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Impact of electronic management on government administration through digital leadership as a mediating variable: An applied study on the ministry of labor

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Abstract---In the modern era governments compete to provide services to citizens based on the digital environment in order to provide services to the largest possible number of citizens, in the fastest time and the highest quality in order to achieve the public interest of the government and society. The study aimed to identify the impact of the electronic management on the government administration through digital leadership as a mediating variable, an applied study on the Ministry of Labor in the Central Region of Jordan. I followed the descriptive approach and the analytical approach, depending on a questionnaire distributed to the offices of the Ministry of Labor in the in the Central Region of Jordan. A sample of (97) individuals was selected, and the sample consisted of (manager or assistant manager, department head, supervisor or inspector, administrative officer) in the offices of the Ministry of Labor. The study relied on statistical methods such as the descriptive statistics represented by (percentages and frequencies, arithmetic averages and standard deviations) and analytical statistics represented by (multiple regression test), and the hypotheses of the study. The study found that the electronic management leads to reducing costs and creating work flexibility, and helps in broad networking between individuals working in the Ministry of Labor and citizens via the electronic network. It also organizes effective communication channels with them. The study recommended improving the role of the electronic a management in building trust between the Ministry of Labor and the

citizens and deepening the principle of privacy in the electronic transactions

Keywords---electronic management, government administration, digital leadership, Ministry of Labor

Introduction

The government administration is the force that is responsible for establishing and building the general administrative system in the public institutions of the state, and this is something approved by all laws, legislations, and regulations (Nada, 2021). Likewise, the administrative system, like other systems, cannot exist and originated in a vacuum. Rather, there must be a government that contains it. The comprehensive administrative system of the state includes the economic, political, administrative and other systems. 2021. And the measure of the success of nations is due to their ability to manage their affairs (Al-Babli and Al-Manjudi, 2021).

Electronic management represents the ideal solution in light of the tremendous technological developments in the modern era, especially in light of the tremendous knowledge growth. The process of transformation that is apparent in the management of public institutions of the state and the increasing reliance on advanced electronic management are a result of the emergence of the Internet, and the associated web, (Giones and Brem, 2017). This mainly contributed to the increase in the need to shift to electronic management in business management in large public institutions. The increase in the knowledge growth, size and preparation of the transactions in the public institutions of the state as well as the expansion of its responsibilities and duties, and the increase in the reliance on the use of means and electronic technologies in the performance of administrative work led to an increase in the need for electronic management (Hiremath et al., 2021).

The Fourth Industrial Revolution at the beginning of the twenty-first century was able to bring about radical changes in the procedures followed in the performance of business. This led to radical changes in the work of public institutions, as it shifted from the traditional method to the digital method, in order for public institutions to keep pace with modern developments by adopting the applications of electronic operations in its operations (Al-Nesour and Al-Khalifa, 2020). This led to the rapid identification of the interests and needs of citizens and the meeting of their desires and requirements in the shortest possible time, which enabled public institutions to provide services in a manner that suits citizens and provide innovative ideas and solutions in record time (Kaya et al., 2020).

In light of the current challenges and management methodologies in general, especially after the events of the Corona pandemic, and given the importance of the services provided by the Ministry of Labor to meet the needs of citizens, it was necessary to create an integrated transformation in the procedures of the administrative work in order to maintain the level of performance of services provided to citizens through the commitment to the series of procedures of

providing services (Al-Dukn, 2021). The role of digital leadership came as a link between electronic management and government administration to enhance the impact of the electronic management in the government administration methodologies.

1.2 Development of theory and hypothesis

Electronic management in the public institutions came as a realistic response to using the computer and its applications in the field of services, getting rid of traditional methods of work, accessing more flexible and effective modern methods to save time, effort and cost, and manipulating the Internet networks in communication between the service provider and its recipients (Harisanty and Anugrah, 2022). The information technology revolution has contributed to dispensing with the need to connect computers directly with each other, which resulted in the ease of communication between different computers using Internet networks. This paved the way for the emergence of the term electronic management in modern organizations as a sophisticated management style that uses modern technologies in the development of administrative operations and giving it qualitative advantages (Hiremath et al., 2021).

Electronic management has contributed to simplifying administrative procedures in government public institutions and reducing paper use to a minimum. It relies on the use of the Internet and business networks to accomplish management functions (planning, organization, leadership, electronic control), and communication functions (Lombardi and Secundo, 2021).

The electronic management in the Ministry of Labor is the main factor in increasing its efficiency and quality by simplifying and organizing the series of procedures followed in the ministry, and speeding up decisions – things that are reflected in the quality of service provision (Giones and Brem, 2017). Digital leadership and the improvement in the level of competencies through developing the skills and the capabilities of individuals working in the Ministry of Labor rely heavily on electronic management in implementing its work and programs and achieving its goals (Yang and Shi, 2021).

The concept of the electronic management refers to the comprehensive management that employs human and material resources, technologies and modern software in order to achieve its planned goals and provide services to citizens more effectively, effortlessly and at a lower cost (Al-Babli and Al-Manjudi, 2021).

First: The impact of electronic management on government administration through digital leadership

H01: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) for electronic management with its dimensions (electronic planning, electronic organization, electronic guidance and leadership) in the government administration represented by its dimensions (information and communication technology, quality of electronic management systems) through digital leadership represented by its dimensions (digital knowledge

management, digital business environment management, digital leadership skills) in the Jordanian Ministry of Labor in Balqa Governorate.

Electronic management appeared in the early 1960s, when IBM invented the term word processor on the activities of its electric printer used in its work.

The reason for launching this term was to draw attention to the production of these printers, linking them with their computer and using a word processor. In 1964 the company produced a device that was put on the market called “magnetic tape”; it was the (MT/ST) printer. When writing any message the words are stored on the “magnetic tape” where it can be printed after retrieval from the magnetized tape on the printer after we print (the name and address of the addressee). This process has saved a great effort, especially when it requires sending the same message to a large number of individuals and entities, and many techniques have begun to appear in the administrative field (Chawla and Goyal, 2021). Hsuan, et al. (2021) defined electronic management as: a set of organizational processes that link community members (service recipients) and information sources (public organizations) through electronic methods and means. Miqrani (2021) defined electronic management as: the transformation of public organization interests towards the performance of its functions and tasks through the use of information technology and the development of communications in the performance of the tasks.

The electronic management is characterized by the abolition of the paper archive and its replacement with the electronic archive system, the correction of the errors at high speed, the processing of data in a large amount within a short time and little effort, simplification of procedures and speed of completion, raising the level of service performance, and providing services to the largest number of citizens at one time (Duhamel et al., 2022).

Nada (2022) defined government administration as: the center of thinking and decision-making in the general administrative construction of the state. Woodrow Wilson was the first to try to establish a science of public administration in a serious way to establish an independent field of knowledge for the public administration. In 1887 he put forward four ideas: separating politics and public administration, looking at the government from a business perspective, holding a comparative analysis between political and private organizations and political programmes, and achieving effective management through training public officials and evaluating the quality of their performance.

There is no doubt that there is still a severe deficiency in the functions of management in many government institutions as a result of the increasing growth of the population and the increase in knowledge and economic activity, in light of technological development (Al-Babli and Al-Manjudi, 2021). This requires a comprehensive administrative change at all administrative levels, leading to the facilitation for citizens and raising the level of service provided to them (Al-Daqq, 2021).

In their study “On Digital Learning, Learning, Development Interventions, and Learning Possibility for Corporate Executives,” Hiremath et al. (2021) aimed to

demonstrate the ways of digital transformation in the companies. The study relied on a set of reports such as the recent L&D reports - prepared by Deloitte 2019; Skillsoft, 2019; LinkedIn Workplace Learning Report, 2019; UK L&D Report, 2019; FICCI-NASSCOM and EY 'Future of Jobs' report, 2017, which clearly indicate that digital learning is rapidly developing as one of the realistic options. Individuals working in the organizations invest their time and energy in reskilling and upskilling to improve their performance in their work in the changing work environment. This study also attempted to review and analyze the emerging opportunities, challenges, and trends in relation to leveraging technology and innovation to enhance learning and development to achieve business goals, within a 10:20:70 framework, while analyzing the case of ten different companies (across different industry sectors) such as Genpact, Nexval, Airbus and Siemens, AstraZeneca Pharma, HPCL, HGS (BPM), HP, Flipkart, and IBM. The best practices from the ground up for talent management and leadership development (Indian Leadership Academy approved version, Publicis Sapient, 2019) are analyzed, summarized and presented to indicate emerging trends in the era of Industry 4.0.

