E-Government and its Impact on Knowledge Management Processes: A Case Study: Ministry of Industry and Trade in Jordan

Dr: Jumana Ziad Al-Zoubi1* Dr: Khaled Mahmoud Al-Shawabkeh2 Dr: Qasem Ebrahim Al.Shaar3
Assistant Professor - Department of Management - The World Islamic Sciences and Education University (WISE), Amman, Jordan
E-mail of the corresponding author: jumanzoubi@yahoo.com

Abstract
This study aimed to identify the application of E-government and its impact on knowledge management in Ministry of Industry and Trade in Jordan, to achieve the objectives of this study, the researchers designed a questionnaire includes (46) questions; in order to collect the primary data from the study sample which consists of (80) employees at Ministry of Industry and Trade in Jordan.
After analyzing the study data and test its hypotheses, the study found a set of results, including the following:
- The presence of a statistically significant effect at a specific level (P ≤ 0.05) for the applications of E-government on the four processes of knowledge management (acquisition and creation of knowledge, save and store knowledge, share and transfer of knowledge and apply and use of knowledge) at Ministry of Industry and Trade in Jordan. It also shows the presence of a statistically significant effect at a specific level (P ≤ 0.05) for the sub-variables of the applications of E-government on the processes of knowledge management at Ministry of Industry and Trade in Jordan.

In the light of the study’s findings, the researchers recommended a set of recommendations as:
1- The need to develop a specialized unit for knowledge management in the Jordanian ministries like Ministry of Industry and Trade in Jordan, in order to ensure the continuity of work efficiently and effectively.
2- Involve the staff of the ministry in specialized courses in E-government and knowledge management in order to increase their efficiency.
3- Emphasize the need to provide an adequate administrative and financial support to activate the processes of knowledge management at the ministry.

Keywords: E-government, Knowledge Management, Ministry of Industry and Trade in Jordan.

1. Introduction:
During the last decades knowledge management has become one of the key issues in the management at the level of most of the countries in the world; as a result of globalization and the results of the huge development in the field of communications, especially the Internet. The modern communications system led to and the widespread understanding of the needs of customers; what made business organizations focused on building intellectual capital, which is an effective competitive tool in the knowledge economy.

The past years have witnessed a growing interest from the organizations towards adopting the concept of knowledge management, a range of organizations have pioneered and leadership in practice, adoption and application of concepts and the basics of knowledge management, according to this interest knowledge management means a comprehensive mix of experiences, values, previous information and expert views that provide a framework for the assessment report of experiences and new information (Najim, 2008).

2. The study importance:
Knowledge management is a process of paramount importance in achieving many of the benefits and regulatory influences, so it was necessary to study the relationship between them and the application of E-government, as this study is a supplement of the scientific efforts to highlight the concept of knowledge management and E-government, to show the benefits that can be derived from the applying, in addition to the need to highlight the role played by the application of E-government in the four knowledge management processes.

This study’s results would be useful in identifying the mechanisms of future work which facilitate the work of knowledge management and to be linked with the benefits that could be derived and the obstacles faced by the effectiveness of their application in the field of E-government.

3. Study objectives:
This study aims to:
1. Provide a comprehensive theoretical framework of the concepts of knowledge management and E-government.
2. Identify the extent of the application of knowledge management and E-government at Ministry of Industry
Identify the role of the application of E-government in knowledge management processes.

4. Provide a set of suggestions and recommendations in order to enhance the role played by the application of E-government in knowledge management at Ministry of Industry and Trade in Jordan.

4. Study problem:
Because of the extreme importance that knowledge management and the active role in influencing the organization as a whole, it was necessary to identify the impact of the E-government application and knowledge management processes in Ministry of Industry and Trade in Jordan. The Study problem generally comes from the following question:

What is the impact of the application of E-government on knowledge management processes in Ministry of Industry and Trade in Jordan?

And therefore the study's hypotheses have been developed.

