of Study

In Jordan, there are 48 governmental independent units; 6 governmental units – Ministry of Finance, Department of General Budget, Department of Income Tax and Sales, Ministry of Health, National Center for Crisis Management and Ministry of Industry and Trade- which are linked to crisis management have been chosen. 6 questionnaires have been distributed to each governmental unit. Total questionnaires have been 36 distributed to the management, the users of the system and the employees of these units; 35 questionnaires have been retrieved; but, 34 questionnaires have been valid for statistical analysis.

### Consistency of Study Tool

Cronbach's alpha coefficient has been used to calculate internal consistency of study tool, which has ranged between 0.87 and 0.92. Table 1 outlines the coefficients; and these ratios are considered appropriate for the purposes of this study.

<b>Field</b>	<b>Internal Consistency</b>
Basic components of governmental e-accounting information system have contributed to the management of the Covid-19 and reduction of its impacts on Jordan's economy.	0.87
Characteristics of quality of governmental e-accounting information system have contributed to the management of the Covid-19 and reduction of its impacts on Jordan's economy.	0.86
Governmental e-accounting information system meets the needs of users in financial department in a manner that is appropriate for managing the Covid-19 crisis and reducing its impacts on Jordan's economy.	0.86

### Data Analysis and Hypotheses Testing

81% - 100%	80% -61%	60% -41%	40% -21%	20% - 5%
Very high	High	Moderate	Low	Very Low
4.05-5	4-3.05	3-2.05	2-1.05	1-0.05

Accordingly, the hypothesis is accepted if arithmetic mean is 3 or more, meanly higher than 60%. Based on Likert scale, the hypothesis is rejected if arithmetic mean is less than 3 (Table 2).

### First hypothesis testing

*H1: Governmental e-accounting system has main components contributing to manage Coronavirus crisis and reducing its impacts on Jordan's economy.*

To test the validity of this hypothesis, arithmetic means and standard deviations of performing of study's sample regarding first hypothesis have been extracted; Table 3 outlines them.

<b>TABLE 3</b>			
<b>ARITHMETIC MEANS AND STANDARD DEVIATIONS OF PERFORMING OF STUDY'S SAMPLE REGARDING FIRST HYPOTHESIS, ARRANGED IN A DESCENDING ORDER</b>			
<b>Statements</b>	<b>Arithmetic mean</b>	<b>Standard Deviation</b>	<b>Response Orientation</b>
Using of efficient electronic devices in governmental units has contributed to the management of Covid-19 crisis and reduction of its impacts national economy	3.07	0.859	High
Providing advanced electronic devices in governmental units has contributed to the management of the Covid-19 crisis and reducing its impacts on national economy.	3.10	0.989	High
Availability of electronic programs and systems has contributed to provision of an information appropriate for managing the Covid-19 crisis and reducing its impacts on national economy.	2.81	0.891	Moderate
E-Systems used in governmental e-accounting have been modified in order to be appropriate for defence laws issued by the government.	3.04	0.898	Moderate
Governmental e-accounting information system has been programmed in order to work under governmental financial systems issued under defence order.	3.10	0.898	High
The costs of information technology departments in governmental units related to the Covid-19 crisis management have been calculated in computer program department and modified according to the needs of each unit.	3.10	0.815	High
In the light of the Covid-19 pandemic, information technology department has taken over the processes of maintaining the hardware and software in the governmental unit.	3	0.805	Moderate
Governmental units have been able to use e-applications in order to provide people with necessary services in the light of the Covid-19 pandemic.	3.16	0.815	High
Information technology department could develop e-systems in governmental units in a manner that is in line with the developments of the Corona virus pandemic.	3.11	0.878	Moderate
Providing protection controls of governmental e-accounting information systems has contributed to the management of the Covid-19 crisis.	3.12	0.815	High
Governmental e-accounting information systems include a set of controls of information protection which has contributed to the management of the Covid-19 crisis and reduction of its impacts on Jordan's economy.			
Total	3.06	0.861	High

Table 3 has outlined arithmetic means and standard deviations of statements constituting first hypothesis related to the contribution of main components of governmental e-accounting information system to the management of the Covid-19 crisis. Arithmetic means have ranged between 2.81 to 3.16. The degrees of availability of systems and their contributions in the management of Covid-19 crisis have varied from moderate to high; and the degree of response orientation has been high; the statement, stated that governmental units have been able to use e-applications in order to provide people with necessary services in the light of the Covid-19 pandemic, has reached the highest arithmetic mean and response orientation has been high; the statement, stated that availability of electronic programs and systems has contributed to provision of an information appropriate for managing the Covid-19 crisis and reducing its impacts on national economy, has reached the lowest arithmetic mean and response orientation has been moderate.