The study concluded that there is a need to study the factors that affect different segments of the workforce in large companies, where educational interaction with digital learning is rapidly emerging between companies.

Second: The impact of electronic management on government administration

H02: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) for electronic management with its dimensions (electronic planning, electronic organization, electronic guidance and leadership) in government administration represented by its dimensions (information and communication technology, quality of electronic management systems) in the Ministry of Labor Jordan in Balqa Governorate.

The electronic management contributes to improving the government administration in the Ministry of Labor by defining the necessary procedures to complete the work within the quality standards, as it contributes to providing services at the lowest cost to the Ministry of Labor and the lowest possible time for citizens and the highest efficiency for individuals working in the Ministry of Labour, (Harisanty and Anugrah, 2022)

The concept of government administration is linked to the vital role the government plays in the establishment and establishment of economic, social and service institutions and the resulting relationships in the human, social, economic and technological aspects in the lives of citizens (Criado, 2021). Accordingly, the government resorts constantly to develop its administration in order to achieve its strategic objectives by keeping pace with the electronic and digital developments and the resulting new administrative methodologies that achieve the public interest, and support the increasing volume of services provided by state institutions (Nada, 2021).

In his study “Determinants of adoption of IS-based service innovations in government to create public value,” Duhamel et al (2021) aimed to propose a conceptual framework that clarifies the factors that support adopting the service innovations based on the (IS)-based information systems in the general sector at the organizational level. He also aimed at the development of a theoretical framework from the technology - organization - environment and also from a case study of the electronic document management system based on information services from six different ministries in the same state in Mexico. The study found strong variances in the degree of adoption of service innovation between various ministries that participated in the state government, which confirms the existence of an impact of the electronic management in the government administration

Third: The impact of digital leadership in government administration

H03: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) for digital leadership represented by its dimensions (digital knowledge management, digital business environment management, digital leadership skills) in government administration represented by its dimensions (information and communication technology, quality of electronic management systems) in the Jordanian Ministry of Labor in Balqa Governorate.

Nambisan (2017) defined digital leadership as the process of building successful interactive relationships with customers through electronic networks and communities in a way that simulates the reality, with the aim of continuing to respond to their requests and achieve their expectations as quickly as possible. This can be done through using the digital technologies available in light of the tremendous development of information transfer technology and the data that is based on artificial intelligence. The European Council identified a set of dimensions on which digital leadership is based, namely (Al-Nesour and Al-Khalifa, 2020):

Digital knowledge management: It is the process of acquiring knowledge and experience in ways of exchanging information and data through technological means, societies and applications, through the formation of a digital knowledge base through which knowledge can be acquired and generated in a digital way (Nambisan, 2017).

The digital business environment management: It is the process related to the organization of electronic leadership in the electronic societies. It enables companies to manage and organize their business in a manner commensurate with the volume of their activities, human resources and the tasks required to be implemented in a way that ensures the success of their relationships while maintaining their organizational form (Ngoasong, 2018).

Electronic leadership skills: It is the process of securing digital information and improving its electronic environment by providing digital solutions to enhance the digital leadership through the leadership of the electronic network in order to link the information obtained in virtual electronic communities through which the activities of the companies can be managed electronically (Yang and Shi, 2021).

Al-Nusour and Al-Khalifat (2020), in their study “The Impact of Digital Leadership on Organizational Performance from the Point of View of the Jordanian Pharmaceutical Industry Managers,” aimed to test the effect of applying digital leadership on organizational performance in the companies operating in the pharmaceutical industries. The study found a statistically significant effect to apply the digital leadership (knowledge management, digital business environment management, access to financial financing, and electronic leadership skills) in organizational performance. The study recommended the necessity of paying attention to digital leadership because of its positive impact on the performance of the companies. This confirms the existence of an impact of the digital leadership on the organizational performance of the government administration.

Fourth: The impact of electronic management on government administration

H04: Fourth main hypothesis: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) for electronic management with its dimensions (electronic planning, electronic organization, electronic guidance and leadership) in government administration represented by its dimensions (information and communication technology, quality of electronic management systems) in the Jordanian Ministry of Labor in Balqa Governorate.

Lombardi and Secundo (2021), in their study “The digital transformation of corporate reporting – a systematic literature review and avenues for future research,” aimed to provide a systematic literature review (SLR) of the relationship between smart and digital technologies and the reporting processes of organizations. They also proposed a future research agenda. Moreover, the study examined the effects of data and digital technology on the process of preparing reports for companies by analyzing the different types of reports by organizations. It concluded that there is a role of digital and smart technologies in the processes of preparing reports and archiving, in terms of speed of the preparation, archiving and retrieval. The study stressed the need for digital technology to manage the huge amount of data and information, and its role in the decision-making processes.

Yang and Shi (2020), in their study “Exploring Mechanisms of Digital Transformation for Electronic Records Management,” aimed to explore the mechanisms behind the transformation of the records management to the digital processes in the context of the electronic records management systems. The aim was to facilitate the evaluation of the long-term performance of the Electronic Records Management (ERM) system. The study concluded that the application of the electronic management would stimulate the restructuring of jobs, with the quality of basic information as a major difficult factor. The study suggested a set of recommendations, the most important of which is the necessity of providing a model for this process.

1.3 Importance of the study

The government administration is one of the important administrative concepts, from which the administrative and economic components are formed in the public institutions of the state, especially the Ministry of Labor. It plays an import role in the lives of the Jordanian citizens and the organization of business economic matters. It also provides the necessary competencies for various sectors in the Jordanian state. Thus, it is considered the main drive of the human capital, which the researchers found the necessity of researching it. They also found that it is important to study the impact of the electronic management through the digital leadership, after the massive digital transformation in most institutions of the ministries after the events of Corona. Moreover, government administration is import in conducting the work of the institutions, companies and projects on which the various sectors are based. This will help it to survive, continue and keep pace with the changes and developments in the modern era, by obtaining results and recommendations that help the Ministry of Labor to reconsider the transition to the electronic management through digital leadership.

1.4 Research design, sample size and procedures

This study followed the descriptive analytical approach using a simple random sampling technique. The sample amounted to (900) items, and consisted of (manager or assistant manager, department head, supervisor or inspector, administrative officer) in the offices of the Ministry of Labor in the Central Region of Jordan. The study representative sample consists of a group of supervisory, executive and administrative jobs. The response rate was (92.7%), depending on the data obtained from the Ministry of Labor. The significance level ($\alpha \leq 0.05$) was adopted which corresponds to a confidence level (95%) to explain the results of the tests. This study was applied to a simple random sample, and the sample size was calculated to find the number of its members based on the Steven K. Thompson equation (Thompson, 2012) shown below in Table (1):

Table (1)
The number of questionnaires distributed and valid for analysis

Constructi on projects in the Jordanian capital Amman	Numbe r of rando m sample	Number of distributed questionnair es	Number of Recovered questionnair es	Number of questionnair es valid for analysis	Percentage of questionnair es valid for analysis
Total	97	97	95	90	92.7%

1.5 Analysis of data and results

The descriptive analytical method was used, and the study model was developed based on the analysis of previous studies. The study tool was developed based on the opinions of a group of referees and experts. The primary data was collected from the study population that was selected from the offices of the Ministry of Labor in the Central Region of Jordan.

To ensure the reliability of the tool, the value of Cronbach's Alpha Coefficient was calculated to show the extent of the internal consistency of the study paragraphs, and to show the quality of building the questionnaire paragraphs and the strength of its cohesion

Table (2)
Values of Cronbach's Alpha Coefficient reliability for the study variables

Variable	No. of paragraphs	Validity and reliability of the Crumbach Alpha questionnaire
Electronic planning	6	0.780
Electronic organization	6	0.941
Electronic guidance and leadership	8	0.857
Independent variable: electronic management	20	0.929
Digital knowledge management	6	0.702
Digital business environment management	6	0.600
Electronic leadership skills	7	0.799
The mediator variable: digital leadership	19	0.875
Information and communication technology	6	0.744
Quality of government administration systems	5	0.760
Dependent variable: government administration	11	0.818
Total	50	0.961

It is noted from Table (2) that the values of Cronbach's Alpha Coefficient ranged between (0.600) as the lowest value, and (0.941) as the highest value. The total value reached (0.961) with a total number of (50) paragraphs, which is a high value.