5. Study hypotheses:
The main hypothesis of the study was built depending on the study problem and its various elements which represented in:

Ho1: No statistically significant impact at (P <0.05) for the application of E-government on the four processes of knowledge management (acquisition and creation of knowledge, save and store knowledge, share and transfer of knowledge and apply and use of knowledge) in Ministry of Industry and Trade in Jordan.

Derived the following sub-hypotheses:
1. Ho1.1: No statistically significant impact at a level (P <0.05) for the necessary technology for the application of the E-government (Internet, Intranet, and a comprehensive national database of information) on the processes of knowledge management in Ministry of Industry and Trade in Jordan.
2. Ho2.1: No statistically significant impact at a level (P <0.05) for updating laws and regulations on the processes of knowledge management at Ministry of Industry and Trade in Jordan.
3. Ho3.1: No statistically significant impact at a level (P <0.05) for staff training on the processes of knowledge management in Ministry of Industry and Trade in Jordan.

6. Model of the study:

7. Theoretical framework
7.1. Knowledge Management
7.1.1. The concept of knowledge:
Knowledge is considered a philosophically old renewed field, it is the result of the activity and the works of the human mind, since the early stages of the consciousness, the man tried to figure out what is surrounding him of natural phenomena and universal, and the need to know was to the necessity to survive and to overcome the difficulties of the environment and its different challenges. Philosophers, writers, and researchers tried to identify the concept of knowledge, but no one could give a comprehensive definition. However, all agree on the fact that knowledge is a precious resource, and it is the real wealth of individuals, peoples and communities. As Francis Bacon argued in his brief definition of knowledge, Knowledge is a power, and this is true not only for individuals, but also for organizations. Organization is similar to the organism in their interactions with the outside world; they are trying to get power through the collecting knowledge with its different forms then
developments and informatics in delivering government services and facilitate the work of non-governmental and the services provided to citizens, which led to the orientation to take advantage of technological services, and other links of modern technology, it has become, therefore examination of the role of government has produced a manifestation of a society totally different from its predecessors, for example, society has enormous progress of information technology and communication, the spread of Internet, intranet and extranet knowledge that has become a main nerve of each possible change in various aspects of civilized life. With the through information systems and technology associated with them. Information society depends on the become dependent on digital technology in various aspects of their lives, which affected the aspects of life considered as a new field at the stage of evolution and self-discovery, so the conceptual framing of knowledge management means the discovery of new knowledge through various internal sources such as stores of knowledge, through sharing of experiences, conferences, seminars, or through financial and economic data... etc., external sources hold knowledge management through organizational boundaries or through participating, and assisted by technological advances such as the Internet. Also means the generation of knowledge, which is knowledge innovation through the participation of teams and supporting working groups in finding new capital knowledge contributes to the definition of new problems, and to find new solutions in its continuous innovative way.

Thus, knowledge management means: planning of knowledge and assets which associated with intellectual capital then organize, control, coordinate and synthesize the knowledge. Knowledge management including achieving the process of sustainability of knowledge and intellectual capital, exploit and invest and dissemination, processes, capabilities, and personal and organizational capabilities, to achieve the biggest possible positive impact on competitive advantage results. Also, knowledge management means: voltage regulator conscious directed by an organization in order to capture all types of knowledge related to the activity of that organization, then collect, classify, organize, store, and make it ready for circulation and participation among individuals, departments and units of the organization. This will raise the level of efficiency of decision-making and organizational performance.