In addition, arithmetic mean of the statements which has formed first hypothesis has been compared with standard mark 3 - hypothesis acceptance standard- by using t-test as stated in Table 4.

<b>TABLE 4</b>					
<b>ARITHMETIC MEANS, STANDARD DEVIATIONS AND T-TEST OF STATEMENTS WHICH HAS FORMED THE FIRST HYPOTHESIS IN COMPARISON WITH STANDARD MARK 3</b>					
Main components of governmental e-accounting information system have contributed to the management of Corona virus crisis and reduction of its impacts on Jordan's economy	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
	3.06	0.861	-3.510	47	0.000

Table 4 has indicated that there are statistical differences at ( $\geq 0.05$ ) between arithmetic mean and standard mark 3; T-value has been -3.510; statistical significance has been 0.000. Thus, this hypothesis stipulating that governmental e-accounting system has main components contributing to manage Coronavirus crisis and reducing its impacts on Jordan's economy, has been accepted.

## Second Hypothesis Testing

*H2: Availability of quality characteristics of governmental e-accounting information system contributes to the management of Coronavirus crisis and reduction of its impacts on Jordan's economy.*

To test the validity of this hypothesis, arithmetic means and standard deviations of performing of study's sample regarding second hypothesis have been extracted; Table 5 outlines them.

<b>TABLE 5</b>			
<b>ARITHMETIC MEANS AND STANDARD DEVIATIONS OF PERFORMING OF STUDY'S SAMPLE REGARDING THE SECOND HYPOTHESIS</b>			
Statements	Arithmetic mean	Standard deviation	Response orientation
Governmental e-accounting information system has quality characteristics of information system contributing to the management of Coronavirus crisis and reduction of its impacts on Jordan's economy.			
Data entry speed	3.08	0.922	High
Data processing speed	3.09	0.882	High
Speed of data extraction and report preparation	3.07	0.722	High
Speed of performing of e-information systems has met the needs of governmental financial department to information in the light of the	3.18	0.945	High

Corona virus crisis			
Data preparation Accuracy	3.29	0.881	High
Outputs of electronic information system are characterized by providing a clear and accurate information	3.17	0.981	High
Accuracy of governmental e-accounting information has met the needs of governmental financial department to the information in the light of Corona virus crisis	3.38	0.981	High
Accuracy of governmental e-accounting information systems has contributed to the improvement of performing the governmental units in the light of the Corona virus crisis.	3.70	0.954	High
Governmental e-accounting information systems have efficiently provided the information	3.28	0.915	High
Governmental e-accounting information systems have contributed to the reduction of routine procedures.	3.27	0.881	High
Governmental e-accounting information systems have contributed to the increase of the efficiency of governmental units' performance.	3.22	0.964	High
Governmental e-accounting information systems have contributed to the achievement of the goals and requirements of government and crisis management committee in the light of the corona virus pandemic.	3.96	0.849	High
Governmental e-accounting information systems have provided the data in accordance with the need of governmental unit and crisis management committee in the light of corona virus pandemic.	3.20	0.923	High
The efficiency of governmental e-accounting information system has contributed to the improvement of performance of governmental units in the light of the corona virus pandemic.	3.73	0.844	High
The effectiveness of governmental e-accounting information system has contributed to the improvement of performance of governmental units in the light of the corona virus pandemic.	3.75	0.863	High
Governmental e-accounting information system has an ability to meet the needs of different levels of financial management in the light of Corona virus pandemic.	3.58	0.863	High
Governmental e-accounting information system has met the needs of governmental financial department in order to manage Corona virus crisis and its financial and economic repercussions.	3.88	0.890	High
Governmental e-accounting information system does not need a specialized training since it is not complicated.	3.17	0.872	High
The data processed by governmental e-accounting information system is characterized by integrity and safety.	3.38	0.789	High
The data processed by governmental e-accounting information system can be relied upon in managing Corona virus pandemic.	3.13	0.981	High
Confidentiality procedures are available in e-systems	3.17	0.879	High
Procedures of identifying user permissions are available.	3.33	0.985	High
Procedures of data base protection are available.	3.54	0.967	High
Total	3.338	0.988	High

Table 5 has outlined arithmetic means and standard deviations of statements constituting second hypothesis as follows:

Governmental e-accounting information system is characterized by accuracy; arithmetic means of study sample's responses have ranged between 3.17 to 3.70; arithmetic mean of field's statement has been 3.36 and the degree of response orientation has been high.