The Pearson Correlation Coefficient for the dimensions of the electronic management (the independent variable) was used to ensure that there is no multiple linear correlation between its dimensions, as shown in Table (3):

Table (3)
Pearson's correlation with the dimensions of electronic management (the independent variable)

Dimensions of electronic management	Electronic planning	Electronic organization	Guidance and electronic leadership
Electronic planning	1		
Electronic organization	0.652**	1	
Electronic guidance	0.484**	0.805**	1

and leadership			
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(**) at significance level 0.01

Table (3) shows that the highest correlation between the dimensions of electronic management (independent variable) (0.805) is between the dimension of the electronic organization and the dimension of the electronic guidance and electronic leadership; while the values of the correlation between the other dimensions were lower than that. This indicates the absence of the phenomenon of the high linear correlation between the dimensions of electronic management (the independent variable); all of which were significant at ($p=0.01$). This indicates that the dimensions of the independent variable are devoid of the high multiple linear correlation problem.

The Variance Inflation Factor (VIF) for the electronic management dimensions (the independent variable) was also calculated to verify the absence of a high correlation and linear overlap between its dimensions. The results were as follows:

Table (4)
Test of variance inflation factor and permissible variance

Variable	Tolerance	VIF
Electronic planning	0.570	1.755
Electronic organization	0.260	3.841
Guidance and electronic leadership	0.347	2.884

Table (4) shows that the values of the Variance Inflation Factor (VIF) are less than (10). It is also noted from the table that the values of the tolerance are between (0.1), which indicates that there is no linear correlation between the dimensions of the electronic management (the independent variable).

The Pearson correlation coefficient for the dimensions of government administration (the dependent variable) was also used to make sure that there is no linear multiple correlation between its dimensions, as shown in

Table (5)
Pearson's correlation with the dimensions of government administration (dependent variable)

Dimensions of government administration	Information and communication technology	Quality of government administration systems
Information and communication technology	1	
Quality of government administration systems	0.504**	1

(**) at significance level 0.01

Table (5) shows that the correlation between the dimensions of government administration (the dependent variable) is (0.504), which indicates that there is no high linear relationship phenomenon between the dimensions of government administration (the dependent variable), as it was significant at ($p=0.01$). This indicates that the dimensions of the dependent variable are devoid of the high multiple linear correlation problem.

The Variance Inflation Factor for the dimensions of the government administration (the dependent variable) was calculated to verify that there was no high correlation and linear overlap between its dimensions. The results were as follows:

Table (6)
Variance inflation factor test and permissible variance

Variable	Tolerance	VIF
Information and Communication Technology	0.746	1.341
Quality of government administration systems	0.746	1.341

Table (6) shows that the values of the Variance Inflation Factor (VIF) are less than (10). It is also noted from the table that the values of the tolerance are between (0.1), which indicates that there is no linear correlation between the dimensions of the government administration (the dependent variable).

The Pearson correlation coefficient for the dimensions of digital leadership (the mediating variable) was used to ensure that there is no linear multiple correlation between its dimensions, as shown in Table (7).

Table (7)
Pearson's correlation with the dimensions of digital leadership
(mediating variable)

Dimensions of digital leadership	Digital knowledge management	Digital business environment management	Electronic driving skills
Digital knowledge management	1		
Digital business environment management	0.582**	1	
Electronic driving skills	0.582**	0.783	1

(**) at significance level 0.01

Table (7) shows that the highest correlation between the dimensions of the digital leadership (the mediating variable) (0.783) is between the digital business environment management dimension and the electronic leadership skills dimension, while the correlation values between the other dimensions were lower

than that. This indicates that there is no phenomenon of high linear correlation between the dimensions of digital leadership (mediating variable), where all of which were significant at ($p=0.01$). This indicates that the dimensions of the mediating variable are devoid of the high multiple linear correlation problem.

The Variance Inflation Factor was calculated for the dimensions of the digital leadership (mediating variable) to verify that there is no high correlation and linear overlap between its dimensions, and the results came as follows:

Table (8)
Test for Variance Inflation Factor and permissible variance

Variable	Tolerance	VIF
Digital knowledge management	0.630	1.588
Digital business environment management	0.369	2.711
Electronic leadership skills	0.359	2.783

Table (8) shows that the values of the Variance Inflation Factor (VIF) are less than (10). It is also noted from the table that the values the tolerance are between (0.1). This indicates that there is no linear correlation between the dimensions of digital leadership (mediating variable).

1.6 Study Results

1.6.1 Results of the characteristics of the study community: The study dealt with a number of demographic variables for the members of the study community. They are "gender, age, academic level". Based on these variables, the study sample was described as in Table (10).

Table (10)
Characteristics of the study population

Variable	Category	Frequency	Percentage
Gender	Male	65	72.2%
	Female	25	27.8%
Total		90	100%
Age	Less than 30	24	26.7%
	30 – 40	51	56.7%
	41 – 50	12	13.3%
	Over 50	3	3.3%
Total		90	100%
Qualification	Technical education	17	18.9%
	Bachelor	40	44.4%
	Master	30	33.3%
	PhD	3	3.3%
		90	100%
Years of experience	5 years or less	19	21.1%
	6 – 10	24	26.7%
	11 – 14	35	38.9%

	15 years or over	12	13.3%
Total		90	100%
Job title	Manager or assistant manager	13	14.4%
	Department head	19	21.1%
	Supervisor or inspector	30	33.3%
		28	31.1%
Total			100%

It is noted from Table (10) that males constitute the largest percentage of the study sample members (72.2%) compared to (27.8%) for females. Those who are from 30 to 40 years old constitute the largest percentage of the study sample members with a percentage of (56.7%). The lowest percentage was for those over 50 years old (3.3%). Those with a bachelor's degree made up the largest percentage of the study sample members with a percentage of (44.4%). The lowest percentage was for those with a doctorate qualification (3.3%). Those whose experience ranges from 11 to 14 years constitutes the largest percentage of the study sample members with a percentage of (38.9%). The lowest percentage was for those with years of experience of 15 years or more with a percentage of (13.3%). Those whose job title is department head make up the largest percentage of the study sample members with a percentage of (33.3%). The lowest percentage was of those with job title of manager (14.4%).

1.6.2 Arithmetic means and standard deviation

First: Arithmetic means and standard deviation of electronic management

Table (11)
Arithmetic means and standard deviation of electronic management

Rank	Dimension	Arithmetic means	Standard deviation	Relative importance
1	Electronic guidance and leadership	3.89	0.747	High
2	Electronic organization	3.85	0.938	High
3	Electronic planning	3.77	0.881	High
Total		3.83	0.855	High

Second: Arithmetic means and standard deviation of digital leadership

Table (12)
Arithmetic mean and standard deviation of digital leadership

Rank	Dimension	Arithmetic means	Standard deviation	Relative importance
1	Digital leadership skills	4.02	0.800	High
2	Digital business environment management	4.02	0.716	High
3	Digital knowledge	3.95	0.663	High

	management			
Total		3.99	0.726	High

Third: Arithmetic means and standard deviation of government administration

Table (13)
Arithmetic means and standard deviation of government administration

Rank	Dimension	Arithmetic means	Standard deviation	Relative importance
1	Information and communication technology	3.89	0.747	High
2	Quality of government administration systems	3.88	0.741	High
Total		3.885	0.741	High

1.6.3 Study hypotheses testing

It includes the following:

First: Ho.1 First main hypothesis

There is no statistically significant effect at the level of significance ($P \leq 0.05$) for the electronic management represented by its dimensions (electronic planning, electronic organization, electronic guidance and leadership) on the government administration represented by its dimensions (information and communication technology and the quality of government administration systems) in the Jordanian Ministry of Labor in the Central Region of Jordan.