7.1.3 Knowledge management processes:
“Knowledge management processes” term was associated with the processes or stages in order to gain, dissemination, storage, application, and using the knowledge for useful purposes. It consists of the following major processes (Hadja, 2006):

a) The acquisition of knowledge: means the discovery of new knowledge through various internal sources such as stores of knowledge, through sharing of experiences, conferences, seminars, or through financial and economic data... etc., external sources hold knowledge management through organizational boundaries or through participating, and assisted by technological advances such as the Internet. Also means the generation of knowledge, which is knowledge innovation through the participation of teams and supporting working groups in finding new capital knowledge contributes to the definition of new problems, and to find new solutions in its continuous innovative way.

b) Store of knowledge: save and use by the knowledge management systems such as expert systems, so that knowledge is stored in the organizational memory which contains the existing knowledge in different ways. With time organizational knowledge is accumulated which helps the software group. Information technology plays an important role in the storage of knowledge, the expansion of organizational memory, retrieval of information, and stored knowledge.

c) Dissemination of knowledge: knowledge sharing and increase the capabilities of knowledge workers, their skills and competencies through regular training programs, to focus on organizational learning, cooperative skills development between communities of practice, and task forces that lead to the creation of new products or new services can increase the efficiency of the organization.

d) Application of knowledge: means to make it more suitable for use in the implementation of the organization's activities, more related to the tasks, benefit from this knowledge after filing and storing, and develop the ways of retrieval and transfer to the workers. (Nonaka and Takeuchi) indicated the process of depositing knowledge within the organization and did not touch upon the process of applying on the basis of that as long as the knowledge is deposited, definitely it will be applied. A lot of literature implicitly shows applying of the knowledge when discussing storing and sharing of knowledge and not on the basis of being a separated process.

7.2. E-government
Information revolution is considered as one of the largest developments in the information age, this revolution has produced a manifestation of a society totally different from its predecessors, for example, society has become dependent on digital technology in various aspects of their lives, which affected the aspects of life through information systems and technology associated with them. Information society depends on the knowledge that has become a main nerve of each possible change in various aspects of civilized life. With the enormous progress of information technology and communication, the spread of Internet, intranet and extranet services, and other links of modern technology, it has become, there re-examination of the role of government and the services provided to citizens, which led to the orientation to take advantage of technological developments and informatics in delivering government services and facilitate the work of non-governmental
organizations with Other entities.

Researchers and scholars included numerous definitions of E-government concept, some of them see E-government as "the automation of the deal between the different government departments, and between government departments, the business sector and citizens on the other hand" (Azzam, 2001). And others believe that E-government "enables government agencies to provide their business and services around the clock through different electronic means (Internet - phone to phone - SMS - and so on), depending on the outcomes of communication and information technology, and to facilitate access, exchange and share information of anywhere, at any time, accurately, transparently and equality "(Senile, 2007, 23).

Also it referred to the concept of E-government as "public sector institutions extent of the results of the technological revolution, that to be used in the performance of its functions and especially the use of the Internet." (Hunaiti 2005.167). (Awamleh 0.2002) see the E-government as "the use of the product of the technological revolution in improving the performance levels of government agencies and raise the efficiency and effectiveness to achieve its goals, and E-government is integrated philosophy and a new theory of public administration, which means a radical shift in the general identity and behavior " . Others believe that E-government is: "The ability to provide government services and obtaining these services by unconventional means, any electronic means on the basis of equality and justice. (Dean, 2005).

From the above definitions of e-government, it is clear that they are different in context and form. They are consistent in substance and meaning as they relate to applications of information technology, communications and technological revolution contemporary in general. Both researchers suggested identifying the E-government as "applying the information and communication technology services in businesses and government agencies in order to improve their performance and level of service, away from the traditional routine procedures and in integrated framework of legislation and laws."

7.2.1 Requirements for the success of e-government:
E-government is not just a technology, but also it is a philosophy and this requires human and legislative shift technology. The necessary requirements can be summarized under four key requirements, necessary to the success of applying e-government. They are as follows: (Qaryouti, 2006,293):

1- Physical requirements (technological and technical):
Provide appropriate technology and keep up with its developments: any provision of equipment, hardware, software methods, sources of knowledge in all government agencies and make it available to individual and institutional use of the widest possible (Awamleh, 2000.151). Then the need to build an advanced information system can be updated according to the changes (Awamleh 0.2001). The need to provide the infrastructure and the integrated technology as Computer devices, networks and websites. (Senile, 2007, 33).