Governmental e-accounting information system is characterized by speed; arithmetic means of study sample's responses have ranged between 3.08 to 3.18; arithmetic mean of field's statement has been 3.10 and the degree of response orientation has been high.

Governmental e-accounting information system is characterized by efficiency; arithmetic means of study sample's responses have ranged between 3.22 to 3.96; arithmetic mean of field's statement has been 3.33 and the degree of response orientation has been high.

Governmental e-accounting information systems are also characterized by effectiveness, flexibility and reliability; arithmetic means of study sample's responses have ranged between 3.17- 3.88; arithmetic mean of field's statement has been 3.59 and the degree of response orientation has been high.

Governmental e-accounting information system is also characterized by self- control. Arithmetic means of study sample's responses have ranged between 3.13 to 3.54; arithmetic mean of field's statement has been 3.31 and the degree of response orientation has been high.

In addition, arithmetic mean of the statements which has formed second hypothesis has been compared with standard mark 3 - hypothesis acceptance standard- by using t-test as stated in Table 6.

Quality characteristics of governmental e-accounting information system have contributed to the management of Corona virus pandemic	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
	3.33	.988	-2.129	47	0.000

Table 6 has indicated that there are statistical differences at ( $\geq 0.05$ ) between arithmetic mean and standard mark 3; T-value has been -2.129; statistical significance has been 0.000. Thus, this hypothesis, stipulating that availability of quality characteristics of governmental e-accounting information system contributes to the management of Coronavirus crisis and reduction of its impacts on Jordan's economy, has been accepted.

### Third Hypothesis Testing

*H3: Governmental e-accounting information system in the Hashemite Kingdom of Jordan meets the needs of the financial department managing Covid-19 crisis and reducing its impacts of Jordan's economy.*

To test the validity of this hypothesis, arithmetic means and standard deviations of performing of study's sample regarding the third hypothesis have been extracted; Table 7 outlines them.

Statements	Arithmetic Mean	Standard Deviation	Response Orientation
Outputs of information systems are simple and can be easily understood.	3.08	.871	High
Information system provides periodically and regularly financial reports according to management needs.	3.69	.971	High
Outputs of governmental e-accounting information system are accurate and	3.50	1	High

objective.			
The systems provide the financial management with an important information in the light of Corona pandemic.	3.40	1	High
The systems provide the parties interested in governmental control over corona crisis management with important information in the light of Corona pandemic.	3.50	1.011	High
The systems provide the parties submitted governmental grants and assistance with important information in the light of Corona pandemic.	3.40	1.026	High
Outputs of governmental e-accounting information system are based on a statement of country revenues and its sources in the light of Corona pandemic.	3.58	1.007	High
Outputs of governmental e-accounting information system are based on a statement of country's expense and its fields the light of Corona pandemic	3.40	1.026	High
Outputs of governmental e-accounting information system are based on the information of monetary center of the country.	3.50	1.011	High
Outputs of governmental e-accounting information system help the government prepare necessary development plans after the end of Corona virus pandemic.	3.69	.971	High
Outputs of governmental e-accounting information system help the government prepare and develop emergency plans required for managing Corona virus pandemic.	3.60	1.300	High
Information provided by governmental e-accounting information system covers all financial and health activities required for managing Covid-19 crisis.	3.65	1.263	High
Total	3.50	1.11	High

Table 7 has outlined arithmetic means and standard deviations of statements constituting third hypothesis. Arithmetic means have ranged between 3.08 to 3.69. Accordingly, this means that governmental e-accounting information system meets highly the needs of financial management required for managing corona virus pandemic.

In addition, arithmetic mean of the statements which has formed third hypothesis has been compared with standard mark 3 - hypothesis acceptance standard- by using t-test as stated in Table 8.

<b>TABLE 8</b>					
<b>ARITHMETIC MEANS, STANDARD DEVIATIONS AND T-TEST OF STATEMENTS WHICH HAS FORMED THE THIRD HYPOTHESIS IN COMPARISON WITH STANDARD MARK 3</b>					
Governmental e-accounting information system in the Hashemite Kingdom of Jordan meets the needs of financial management required for	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
	3.50	1.11	-3.449	47	000.

manging Corona virus crisis.					
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Table 8 has indicated that there are statistical differences at ( $\geq 0.05$ ) between arithmetic mean and standard mark 3; T-value has been -3.449; statistical significance has been 0.000. Thus, this hypothesis stipulating that governmental e-accounting information system in the Hashemite Kingdom of Jordan meets the needs of the financial department managing Covid-19 crisis and reducing its impacts of Jordan's economy, has been accepted.