Table (14)
Standard multiple regression analysis to identify the impact of electronic management represented by its dimensions (electronic planning, electronic organization, electronic guidance and leadership) on government administration in the Jordanian Ministry of Labor in the Central Region of Jordan

Dependent variable	Model summary		Variance ^b				Dimension of the independent variable	Regression coefficients ^a		
	R	R ² Coefficient of determination	Degree of freedom	(F) Value	Sig F statistical significance	(B) Value		(T) Value	Sig F statistical significance	
Independent variable	0.935	0.874	Regression	3	197.953	0.000	Electronic planning	0.287	7.736	0.000

			Residual	1			Electronic organization	0.094	2.232	0.028
			Total	86			Guidance and electronic leadership	0.432	7.947	0.000

^a The independent variable of electronic management represented by its dimensions (electronic planning, electronic organization, guidance and electronic leadership)

^b The dependent variable (the government administration)

It is noted in Table (14) that the sub-variables related to electronic management represented by its dimensions (electronic planning, electronic organization, electronic guidance and leadership) have a statistically significant effect at the level of government administration. The calculated (t) values reached between (2.232 - 7.947), and all of them are significant values at the level of significance ($P \leq 0.05$). The value of the correlation coefficient of the relationship between electronic management with its dimensions of government administration reached ($R=0.935$). The coefficient of determination was ($R^2=0.874$). That is the electronic management as an independent variable with its dimensions explains the percentage of (87.4%) of the variance in the dependent variable, which is the government administration. The calculated F value was ($F=197.953$), which is a significant value at the significance level ($P \leq 0.05$). To determine the importance of each independent variable separately in the impact of electronic management on the government administration, Stepwise Multiple Regression analysis was performed, as shown in Table (15), which shows the order of entry of the independent variables into the regression equation

Table (15)
Results of Stepwise Multiple Regression for predicting the level of governmental administration through the dimensions of electronic management

Model number	Model summary	Variance			
	R Correlation coefficient	R ² Correlation coefficient	Degree of freedom	(F) value	Sig F statistical significant
1	0.843	0.711	1	216.341	0.000
2	0.931	0.866	2	281.553	0.000
3	0.935	0.874	3	197.953	0.000
Model number 1. Electronic guidance and leadership 2. Electronic guidance and leadership, and electronic planning 3. Electronic guidance and leadership, and electronic planning, and electronic organization					

It is noted from the results contained in Table (15) that the dimensions of the independent variable "electronic management" were as follows: electronic guidance and leadership ranked (first), and explained the (71.1%) of the variance in the dependent variable "government administration". The electronic planning ranked (second), and explained with electronic guidance and leadership (86.6%) of the variance in the government administration. The electronic organization ranked (third) with the electronic guidance and leadership, and electronic planning, and electronic organization, and it explained (87.4%) of the variance in the government administration. Accordingly, the null hypothesis is rejected and the alternative hypothesis is accepted. That is "there is a statistically significant effect at the level of significance ($p \leq 0.05$).

Table (16) shows the results of coefficients analysis.

Table (16)
Results of the multi-gradient linear regression coefficients to reveal the impact of electronic management with its dimensions in government administration

Model		Regression coefficients		
		(B) value	(T) value	Sig t statistical significant
1	Electronic guidance and leadership	0.703	14.709	0.000
2	Electronic guidance and leadership	0.521	13.947	0.000
	Electronic planning	0.329	10.049	
3	Electronic guidance and leadership	0.432	7.95	0.000
	Electronic planning	0.287	7.74	0.000
	Electronic organization	0.094	2.23	0.030

It is noted from Table (16) that all the values of (B) at the calculated and different (T) levels in the three models, and their significance ranged between (0.000-0.030). All of them were less than (0.05), and they were significant at the level ($P < 0.05$). This confirms the significance of coefficients. Accordingly, we reject the first main null hypothesis and accept the alternative hypothesis, which states that there is a statistically significant effect at the level of significance ($P \leq 0.05$).

Sub-hypothesis testing

Ho1.1 First sub-hypothesis: There is no statistically significant effect at the level of significance ($P \leq 0.05$) of the electronic planning on the government administration represented by its dimensions (information and communication technology, and the quality of government administration systems) in the Jordanian Ministry of Labor in Balqa Governorate.

To test this hypothesis, the Simple Regression test was used, as shown in the following table:

Table (17)
Results of the simple linear regression test to reveal the impact of electronic planning on government administration represented by its dimensions

Dependent variable	Model summary ^b		Variance ^b			Regression coefficients ^a			
	R	R ²	Coefficient of determination	Degree of freedom	(F) value	Sig F statistical significance	(B) value	(T) value	Sig F statistical significance
Independent variable	0.753	0.567	Regression	1	115.226	0.000	0.551	10.734	0.000
			Residual	8					
			Total	89					

^a Independent variable (electronic planning)

^b Dependent variable (government administration represented by its dimensions)

It is noted the results in Table (17) that show the value of the correlation coefficient (R) between the two variables (electronic planning and government administration represented by its dimensions) reached (0.753). The relationship between the two variables was direct. This explains that the electronic planning dimension positively affects the dependent variable "government administration".

The value of the coefficient of determination (R²) is (0.567), which is (56.7%) of the change in electronic management and government administration. The calculated value of (F) was (115,226) at the statistical significance level (0.000), which is less than ($P \leq 0.05$). This confirms the significance of the regression, so the null hypothesis was rejected and the alternative hypothesis accepted. That is there is a statistically significant effect at the level of significance ($P \leq 0.05$).

Ho1.2 The second sub-hypothesis: There is no statistically significant effect at the level of significance ($P \leq 0.05$) of the electronic organization on the government administration represented by its dimensions (information and communication technology, and the quality of government administration systems) in the Jordanian Ministry of Labor in Balqa Governorate.

To test this hypothesis, Simple Regression test was used. Table (18) illustrates this:

Table (18)
Results of the simple linear regression test to reveal the impact of electronic organization on the government administration represented by its dimensions (information and communication technology, and the quality of government administration systems)

Dependent variable	Model summary ^b		Variance ^b				Regression coefficients ^a		
	R	R ² Coefficient of determination	Degree of freedom		(F) value	Sig F statistical significance	(B) value	(T) value	Sig F statistical significance
Independent variable	0.841	0.708	Regression	1	113.331	0.000	0.474	14.606	0.000
			Residual	88					
			Total	89					

^a Independent variable (electronic organization)

^b Dependent variable is (government administration)

Results presented in Table (18) showed that the value of the correlation coefficient (R) between the two variables (electronic organization and government administration) was (0.841). The relationship between the two variables was direct. This explains that the dimension of the electronic organization positively affects the dependent variable “government administration”. The value of the coefficient of determination (R²) is (0.708), with the percentage (70.8%) of the change in the electronic management and government administration. The calculated value of (F) reached (213.331) with a level of statistical significance (0.000) which is less than ($P \leq 0.05$). This confirms the significance of the regression. Based on the previous results, the null hypothesis was rejected, and the alternative hypothesis was accepted. That is there is a statistically significant effect at the level of significance ($P \leq 0.05$).

Ho1.3 The third sub-hypothesis: There is no statistically significant effect at the level of significance ($P \leq 0.05$) for electronic guidance and leadership on the government administration represented by its dimensions (information and communication technology, and the quality of government administration systems) in the Jordanian Ministry of Labor in Balqa Governorate.

To test this hypothesis, the Simple Regression test was used, and Table (19) illustrates this.

Table (19)
Results of the simple linear regression test to detect the impact of
electronic guidance and leadership on government administration
represented by its dimensions (information and communication technology,
and the quality of government administration systems)

Dependent variable	Model summary ^b		Variance ^b				Regression coefficients ^a		
	R	R ²	Coefficient of determination	Degree of freedom	(F) value	Sig F statistical significance	(B) value	(T) value	Sig F statistical significance
Independent variable	0.843	0.711	Regression	1	216.341	0.000	0.703	14.709	0.000
			Residual	8					
			Total	8					
				9					

^a Independent variable (electronic guidance and leadership)

^b Dependent variable (government administration)

Table (19) presents the results that showed the value of the correlation coefficient (R) between the two variables (electronic guidance and leadership and government administration) is (0.843). The relationship between the two variables was direct. This explains that the dimension of guidance and electronic leadership positively affects the dependent variable "government administration". The value of the coefficient of determination (R²) is (0.711) with a percentage (71.1%) of the change in electronic management and government administration. The calculated value of (F) reached (198.697) with a level of statistical significance (0.000), which is less than ($P \leq 0.05$), and this confirms the significance of the regression, and based on the previous results, the null hypothesis was rejected, and the alternative hypothesis was accepted, meaning that there is a statistically significant effect at the level of significance ($P \leq 0.05$).