3- Legislative and legal requirements: develop legislative frameworks and updating them according to the latest developments: any issuing of laws, regulations and procedures that facilitate the transition towards e-government. (Awamleh, 2000. 151). It also must update the laws and regulations in order to fit the nature of the business of e-government. (Hunaiti 2005.155). Then the ability to maintain information security, privacy and confidentiality in the deal. (Abu Zeid 2006.40).

8. Previous studies:
Al-Aloul study (2011) titled: "The Role of Knowledge Management in Academic Human Resources Development in the Palestinian universities in Gaza."
This study aims to investigate the concept of knowledge management in the development of academic human resources in universities in Gaza Strip. It aims to determine the degree of applying the knowledge management in developing the academic human resources in the Palestinian universities by the academic staff. The researcher used the descriptive analytical method were the study questionnaire distributed on the study sample of Palestinian universities in Gaza Strip (Al-Azhar, Al-Aqsa, Open Jerusalem and Muslim). The number of study sample (1309) employees, then took from them a stratified sample of (196) academic employees. Finally, the study found several results, the most important one is: the statistically significant differences in practicing the role of knowledge management between the academic staff in the Palestinian universities in Gaza Strip, due to the variable sex in favor of females and variable workplace for the benefit of the Islamic University.

The British study (2010) titled "The impact of applying knowledge management on organizational performance in the Jordanian commercial banks" aims to investigate the effect of the exercise of the key processes of knowledge management on organizational performance. The researcher used the descriptive analytical method and distributed a questionnaire study for (144) director of the level of senior management in
the Jordanian commercial banks. The study found several results, the most important is: the existence of the effect of knowledge management processes (generation, distribution and utilization) on organizational performance.

The study of (Al-Rawajbeh & Haboush, 2011) titled "Enhancing the E-Government Functionality using Knowledge Management", aims to highlight the main objects of E-government applying in organizations. Then the study shows the role of knowledge management in achieving the recognition of knowledge management and the importance of reaching every process in the application of electronic government. The study also demonstrated the role of technology in each of the E-government and knowledge management and the extent of its contribution to the processes of conservation and storage, transportation and participation greaterly expanded the study to also highlight the role of knowledge management and the need for development of its government. The study focused on the analysis of the advantages of using knowledge management through the use of information technology. The study came to conclude that knowledge management considered as a part of the E-government and the main backer of its different applications as a facilitator and supporter to share, transfer and save information.

A study of (Al-Najjar and Al-Zoubi, 2010) titled "Knowledge Management Architecture: Empirical Study on the Jordanian Universities", aims to: Detecting the presence of knowledge management in Jordanian universities were targeted a set of variables related to knowledge management to reach the key factors in building knowledge management. A proposed model represents the four major pillars for the construction of knowledge management in institutions of higher education in Jordan. The study sample represents all workers in Jordanian universities. The study sample consists of (355) academics, by using a random sample with academic ranks, ages and experiences.

A study of (Zhou and Gao, 2007) titled E-government and Knowledge Management”, aims to identify the importance of knowledge management in E-government development in China. Where they built portals for government departments and they effectively promoted them. Despite the low level of satisfaction about the way of presenting information and services and meet the needs of the community through e-government. On this basis, there was a need to manage all sources of information and facilitate the use of e-government. The research presented a conceptual model for knowledge management based on E-government environment, as well as the three sub-systems of the model, which has been analyzed, arranged and applied. The search pointed to the processes of knowledge management in E-government are similar to those found in the companies to a certain extent, but different in essence aims and purposes. The aim is to provide a service to the community, and to enhance the ability of competitiveness and profitability of the companies. On the basis of the necessity of software and hardware for E-government environment, a conceptual model has been prepared to knowledge management, which consists of sub-systems for each of the collection, organization and application of knowledge. There are interconnected relationships between the three sub-systems which support each other. The research found some results, the most important one was that the E-government in China is followed everywhere. In addition to that, the E-government does a more prominent role for the state in spreading use of the Internet and its commercial application in accordance with the "nature of Chinese characteristics".