#### Fourth Hypothesis Testing

*H4: Governmental e-accounting information system in the Hashemite Kingdom of Jordan plays an important role in managing Coronavirus crisis and reducing its impacts on Jordan's economy.*

To test the validity of this hypothesis, arithmetic means and standard deviations of performing of study's sample regarding fourth hypothesis have been extracted; Table 9 outlines them.

<b>TABLE 9</b>			
<b>ARITHMETIC MEANS AND STANDARD DEVIATIONS OF PERFORMING OF STUDY'S SAMPLE REGARDING FOURTH HYPOTHESIS</b>			
<b>Statements</b>	<b>Arithmetic Mean</b>	<b>Standard Deviation</b>	<b>Response Orientation</b>
Governmental e-accounting information system has contributed to the management of Corona virus crisis and reduction its impacts on Jordan's economy through the following:			
Identifying the measures and policies appropriate for facing the economic challenges	3.69	.971	High
Identifying the procedures appropriate for facing the economic challenges	3.50	1.011	High
Assessing and managing the risks associated with these policies and procedures	3.40	1.026	High
Identifying the costs required for the programs of supporting and facing the economic challenges which financial management may bear now or in future.	3.50	1.011	High
Developing the procedures contributing to the reduction of risks which the government may expose to.	3.40	1.026	High
Developing the procedures and mechanisms controlling and monitoring the exposure to the risks	3.58	1.007	High
Strengthening the institutional capacities in the field of public financial management, as a whole.	3.40	1.026	High
Providing the information in order to continuously provide governmental services through websites or applications developed.	3.50	1.011	High
Providing information in order to determine the legal framework of sources of funding for the budget	3.69	.971	High
Providing information on emergency reserves and allocations for emergent spending, if any.	3.60	1.300	High
Rearranging spending priorities	3.65	1.263	High

Tracking and preparing the reports on the procedures of emergency response	3.50	1.008	High
Total	3.53	1.072	High

Table 9 has outlined arithmetic means and standard deviations of statements constituting fourth hypothesis. Arithmetic means have ranged between 3.40 to 3.69. Accordingly, this means that governmental e-accounting information has highly contributed to the management of Corona virus crisis and the reduction of its impacts on Jordan's economy.

In addition, arithmetic mean of the statements which has formed the fourth hypothesis has been compared with standard mark 3 - hypothesis acceptance standard- by using t-test as stated in Table 10.

<b>TABLE 10</b> <b>ARITHMETIC MEANS, STANDARD DEVIATIONS AND T-TEST OF STATEMENTS WHICH HAS FORMED THE fourth HYPOTHESIS IN COMPARISON WITH STANDARD MARK 3</b>					
e-accounting-government contributor to the management of the corona crisis	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
	3.53	2.071	-3.339	47	000.

Table 10 has indicated that there are statistical differences at ( $\geq 0.05$ ) between arithmetic mean and standard mark 3; T-value has been -3.339; statistical significance has been 0.000. Thus, this hypothesis stipulating that governmental e-accounting information system in the Hashemite Kingdom of Jordan plays an important role in managing Coronavirus crisis and reducing its impacts on Jordan's economy, has been accepted.

## RESULTS

The study has reached a set of results as follows:

Main components of governmental e-accounting information system have highly contributed to the management of Corona virus crisis and reduction of its economic impacts; in addition, availability of e-devices, programs and system in governmental units and information technology departments which manage, operate and develop these programs and systems has contributed to the management of corona virus file and reduction of its impacts on Jordan's economy.

Availability of quality characteristics of governmental e-accounting information systems has highly contributed to management of Corona virus crisis and reduction of its economic impacts since these systems are accurate, speedy, efficient, effective and flexible. Furthermore, data processed by these systems can be relied upon. As a result, decisions required for directing expense and borrowing can be taken; and programs required for managing the crisis can be prepared.

Governmental e-accounting information system highly meets the needs of financial management since information system seeks to provide various departments interested in managing Corona virus crisis and making the decisions required for reducing its impacts of Jordan's economy with required information.

## RECOMMENDATIONS

The study has recommended the following:

The management shall provide alternative sources of income, and reduce unnecessary expenses; it shall also maintain only important activities which are considered sources of governmental revenues and shall support national economy.

The management shall provide alternative methods to practice governmental services such as activating e-government and supporting modern and electronic methods.

The management shall encourage the citizens to use e-systems; furthermore, it shall mandatorily imposes this system as well as provide training means and methods through media channel.

The employees shall be trained in order to be able to use modern techniques and they shall be ready to perform technologically the normal governmental activities.

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