Second: The second main hypothesis: Ho.2 The second main hypothesis

Ho.2 The second main hypothesis: There is no statistically significant effect at the level of significance ($P \leq 0.05$) of electronic management represented by its dimensions (electronic planning, electronic organization, electronic guidance and leadership) on the digital leadership represented by its dimensions (digital knowledge management, digital business environment management, electronic

leadership skills) in the Jordanian Ministry of Labor in the Central Region of Jordan.

To test this hypothesis, the standard multiple linear regression test was used. Table (20) illustrates this.

Table (20)
Standard multiple regression analysis to identify the impact of electronic management represented by its dimensions (electronic planning, electronic organization, electronic guidance and leadership) on digital leadership in the Jordanian Ministry of Labor in the Central Region of Jordan

Dependent Variable	Model summary		Variance ^b				Dimension of the independent variable	Regression coefficients ^a		
	R	R ² Coefficient of determination	Degree of Freedom		(F) value	Sig F statistical significance		(B) value	(T) value	Sig F statistical significance
Independent variable	0.935	0.874	Regression	3	197.953	0.000	Electronic planning	0.287	7.736	0.000
			Residual	1			Electronic organization	0.094	2.232	0.028
			Total	86			electronic guidance and leadership	0.432	7.947	0.000

^a Independent variable of electronic management represented by its dimensions (electronic planning, electronic organization, electronic guidance and leadership).

^b Mediating variable is digital leadership

It is noted from Table (20) that the values of the (t) test for the sub-variables related to the electronic management represented by its dimensions (electronic planning, electronic organization, electronic guidance and leadership) have a statistically significant effect at the level of digital leadership. The calculated (t) values come between (2.028 –10.643). These values are significant at the level of significance ($P \leq 0.05$). It is also noted that the value of the correlation coefficient of the relationship between the electronic management with its dimensions of digital leadership reached ($R=0.942$). The coefficient of determination reached ($R^2=0.888$). This means that the electronic management as an independent

variable in its dimensions explains the percentage (88.8%) of the variance in the mediating variable, which is the digital leadership. The calculated F value was ($F=227.846$), which is a significant value at the significance level ($P \leq 0.05$).

To determine the importance of each independent variable separately in the impact of the electronic management on the digital leadership, a Stepwise Multiple Regression analysis was performed as shown in Table (21), which shows the order of entry of the independent variables into the regression equation.

Table (21)
Results of Stepwise Multiple Regression to predict the level of digital leadership through the dimensions of electronic management

Model number	Model summary	Variance			
	R Correlation coefficient	R ² Correlation coefficient	Degree of freedom	(F) value	Sig F statistical significant
1	0.935	0.875	1	614.857	0.000
2	0.940	0.883	2	327.974	0.000
3	0.942	0.888	3	227.846	0.000
Model number 1. Electronic organization 2. Electronic guidance and leadership, and electronic planning 3. Electronic organization, electronic planning, electronic guidance and leadership					

It is noted from Table (21) that the dimensions of the independent variable "electronic management" were as follows: The electronic organization came in the first place and explained the percentage (87.5%) of the variance in the mediating variable "digital leadership". The electronic planning ranked second, as it explained with the electronic organization the percentage of (88.3%) of the variance in the digital leadership. The electronic guidance and leadership ranked third with the electronic organization and electronic planning, and explained (88.8%) of the variance in the digital leadership. Accordingly, the null hypothesis is rejected and the alternative hypothesis is accepted, meaning that "there is a statistically significant effect at the level of significance ($P \leq 0.05$).

Table (22) shows the results of the coefficients analysis

Table (22)
Results of graded multiple linear regression coefficients to reveal the impact of electronic management in its dimensions on digital leadership

Model		Regression coefficients		
		(B) value	(T) value	Sig t statistical significant
1	Electronic organization	0.480	17.729	0.000
2	Electronic organization Electronic planning	0.441 0.079	2.453 10.049	0.016

3	Electronic organization	0.386	10.643	0.000
	Electronic planning	0.085	2.675	0.009
	Electronic guidance and leadership	0.094	2.028	0.046

It is noted from the table (22) that the significance of all the values of (B) at the calculated and different levels of (T) in the three models ranged between (0.000-0.046) and all of them were less than (0.05), and they were significant at the level ($P < 0.05$). This confirms the significance of the coefficients. Based on the previous results, we reject the first main null hypothesis and accept the alternative hypothesis, which states:

There is a statistically significant effect at the level of significance ($P \leq 0.05$) of the electronic management represented by its dimensions (electronic planning, electronic organization, electronic guidance and leadership) on the digital leadership represented by its dimensions (digital knowledge management, digital business environment management, electronic leadership skills) in the Jordanian Ministry of Labor in the Central Region of Jordan.

Sub-hypothesis testing

Ho2.1 The first sub-hypothesis: There is no statistically significant effect at the level of significance ($P \leq 0.05$) of the electronic planning on the digital leadership represented by its dimensions: digital knowledge management, digital business environment management, electronic leadership skills) in the Jordanian Ministry of Labor in the Central Region of Gordon.

To test this hypothesis, the Simple Regression test was used. Table (32) illustrates this:

Table (23)
Results of the simple linear regression test to reveal the impact of electronic planning on digital leadership represented by its dimensions

Dependent variable	Model summary ^b		Variance ^b				Regression coefficients ^a		
	R relation coefficient	R ² Coefficient of determination	Degree of freedom	(F) value	Sig F statistical significance	(B) value	(T) value	Sig F statistical significance	
Independent variable	0.678	0.460	Regression	1	74.916	0.000	0.452	8.655	0.000
			Residual	88					

			Total	89					
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^a Independent variable (electronic planning)

^b Mediating variable (digital leadership represented by its dimensions)

It is noted from Table (23) that the results showed that the value of the correlation coefficient (R) between the two variables (electronic planning and digital leadership represented by its dimensions) reached (0.678), and the relationship between the two variables was direct. This explains that the electronic planning dimension positively affects the mediating variable “digital leadership”. The value of the coefficient of determination (R²) reached (0.460) which is (46%) of the change in the electronic management and the digital leadership. The calculated value of (F) reached (74.916) with a level of statistical significance (0.000) which is less than ($P \leq 0.05$). This confirms the significance of the regression. On the basis of the previous results, the null hypothesis was rejected, and the alternative hypothesis was accepted. That is, there is a statistically significant effect at the level of significance ($P \leq 0.05$).

Ho2.2 The second sub-hypothesis: There is no statistically significant effect at the level of significance ($P \leq 0.05$) of the electronic planning on the digital leadership represented by its dimensions (digital knowledge management, digital business environment management, electronic leadership skills) in the Jordanian Ministry of Labor in the Central Region of Jordan.

To test this hypothesis, the Simple Regression test was used. Table (24) is illustrative.

Table (24)
Results of the simple linear regression test to reveal the impact of electronic organization on digital leadership represented by its dimensions (digital knowledge management, digital business environment management, electronic leadership skills)

Dependent variable	Model summary ^b		Variance ^b				Regression coefficients ^a		
	R relation coefficient	R ² Coefficient of determin- ation	Degree of freedom		(F) value	Sig F statistica significan	(B) valu e	(T) value	Sig F statistic al signific ance
Indepe nd- ent variable	0.935	0.875	Regr e- ssio n	1	614.9 16	0.000	0.48 0	24.79 6	0.000
			Resi d-	8					

			ual	8					
			Total	8					
				9					

^a Independent variable 1

^b Mediating variable (digital leadership)

The results in Table (24) showed that the value of the correlation coefficient (R) between the two variables (electronic organization and digital leadership) was (0.935), and the relationship between the two variables was direct. This explains that the dimension of the electronic organization positively affects the mediating variable "digital leadership". The value of the coefficient of determination (R²) reached (0.875), which means (87.5%) of the change in the electronic management and digital leadership, while the calculated value of (F) reached (614.857) with a level of statistical significance (0.000), which is less than ($P \leq 0.05$). This confirms the significance of the regression. According to the previous results, the null hypothesis was rejected, and the alternative hypothesis was accepted, meaning that there is a statistically significant effect at the level of significance ($P \leq 0.05$).