The most important findings of the study:
- The main pillars of knowledge in the management of higher education in Jordanian universities are: strategy and commitment, information systems, culture and communication.
- The study considered that the strategy and commitment serves as a force for knowledge management, information systems are working to improve and facilitate the exchange of knowledge smoothly, culture as an important and a significant factor within the organization and finally believing that communication tools are physical such as the Internet and extranet.

9. Methodology of the study: (methods and procedures)

9.1.Type and nature of the study:
This study is essential in terms of style (Basic) and applied in Ministry of Industry and Trade in Jordan, where the purpose of illustration (Explanatory), Deductive in its nature, because it depends on management theories and previous studies.

9.2.Methods of data collection:
The researchers depended in this study on the use of descriptive analytical method and style of the field study. The sources of information consist of two sources:
First, the secondary sources: The literature in management through the use of scientific references, researches and studies published in specialized magazines and periodicals, as well as articles and papers published in specialized sites on the Internet.
Second: The primary sources: The data that have been collected through the questionnaire that was designed and distributed to a study sample of the ministry, and then that data were analyzed and processed.
9.3. The study’s population and sample: The study population was from Ministry of Industry and Trade in Jordan. The number of members of the population is (720) in the center of the ministry distributed in (17) directorates. The sample of the study was a random sample consisting of (80) employees in (6) directorates within the ministry center. The rate of questionnaires recovery has reached (72 questionnaires).

9.4. Instrument of the study: 
The researchers designed and developed a questionnaire specifically for this purpose, based on hypotheses in addition to the dependent and independent variables, and then were presented to a group of expertise and competence people, who are a faculty members in the College of Business and Finance at the University of The World Islamic Sciences and in Colleges of Administrative Sciences in other universities. Then some adjustments were made and re-formulated according to the observations and recommendations regarding to ensuring the stability of the tool (questionnaire), it was done through the use of test (Cronbach Alpha).

9.5. Reliability Test:
(Cronbach alpha) test was used to measure the reliability of the measurement tool. The value of the questionnaire as a whole was = 0.965 which is an excellent rate being higher than the acceptable rate which is 60%. Also the $\alpha$ value for each variable as follows:

<table>
<thead>
<tr>
<th>$\alpha$ value</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.93</td>
<td>Technology</td>
</tr>
<tr>
<td>0.831</td>
<td>Training</td>
</tr>
<tr>
<td>0.792</td>
<td>Rules</td>
</tr>
<tr>
<td>0.963</td>
<td>The dependent variable of knowledge management</td>
</tr>
</tbody>
</table>

9.6. Methods of data analysis:
Analysis of the data was collected and processed by the Statistical program Package for Social Sciences (SPSS), to gain access to the Pearson correlation coefficient.

It also adopted a process of analysis on measures of descriptive statistics (percentages, statistical frequencies, the arithmetic average, and standard deviation) to indicate the characteristics of the sample.

The study used measures of inferential statistics to reach the appropriate correlation coefficient, to analyze the study data and to test various hypotheses.

10. The results of the study:
The average and the standard deviation were extracted in order to describe the sample answers about the below paragraphs:
1- Technology:

<table>
<thead>
<tr>
<th>Arithmetic average</th>
<th>Standard deviation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3056</td>
<td>.68462</td>
<td>a1</td>
</tr>
<tr>
<td>3.8472</td>
<td>.83345</td>
<td>a2</td>
</tr>
<tr>
<td>3.7361</td>
<td>.85569</td>
<td>a3</td>
</tr>
<tr>
<td>3.6944</td>
<td>.83310</td>
<td>a4</td>
</tr>
<tr>
<td>4.3056</td>
<td>.74378</td>
<td>a5</td>
</tr>
<tr>
<td>3.9167</td>
<td>.89992</td>
<td>a6</td>
</tr>
<tr>
<td>3.5556</td>
<td>.94778</td>
<td>a7</td>
</tr>
<tr>
<td>3.5972</td>
<td>.88269</td>
<td>a8</td>
</tr>
<tr>
<td>3.9167</td>
<td>.88413</td>
<td>a9</td>
</tr>
<tr>
<td>3.7639</td>
<td>.89589</td>
<td>a10</td>
</tr>
<tr>
<td>3.4444</td>
<td>1.00546</td>
<td>a11</td>
</tr>
<tr>
<td>3.6111</td>
<td>.77923</td>
<td>a12</td>
</tr>
<tr>
<td>3.6944</td>
<td>.89818</td>
<td>a13</td>
</tr>
<tr>
<td>3.4306</td>
<td>1.00459</td>
<td>a14</td>
</tr>
<tr>
<td>3.9167</td>
<td>.74588</td>
<td>a15</td>
</tr>
<tr>
<td>3.5833</td>
<td>.91544</td>
<td>a16</td>
</tr>
<tr>
<td>3.7700</td>
<td>.60485</td>
<td></td>
</tr>
</tbody>
</table>

It is clear that the trends are positive towards the above paragraphs and that because the arithmetic averages are greater than the average measurement tool (3) also it was found that the overall average of 3.77 reflects the approval of the sample towards the variable above.

2- Training:

<table>
<thead>
<tr>
<th>Arithmetic average</th>
<th>Standard deviation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6667</td>
<td>.82223</td>
<td>a17</td>
</tr>
<tr>
<td>3.5972</td>
<td>.86659</td>
<td>a18</td>
</tr>
<tr>
<td>3.1944</td>
<td>1.02968</td>
<td>a19</td>
</tr>
<tr>
<td>3.2778</td>
<td>1.03763</td>
<td>a20</td>
</tr>
<tr>
<td>3.4028</td>
<td>.91405</td>
<td>a21</td>
</tr>
<tr>
<td>3.6250</td>
<td>.84649</td>
<td>a22</td>
</tr>
<tr>
<td>3.4606</td>
<td>.67974</td>
<td>General average</td>
</tr>
</tbody>
</table>

It is clear that the trends are positive towards the above paragraphs and that because the arithmetic averages are greater than the average measurement tool (3) also it was found that the overall average of 3.4606 reflects the approval of the sample towards the variable above.
3- Regulations:

Table 3: regulation dimension

<table>
<thead>
<tr>
<th>Arithmetic average</th>
<th>Standard deviation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2639</td>
<td>0.90372</td>
<td>a23</td>
</tr>
<tr>
<td>3.3750</td>
<td>0.94104</td>
<td>a24</td>
</tr>
<tr>
<td>3.8472</td>
<td>0.64261</td>
<td>a25</td>
</tr>
<tr>
<td>3.4583</td>
<td>0.88711</td>
<td>a26</td>
</tr>
<tr>
<td>2.8333</td>
<td>0.94943</td>
<td>a27</td>
</tr>
<tr>
<td>3.3556</td>
<td>0.64413</td>
<td>General average</td>
</tr>
</tbody>
</table>

It is clear that the trends are negative towards paragraph (27) and that because the arithmetic averages are less than the average measurement tool (3) also it was found that the overall average is less than the average measurement tool (3). Also it was found that the overall average of 3.3556 reflects the approval of the sample towards the variable above.