Ho2.3 The third sub-hypothesis: There is no statistically significant effect at the level of significance ($P \leq 0.05$) for the electronic guidance and leadership on the digital leadership represented by its dimensions (digital knowledge management, digital business environment management, electronic leadership skills) in the Jordanian Ministry of Labor in Balqa Governorate.

To test this hypothesis, the Simple Regression test was used. Table (25) illustrates this.

Table (25)
Results of the simple linear regression test to detect the impact of electronic guidance and leadership on digital leadership represented by its dimensions (digital knowledge management, digital business environment management, electronic leadership skills)

Dependent variable	Model summary ^b		Variance ^b				Regression coefficients ^a		
	R	R ²	Degree of freedom	(F) value	Sig F statistical significance	(B) value	(T) value	Sig F statistical significance	
Independent	0.792	0.628	Regression	1	148.369	0.000	0.603	12.181	0.000

variable			Residual	88					
			Total	89					

^a Independent variable (electronic guidance and management)

^b Mediating variable (digital leadership)

Looking at Table (25), the results showed that the value of the correlation coefficient (R) between the two variables (electronic guidance and management, and digital leadership) was (0.792), and the relationship between the two variables was direct. This explains that the electronic guidance and leadership dimension positively affects the mediating variable "digital leadership". The value of the coefficient of determination (R²) reached (0.628), which means (62.8%) of the change of electronic management and digital leadership. The value of (F) calculated (148,369) with a level of statistical significance (0.000) which is less than ($P \leq 0.05$). This confirms the significance of the regression. Based on the previous results, the null hypothesis was rejected, and the alternative hypothesis was accepted. That is, there is a statistically significant effect at the level of significance ($P \leq 0.05$).

Third: The third main hypothesis

Ho.3 The third main hypothesis: There is no statistically significant effect at the level of significance ($P \leq 0.05$) of digital leadership represented by its dimensions (digital knowledge management, digital business environment management, digital leadership skills) on government administration represented by its dimensions (information and communication technology, quality government administration systems) in the Jordanian Ministry of Labor in Balqa Governorate

To test this hypothesis, the standard multiple linear regression test was used. Table (26) is illustrative.

Table (26)

Standard multiple regression analysis to identify the impact of digital leadership represented by its dimensions (digital knowledge management, digital business environment management, digital leadership skills) on the government administration in the Jordanian Ministry of Labor in Balqa Governorate

Dependent variable	Model summary		Variance ^b			Dimensions of the independent variable	Regression coefficients ^a		
	R	R ²	Degree of freedom	(F) value	Sig F statistical significance		(B) value	(T) value	Sig F statistical significance
	relation coefficient	Coefficient of determination							

		ation								
Indepe nd-ent variable	0.860	0.740	Regr e- ssio n	3	81.5 43	0.000	Digital knowledge manageme nt	0.19 7	2.69 1	0.009
			Resi d- ual	1			digital business environme nt manageme nt	0.30 9	3.18 3	0.002
			Total	8 6			digital leadership skills	0.40 4	3.29 9	0.000

^a Mediating variable, digital leadership, represented by its dimensions (digital knowledge management, digital business environment management, digital leadership skills)

^b Dependent variable (government administration)

It is noted from Table (26) that the values of the (t) test for the sub-variables related to digital leadership represented by its dimensions (digital knowledge management, digital business environment management, digital leadership skills) have a statistically significant effect at the level of the government administration, where the calculated (t) values reached between (2.691- 5.299), all of which are significant values at the level of significance ($P \leq 0.05$). It is noted that the value of the correlation coefficient of the relationship between digital leadership and its dimensions of government administration was ($R=0.765$), and the coefficient of determination was ($R^2=0.585$). This means that the digital leadership as an independent variable with its dimensions explains (58.5%) of the variance in the dependent variable, which is government administration. The calculated F value was ($F=81.543$), which is a significant value at the significance level ($P \leq 0.05$).

To determine the importance of each independent variable separately in the impact of the digital leadership on the government administration, a Stepwise Multiple Regression analysis was performed as shown in Table (27), which shows the order of entry of the mediating variables into the regression equation.

Table (27)
Results of Stepwise Multiple Regression analysis to predict the level of government administration through the dimensions of digital leadership

Model number	Model summary	Variance			
	R Correlation coefficient	R ² Correlation coefficient	Degree of freedom	(F) value	Sig F statistical significant
1	0.820	0.673	1	180.893	0.000
2	0.847	0.718	2	110.750	0.000
3	0.860	0.740	3	81.543	0.000

Model number

1. Digital leadership skills
2. Digital leadership skills and digital business environment management
3. Digital leadership skills, digital business environment management, and digital knowledge management

It is noted from Table (27) that the dimensions of the mediating variable "digital leadership" were as follows: Digital leadership skills ranked (first) and explained (67.3%) of the variance in the dependent variable "government administration", while the digital business environment management ranked (second), as it explained with digital leadership skills (71.8%) of the variance in the government administration. digital knowledge management ranked (third) with digital leadership skills and digital business environment management, and explained (74%) of the variance in the government administration. Accordingly, the null hypothesis is rejected and the alternative hypothesis is accepted, meaning that "there is a statistically significant effect at the significance level ($P \leq 0.05$). Table (28) shows the results of transaction analysis.

Table (28)
Results of graded multiple linear regression coefficients to reveal the impact of digital leadership in its dimensions in government administration

Model		Regression coefficients		
		(B) value	(T) value	Sig t statistical significant
1	Digital leadership skills	0.681	13.450	0.000
2	Digital leadership skills Digital business environment management	0.459 0.366	6.045 3.737	0.000
3	Digital leadership skills Digital business environment management Digital knowledge management	0.404 0.309 0.197	5.299 3.183 2.691	0.000 0.002 0.009

It is noted from Table (28) that all the values of (B) at the calculated different (T) levels in the three models ranged significantly between (0.000-0.009). All of them were less than (0.05), which is significant at the level ($P < 0.05$), and this confirms the significance of the coefficients. Based on the previous results, the first main null hypothesis was accepted and we accept the alternative hypothesis, which states: There is a statistically significant effect at the level of significance ($P \leq 0.05$).

Sub-hypothesis testing

Ho3.1 The first sub-hypothesis: There is no statistically significant effect at the level of significance ($P \leq 0.05$) for digital knowledge management on the government administration represented by its dimensions (information and communication technology, and the quality of government administration systems) in the Jordanian Ministry of Labor in Balqa Governorate.

To test this hypothesis, the Simple Regression test was used, and Table (29) illustrates this.

Table (29)
Results of the simple linear regression test to reveal the impact of digital knowledge management on government administration represented by its dimensions

Dependent variable	Model summary ^b		Variance ^b			Regression coefficients ^a			
	R elation coefficient	R ² Coefficient of determination	Degree of freedom	(F) value	Sig F statistical significance	(B) value	(T) value	Sig F statistical significance	
Independent variable	0.633	0.400	Regression	1	58.710	0.000	0.668	7.662	0.000
			Residual	88					
			Total	89					

^a Mediating variable (digital knowledge management)

^b Dependent variable (government administration represented by its dimensions)

Looking at Table (29), the results showed that the value of the correlation coefficient (R) between the two variables (digital knowledge management and government administration represented by its dimensions) was (0.633), and the relationship between the two variables was direct. This explains that the digital knowledge management dimension positively affects the dependent variable "government administration". The value of the coefficient of determination (R²) is (0.400), which is (40%) of the change in the digital leadership and government administration. The calculated value of (F) was (58.710) with a level of statistical significance (0.000), which is less than ($P \leq 0.05$). This confirms the significance of the regression. Accordingly, the null hypothesis was rejected, and the alternative hypothesis was accepted, meaning that there is a statistically significant effect at the level of significance ($P \leq 0.05$).

Ho3.2 The second sub-hypothesis: There is no statistically significant effect at the level of morality ($P \leq 0.05$) of the digital business environment management on the government administration represented by its dimensions (information and communication technology, and the quality of government administration systems) in the Jordanian Ministry of Labor in Balqa Governorate.

To test this hypothesis, the Simple Regression test was used, and Table (30) illustrates this:

Table (30)
Results of the simple linear regression test to reveal the impact of the digital business environment management on government administration represented by its dimensions (information and communication technology, and the quality of government administration systems)

Dependent variable	Model summary ^b		Variance ^b			Regression coefficients ^a			
	R	R ² Coefficient of determination	Degree of freedom	(F) value	Sig F statistical significance	(B) value	(T) value	Sig F statistical significance	
Independent variable	0.774	0.600	Regression	1	131.710	0.000	0.829	11.478	0.000
			Residual	88					
			Total	89					

^a mediating variable the digital business environment management

^b The dependent variable is the government administration

A close look at the results in Table (30) shows that the value of the correlation coefficient (R) between the two variables (digital Business environment management and government administration) was (0.774), and the relationship between the two variables was direct. This explains that the digital business environment management positively affects the dependent variable “government administration”. The value of the coefficient of determination (R²) reached (0.600), that is, (60%) of the change in the digital leadership and the government administration. The calculated value of (F) was (131.752) with a level of statistical significance (0.000) which is less than ($P \leq 0.05$). This confirms the significance of the regression. Consequently, the null hypothesis was rejected, and the alternative hypothesis was accepted. That is: There is a statistically significant effect at the level of significance ($P \leq 0.05$).

Ho3.3 The third sub-hypothesis: There is no statistically significant effect at the level of significance ($P \leq 0.05$) of the digital leadership skills on the government administration represented by its dimensions (information and communication technology, and the quality of government administration systems) in the Jordanian Ministry of Labor in Balqa Governorate.

To test this hypothesis, the Simple Regression test was used, as shown in Table (31).

Table (31)
Results of the simple linear regression test to reveal the impact of digital leadership skills on government administration represented by its dimensions (information and communication technology, and the quality of government administration systems)

Dependent variable	Model summary ^b		Variance ^b			Regression coefficients ^a		
	R	R ²	Degree of freedom	(F) value	Sig F statistical significance	(B) value	(T) value	Sig F statistical significance
Independent variable	0.820	0.673	Regression	1	180.893	0.000	0.681	13.450
			Residual	88				
			Total	89				

^a Mediating variable (digital leadership skills)

^b Dependent variable (government administration)

Inspecting Table (31) shows that the value of the correlation coefficient (R) between the two variables (digital leadership skills and government administration) was (0.820), and the relationship between the two variables was direct. This explains that the dimension of digital leadership positively affects the dependent variable “government administration”. The value of the coefficient of determination (R²) was (0.673), which is (67.3%) of the change in the digital leadership and government administration. The calculated value of (F) was (180.893) with a level of statistical significance (0.000), which is less than ($P \leq 0.05$), and this confirms the significance of the regression. Hence, the null hypothesis was rejected, and the alternative hypothesis was accepted. That is: There is a statistically significant effect at the level of significance ($P \leq 0.05$).

Fourth: Ho.4 Fourth main hypothesis

Ho.4 The fourth main hypothesis

There is no statistically significant effect at the level of significance ($P \leq 0.05$) of the electronic management represented by its dimensions (electronic planning, electronic organization, electronic guidance and leadership) on the

government administration represented by its dimensions (information and communication technology, and the quality of government administration systems). Through digital leadership represented by its dimensions (digital knowledge management, digital business environment management, digital leadership skills) in the Jordanian Ministry of Labor in Balqa Governorate.

To test this hypothesis, it was divided into three sub-hypotheses.

Ho4.1 First sub-hypothesis

There is no statistically significant effect at the level of significance ($P \leq 0.05$) of the electronic planning on the government administration represented by its dimensions (information and communication technology, and the quality of government administration systems) through digital leadership represented by its dimensions (digital knowledge management, digital business environment management, digital leadership skills) in the Jordanian Ministry of Labor in the Central Region of Jordan.

To test this hypothesis, the Simple Regression test was used, as indicated in Table (32).

Table (32)
Results of simple linear regression test to reveal the impact of electronic planning on government administration through digital leadership

Dependent variable	Model summary ^b		Variance ^b					Regression coefficients ^a		
	R elation coefficient	R ² Coefficient of determination	Degree of freedom	(F) value	Sig F statistical significance		(B) value	(T) value	Sig F statistical significance	
Independent variable	0.888	0.789	Regression	2	162.181	0.000	Electronic organization	0.233	4.751	0.000
			Residual	87			Digital leadership	0.702	9.546	0.000
			Total	89						

^a Independent variable (electronic planning through digital leadership)

^b Dependent variable (government administration)

The results in Table (32) showed the value of the correlation coefficient (R) between the two variables electronic planning and government administration through digital leadership represented by its dimensions (digital knowledge management, digital business environment management, digital leadership skills) reached (0.888), and the relationship between the two variables were direct. This explains that the electronic planning dimension positively affects the dependent variable "government administration". The value of the coefficient of determination (R²) reached (0.789), i.e. (78.9%) of the change of the electronic management and government administration through digital leadership. The value of the calculated (F) was (162.181) with a level of statistical significance (0.000) which is less than ($P \leq 0.05$). This confirms the significance of the regression. Accordingly, the null hypothesis was rejected, and the alternative hypothesis was accepted. That is: There is a statistically significant effect at the level of significance ($P \leq 0.05$).

Ho4.2 The second sub-hypothesis: There is no statistically significant effect at the level of significance ($P \leq 0.05$) of the electronic organization on the government administration represented by its dimensions (information and communication technology, and the quality of government administration systems) through digital leadership represented by its dimensions (digital knowledge management, digital business environment management, digital leadership skills) in the Jordanian Ministry of Labor in Balqa Governorate.

To test this hypothesis, the Simple Regression test was used, as presented in Table (33).

Table (33)
Results of the simple linear regression test to reveal the impact of electronic organization on government administration through digital leadership represented by its dimensions (digital knowledge management, digital business environment management, digital leadership skills)

Dependent variable	Model summary ^b		Variance ^b				Regression coefficients ^a			
	R	R ²	Degree of freedom		(F) value	Sig F statistical significance		(B) value	(T) value	Sig F statistical significance
Independent variable	0.864	0.747	Regression	2	128.168	0.000	Electronic organization	0.181	2.110	0.038
			Residual	87			Digital leadership	0.609	3.642	0.000
			Total	89						

^a Independent variable (electronic organization) through digital leadership

^b Dependent variable (government administration)

Looking at Table (33), the results showed that the value of the correlation coefficient (R) between the two variables (electronic organization and government administration through digital leadership) was (0.864), and the relationship between the two variables was direct. This explains that the dimension of electronic organization positively affects the dependent variable "government administration". The value of the coefficient of determination (R²) reached (0.747), that is, (74.7%) of the change of electronic management and government administration through digital leadership. The calculated value of (F) reached (126.168) with a statistical significance level (0.000) which is less than ($P \leq 0.05$). This confirms the significance of the regression. According to the previous results, the null hypothesis was rejected, and the alternative hypothesis was accepted. That is, there is a statistically significant effect at the level of significance ($P \leq 0.05$).

Ho4.3 Third sub-hypothesis

There is no statistically significant effect at the level of significance ($P \leq 0.05$) for electronic guidance and leadership on the government administration represented by its dimensions (information and communication technology, and the quality of government administration systems) through digital leadership represented by its dimensions (digital knowledge management, digital business environment management, digital leadership skills) in the Jordanian Ministry of Labor in Balqa Governorate.

To test this hypothesis, the Simple Regression test was used. Consider Table (34).

Table (34)

Results of simple linear regression test to reveal the impact of electronic guidance and leadership on government administration through digital leadership represented by its dimensions (digital knowledge management, digital business environment management, digital leadership skills)

Dependent variable	Model summary ^b		Variance ^b					Regression coefficients ^a		
	R elation coefficient	R ² Coefficient of determination	Degree of freedom		(F) value	Sig F statistical significance		(B) value	(T) value	Sig F statistical significance
Independent	0.898	0.806	Regression	2	181.14	0.000	Electronic guidance and	0.369	5.715	0.038

variable							leadership	0.555	6.549	0.000
			Residual	87			Digital leadership			
			Total	89						

^a Independent variable (electronic guidance and leadership) through digital leadership

^b Dependent variable (government administration)

The results in Table (34) indicate that the value of the correlation coefficient (R) between the two variables (electronic guidance and leadership and government administration through digital leadership) reached (0.898), and the relationship between the two variables was direct. This explains that the dimension of the electronic guidance and leadership positively affects the dependent variable "government administration". The value of the coefficient of determination (R²) was (0.806), that is, (80.6%) of the change of electronic management and government administration through digital leadership, while the calculated value of (F) was (181.114) with a level of statistical significance (0.000) which is less than ($P \leq 0.05$). This confirms the significance of the regression. In keeping with the previous results, the null hypothesis was rejected, and the alternative hypothesis was accepted, that is: There is a statistically significant effect at the level of significant ($P \leq 0.05$).