4- Knowledge Management processes

Table 4 Knowledge Management processes dimensions

<table>
<thead>
<tr>
<th>Arithmetic average</th>
<th>Standard deviation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5972</td>
<td>0.81638</td>
<td>b1</td>
</tr>
<tr>
<td>3.4028</td>
<td>0.78111</td>
<td>b2</td>
</tr>
<tr>
<td>3.5417</td>
<td>0.88711</td>
<td>b3</td>
</tr>
<tr>
<td>3.3889</td>
<td>0.79710</td>
<td>b4</td>
</tr>
<tr>
<td>3.5139</td>
<td>0.83906</td>
<td>b5</td>
</tr>
<tr>
<td>3.6528</td>
<td>0.82496</td>
<td>b6</td>
</tr>
<tr>
<td>3.5833</td>
<td>0.76453</td>
<td>b7</td>
</tr>
<tr>
<td>3.2361</td>
<td>0.81350</td>
<td>b8</td>
</tr>
<tr>
<td>3.6250</td>
<td>0.79501</td>
<td>b9</td>
</tr>
<tr>
<td>3.5139</td>
<td>0.88800</td>
<td>b10</td>
</tr>
<tr>
<td>3.3750</td>
<td>0.94104</td>
<td>b11</td>
</tr>
<tr>
<td>3.5556</td>
<td>0.94778</td>
<td>b12</td>
</tr>
<tr>
<td>3.5556</td>
<td>0.94778</td>
<td>b13</td>
</tr>
<tr>
<td>3.4306</td>
<td>0.93185</td>
<td>b14</td>
</tr>
<tr>
<td>3.2917</td>
<td>0.94104</td>
<td>b15</td>
</tr>
<tr>
<td>3.5139</td>
<td>0.85569</td>
<td>b16</td>
</tr>
<tr>
<td>3.6806</td>
<td>0.78411</td>
<td>b17</td>
</tr>
<tr>
<td>3.5833</td>
<td>0.78274</td>
<td>b18</td>
</tr>
<tr>
<td>3.6944</td>
<td>0.83310</td>
<td>b19</td>
</tr>
<tr>
<td>3.5124</td>
<td>0.66015</td>
<td>General Total</td>
</tr>
</tbody>
</table>

It is clear that the trends are positive towards the above paragraphs and that because the arithmetic averages are greater than the average measurement tool (3) also it was found that the overall average of 3.5124 reflects the approval of the sample towards the variable above.

The Main hypothesis: There is no statistically significant impact at the level of (P ≤ 0.05) for the E-electronic government on the four processes of knowledge management (acquisition and creation of knowledge, save and store knowledge, share and transfer of knowledge and apply and use of knowledge) in Ministry of Industry and Trade in Jordan.
Hypothesis test results:

Table 5. Result of the main hypothesis:

<table>
<thead>
<tr>
<th>R²</th>
<th>R</th>
<th>Result of the main hypothesis</th>
<th>f SIG</th>
<th>f tabulated</th>
<th>f calculated</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.526</td>
<td>0.725</td>
<td>Refuse</td>
<td>0.000</td>
<td>2.72</td>
<td>25.108</td>
</tr>
</tbody>
</table>

Multiple regression test was used, and from computer results in the previous table we found that the value of \( f \) calculated = 25.108 is greater than the tabular value, and since the decision rule is to accept the hypothesis of nihilism (Ho) if the calculated value is less than the tabular value and rejects the hypothesis of nihilism (Ho) if the calculated value greater than the tabular value, and therefore we reject the hypothesis nihilism (Ho), and accept the alternative hypothesis (Ha). This means that the independent variables combined are affecting the knowledge management, and the relation is a strong relationship as \( R = 0.725 \) and the independent variables explain 52.6% of knowledge management changes.

The first sub-hypothesis: there is no statistically significant impact at the level of \( P < 0.05 \) for the necessary technology for the application of the electronic government (Internet, Intranet, and a comprehensive national database of information) on the processes of knowledge management at Ministry of Industry and Trade in Jordan.

Hypothesis test results:

Table 6. Result of the first sub-hypothesis

<table>
<thead>
<tr>
<th>r²</th>
<th>r</th>
<th>Result of the first sub-hypothesis</th>
<th>t SIG</th>
<th>t  tabulated</th>
<th>t calculated</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.347</td>
<td>0.589</td>
<td>Refuse</td>
<td>0.000</td>
<td>1.9939</td>
<td>6.096</td>
</tr>
</tbody>
</table>

Simple regression test was used, and from computer results in the previous table we found that the value of \( t \) calculated = 6.096 is greater than the tabular value, and since the decision rule is to accept the hypothesis of nihilism (Ho) if the calculated value is less than the tabular value and rejects the hypothesis of nihilism (Ho) if the calculated value greater than the tabular value, and therefore we reject the hypothesis nihilism (Ho), and accept the alternative hypothesis (Ha). This means that technology affecting the knowledge management, and the relation is a moderate relationship as \( R = 0.589 \) and the independent variable explains 34.7% of knowledge management changes.

The second sub-hypothesis: there is no statistically significant effect at the level of \( P < 0.05 \) to update laws and regulations on the processes of knowledge management at Ministry of Industry and Trade in Jordan.

Hypothesis test results:

Table 7. Result of the second sub-hypothesis

<table>
<thead>
<tr>
<th>r²</th>
<th>r</th>
<th>Result of the second sub-hypothesis</th>
<th>t SIG</th>
<th>t  tabulated</th>
<th>t calculated</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.336</td>
<td>0.58</td>
<td>Refuse</td>
<td>0.000</td>
<td>1.9939</td>
<td>5.957</td>
</tr>
</tbody>
</table>

Simple regression test was used, and from computer results in the previous table we found that the value of \( t \) calculated = 5.957 is greater than the tabular value, and since the decision rule is to accept the hypothesis of nihilism (Ho) if the calculated value is less than the tabular value and rejects the hypothesis of nihilism (Ho) if the calculated value greater than the tabular value, and therefore we reject the hypothesis nihilism (Ho), and accept the alternative hypothesis (Ha). This means that training affecting the knowledge management and the relation is a moderate relationship as \( R = 0.589 \) and the independent variable explains 33.6% of knowledge management changes.

The third sub-hypothesis: there is no statistically significant impact at the level of \( P < 0.05 \) for staff training on the processes of knowledge management at Ministry of Industry and Trade in Jordan.

Hypothesis test results:

Table 7. Result of the third sub-hypothesis

<table>
<thead>
<tr>
<th>r²</th>
<th>r</th>
<th>Result of the third sub-hypothesis</th>
<th>t SIG</th>
<th>t  tabulated</th>
<th>t calculated</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.393</td>
<td>0.627</td>
<td>refuse</td>
<td>0.000</td>
<td>1.9939</td>
<td>6.731</td>
</tr>
</tbody>
</table>

Simple regression test was used, and from computer results in the previous table we found that the value of \( t \) calculated = 6.731 is greater than the tabular value, and since the decision rule is to accept the hypothesis of nihilism (Ho) if the calculated value is less than the tabular value and rejects the hypothesis of nihilism (Ho) if the calculated value greater than the tabular value, and therefore we reject the hypothesis nihilism (Ho), and accept the alternative hypothesis (Ha). This means that rules affecting the knowledge management and the relation is a moderate relationship as \( R = 0.627 \) and the independent variable explains 39.3% of knowledge management changes.
11. Conclusions:
First: the use of information technology in e-government:
E-government concept focuses on the use of information and communication technology in order to improve the implementation of government activities, improve government processes, reduce costs, improve performance, strategic linkage between the ministries and departments, and create a higher degree of empowerment.

Second, develop the e-citizenship and e-services: by connecting the citizen with the government, raise the level of accountability and democracy, and improve the services provided to citizens.

Third, the role of knowledge management in e-government: The E-government program considered as a practical embodiment of knowledge management as information organization can be used in solving a specific problem, or it is understandable analyzed and applied information in a regular way. E-government means the use of information technology in dealing with the available knowledge at the governmental institutions, and in the work completion and performance monitoring via the Internet lines or over other digital media, as it depends on the use of elements of information, knowledge and communications in the planning and implementation of government policies towards achieving the overall objectives.

12. Recommendations
1. The need to develop a specialized unit for knowledge management in banks, to ensure the continuity of work efficiently and effectively.
2. Ministry staff involvement in a courses specialized in the application of E-government and knowledge management in order to increase their efficiency.
3. Emphasize the need to provide enough administrative and financial support to activate the processes of knowledge management at the ministry.

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