Discussion of Results

First: Results of the independent variable (electronic management)

It includes the following:

Electronic guidance and leadership: The results indicated that electronic planning dimension is of a high degree of importance, and it reached (3.89). It was found that the Ministry of Labor uses the electronic management in holding its periodic meetings, providing information on a permanent and continuous basis, and extending oversight on the personnel working to achieve the highest quality, the lowest costs and the least possible time.

Electronic organization: The results indicated that the electronic planning dimension is of a paramount importance, and it reached (3.85). It was found that the Ministry of Labor uses electronic planning in broad networking between the working individuals and citizens who refer to the Ministry of Labor via the electronic network. This creates effective communication channels capable of providing high quality services for citizens, organizing relationships and dividing work and responsibilities among working individuals, and providing an electronic archiving system that contributes greatly to evaluating services in the least possible time.

Electronic planning: The results showed that the electronic planning dimension is vital, and it reached (3.77). It was found that the Ministry of Labor is intensively interested in electronic planning. It contributes significantly to reducing costs, giving administrative processes sufficient flexibility that contributes to alleviating the citizens' trouble, and relieving work pressure on the personnel. This helps to keep pace with global recent developments in the field of communications and information technology to develop and improve the services provided by the Ministry of Labor.

The researchers note that the electronic management obtained a total importance rate (3.83). This indicates the realization of the study community and the research sample of the importance of the electronic management in the administrative operations of the Ministry of Labor. It also shows that the Ministry of Labor seeks permanently and continuously to develop the skills of its employees as well as the digital infrastructure. The test of the first main hypothesis proved that there is an impact of the electronic management on the government administration, where the value of the correlation coefficient of the relationship between electronic management and its dimensions of government administration amounted to ($R=0.935$), and the coefficient of determination reached ($R^2=0.874$). This means that the electronic management as an independent variable with its dimensions explains (87.4%) of the variance in the dependent variable, which is the government administration. The calculated F value was ($F=197.953$), which is a significant value at the significance level ($P \leq 0.05$).

Second: Results of the mediating variable (digital leadership)

Digital leadership skills: The results indicated that the electronic planning dimension is highly important, and reached (4.02). It was found that the Ministry of Labor is working to empower its employees to improve their level of performance and achievement in tasks. It also supports excellence in the field of work and motivates working individuals, by empowering them with the powers necessary and constantly developing their skills.

Digital business environment management: the results indicated that the electronic planning dimension is essentially significant, and it reached (4.02). It was discovered that the Ministry of Labor is working on diversity in its methods to attract qualified cadres and expertise. It also allows to re-design its organizational structure in line with changes in the work environment and to achieve its strategic objectives. Furthermore, provides all the requirements for digital leadership, including modern devices and equipment.

Knowledge management: The results brought to light that the electronic planning is of an utmost importance, and it reached (3.95). It was found that the Ministry of Labor is constantly working to increase awareness of the importance of digital leadership through the consolidation of leadership values among working individuals with the aim of improving their performance and motivating them.

The researchers note that the mediating variable (digital leadership) obtained a high overall importance and reached (3.99). This elucidates the constant endeavor of the Ministry of Labor to enhance the concept of digital leadership and root its knowledge among the working individuals. This can be done by providing technological infrastructure such as modern devices and software, as well as providing them with training programs to develop the skills of working individuals to keep pace with the developments in the field of digital leadership. The third sub-hypothesis proved that the value of the correlation coefficient of the relationship between digital leadership and its dimension of government administration was ($R=0.765$), and the coefficient of determination was ($R^2=0.585$). This means that the digital leadership as an independent variable with its dimensions explains (58.5%) of the variance in the dependent variable, which is the government administration. The calculated F value was ($F=81.543$), which is a significant value at the significance level ($P\leq 0.05$).

Third: Results of the dependent variable (government administration)

Information and communication technology: The results indicated that the electronic planning dimension is of a high degree of importance, and reached (3.89). It was indicated that the Ministry of Labor provides all computer accessories (printer, scanner ... etc.) needed by the working individuals. It is also interested in developing the electronic management systems continuously, aiming at providing a digital work environment that helps the working individuals to perform their job duties and tasks efficiently and effectively.

Quality of government administration systems: The results indicated that the electronic planning dimension is of a high degree of importance, and it reached (3.88). It was found that the Ministry of Labor provides electronic management services to citizens in an appropriate manner that suits the needs of the citizens. It also supplies services with high quality and with reliable and accurate information.

The researchers note that the dependent variable (government administration) obtained a high degree of importance and reached (3.885). This indicates the importance of the variable in the administrative processes in the Ministry of Labor and in all public institutions of the state. This also shows that the Ministry of Labor paid great attention to information and communications technology and the quality of the government administration systems and their activation in the performance of administrative operations. Testing of the hypotheses proved that there is an impact of the electronic management on the government administration through the digital leadership. The fourth main hypothesis proved that the value of the coefficient of determination (R^2) is (0.789), which is (78.9%) of the change of the electronic management and government administration through the digital leadership. The calculated (F) value was (162.181) with a statistical significance level (0.000) which is less than ($P\leq 0.05$). This confirms the significance of the regression.

Findings and recommendations

Results

1. Electronic planning in the Ministry of Labor reduces costs and creates work flexibility.
2. Electronic management in the Ministry of Labor helps in broad networking between the individuals working in the Ministry of Labor and citizens through the electronic network, and it organizes effective channels of communication with them.
3. Electronic management helps in holding periodic meetings in the Ministry of Labor, enabling working individuals to take successful decisions, and in developing human relations between them.
4. Ministry of Labor is working to increase awareness of the importance of digital leadership, and is keen to consolidate the values of leadership knowledge and values that support access to pioneering performance in accomplishing tasks.
5. Ministry of Labor diversifies its methods of attracting qualified cadres and expertise, and allows re-designing the organizational structure in proportion to modern changes so that the Ministry keeps pace with changes in the work environment in line with the achievement of its strategic objectives.
6. Ministry of Labor promotes empowering its employees to improve the achievement of tasks, and excel in the field of work that makes the leader more efficient. It grants them the required powers so that employees can perform their tasks, and it dedicates an additional budget to training employees with leadership talents on modern applications.
7. Ministry of Labor provides all computer accessories (printer, scanner...etc.) that the employee needs in the field of work. It is also interested in developing the electronic management systems on an ongoing basis.
8. Electronic administration services at the Ministry of Labor provide information in the appropriate form and coordination, and enjoy the speed of performing the functions required of them with a quick response.

5-4 Recommendations

1. Enhancing the role of the electronic planning in saving time and effort and providing high-quality, reliable services through the participation of individuals working in the Ministry of Labor in specialized courses in the electronic planning.
2. Improving the role of the electronic management in building trust between the Ministry of Labor and citizens, and deepening the principle of privacy in the electronic transactions, by providing quick, easy services to citizens to obtain through special accounts that are created for citizens.

3. Working to improve the tools and means of effective communication between departments and sections in the Ministry of Labor, and developing the skills that administrative leaders must possess in the Ministry of Labor. This can be done through developing their skills in establishing effective communication and engaging them in specialized courses in effective communication.
4. Promoting the culture of learning, benefiting from previous experiences and granting incentives to talented employees. This can be done through developing incentive and reward systems to motivate all working individuals to be creative at work.
5. Working on re-designing the administrative processes to comply with the principle of support between the different departments, while granting the working individuals the required powers to enable them to perform their tasks to improve the achievement of tasks. This can be done by reformulating the administrative processes through the involvement of working individuals in the redesign.
6. Strengthening central databases to save data and information, and provide all the programs needed to complete transactions and collect revenues, to facilitate services for citizens and reduce pressure on the offices of the Ministry of Labor.
7. Providing E-government services citizens with comprehensive, complete and accurate information, through electronic guidance bulletins on the website of the Ministry of Labor or from paper guidance bulletins in the offices of the Ministry of Labor.

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