

The effect of applying modern electronic management systems on improving job performance

(A case study on the employees and professors of the College of Administration and Economics / University of Baghdad)

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Abstract:-

The Iraqi Ministry of Higher Education and Scientific Research, represented by the College of Administration and Economics, seeks the necessity of electronic transformation in the management and implementation of all tasks and duties entrusted to it. Where it worked on the application of modern electronic management systems in all departments, divisions, and departments associated with them through the implementation and application of contemporary electronic administrative systems at work. Where the importance of electronic management lies in enhancing the efficiency of management and employees and taking advantage of technological development at present. Therefore, intensive steps have begun to work on developing the management system in the form of time plans with planned and studied times, so this study came to shed light on the impact of the use of these systems at the level of The performance of the staff and professors in the department and the resulting positive effects on the staff and the administration in general.

This study aims to know the importance of modern electronic management and the effective and strategic role in increasing the efficiency of employees and developing the administrative systems in force at present, which leads to providing new ways in determining and measuring the strength and efficiency of employees at different administrative levels.

The study is based on a fundamental question in this study: Knowing the application and implementation of modern electronic management

systems to improve the performance of the employees of the College of Administration and Economics / the University of Baghdad?

To achieve this, the researcher used the descriptive-analytical approach and the method of the field study based on the questionnaire tool that was distributed to a random sample of various employees consisting of (60) employees. .

This research study has concluded many of the following results: There is a strong positive impact of the application of modern electronic management systems on developing and increasing the efficiency of administrative work and on the performance of all employees of the College of Administration and Economics / the University of Baghdad, and the presence of a high degree of knowledge and skill in all employees in all divisions and divisions. With modern electronic systems in the College of Administration and Economics / University, and finally, the application of electronic management systems has obtained a successful degree in evaluating job performance within the electronic framework from several aspects, the most important of which are experience, skill, ability, and efficiency.

Where important fundamental recommendations were reached, including the need to work on following up the activation of modern electronic management programs on a continuous and planned basis and to work on converting all administrative decisions and practices that were accomplished using the old, traditional methods to electronic systems and advanced programs to complete the administrative work in a manner that is consistent and appropriate in a successful and studied manner. With the work objectives of modern electronic management systems in the work environment.

keywords:

(Electronic management, modern systems, job performance, performance improvement, manpower

المستخلص :-

تسعى وزارة التعليم العالي والبحث العلمي العراقية متمثلة بكلية الادارة والاقتصاد الى ضرورة التحول الالكتروني في ادارة وتنفيذ جميع المهام والواجبات الموكلة بها. حيث عملت على تطبيق نظم الادارة الإلكترونية الحديثة في جميع الاقسام والشعب والادارات المرتبطة بها من خلال تنفيذ وتطبيق الانظمة الالكترونية الادارية المعاصرة في العمل . حيث تكمن اهمية الادارة الالكترونية

في تعزيز كفاءة الادارة والموظفين وللاستفادة من التطور التكنولوجي في الوقت الحالي , لذا بدأت الخطوات الحديثة في العمل على تطوير نظام الادارة على شكل خطط زمنية بأوقات مخططة ومدروسة ، لذا جاءت هذه الدراسة لتلقي الضوء على مدى تأثير استخدام هذه الأنظمة على مستوى أداء الموظفين والاساتذة في الدائرة وما نتج عن ذلك من آثار إيجابية على الموظفين وعلى الإدارة بصورة عامة.

تهدف هذه الدراسة الى معرفة اهمية الادارة الالكترونية الحديثة والدور الفعال والاستراتيجي في زيادة كفاءة الموظفين وتطوير الانظمة الادارية المعمول بها في الوقت الحالي مما يؤدي الى توفير طرق جديدة في تحديد وقياس قوة وكفاءة الموظفين في المستويات الادارية المختلفة .

تقوم الدراسة على سؤال مهم وجوهري في هذه الدراسة : معرفة تطبيق وتنفيذ انظمة الادارة الالكترونية الحديثة على تحسين أداء موظفي كلية الادارة والاقتصاد / جامعة بغداد ؟ ولتحقيق ذلك استخدمت الباحثة المنهج الوصفي التحليلي، وأسلوب الدراسة الميدانية بالاعتماد على أداة الاستبانة التي تم توزيعها على عينة عشوائية من مختلف الموظفين تتألف من (٦٠) موظفة ولقد بلغ العائد من الاستبيانات الصالحة للتحليل الإحصائي (٥٩) مفردة أي ما يعادل ٩٩ % من عينة الدراسة.

ان هذه الدراسة البحثية قد استنتجت العديد من النتائج التالية : وجود أثر إيجابي قوي لتطبيق أنظمة الإدارة الإلكترونية الحديثة على تطوير وزيادة كفاءة العمل الإداري وعلى أداء جميع موظفي كلية الادارة والاقتصاد / جامعة بغداد ، ووجود معرفة ومهارة بدرجة عالية في جميع الموظفين في كل الشعب والاتقسام بالأنظمة الالكترونية الحديثة في كلية الادارة والاقتصاد / جامعة ، وأخيرا فان تطبيق أنظمة الادارة الإلكترونية قد حصل على درجة ناجحة في تقييم الاداء الوظيفي ضمن اطار العمل الالكتروني من عدة جوانب اهمها الخبرة , المهارة , القابلية , والكفاءة. حيث تم التوصل الى توصيات جوهرية مهمة ومن بينها ضرورة العمل على متابعة تفعيل برامج الإدارة الإلكترونية الحديثة بصورة مستمرة ومخططة والعمل على تحويل جميع القرارات والممارسات الإدارية التي كانت تنجز تتم بالطرق القديمة التقليدية إلى الانظمة الالكترونية والبرامج المتطورة في اكمال العمل الاداري بما ينسجم ويتلاءم بصورة ناجحة ومدروسة مع أهداف عمل انظمة الإدارة الإلكترونية الحديثة في بيئة العمل.

الكلمات المفتاحية:

(الادارة الالكترونية ,الانظمة الحديثة ,الاداء الوظيفي , تحسين الاداء ,القوى العاملة)

1. Introduction

The Iraqi Ministry of Higher Education and Scientific Research, represented by the College of Administration and Economics/University of Baghdad, is striving hard towards, motivating and direct support for all projects related to the application of modern electronic management systems and programs in the various departments and formations of the ministry as essential and basic procedures and plans to achieve the main strategic goal, which is the design of an administration government Electronic systems aimed at providing various event services to all citizens through modern electronic administrative systems, and modern electronic systems are among the latest and most advanced systems in new and advanced services, and among the most reliable pillars in bringing about economic and social development (Aboud, 2014, pp. 199-203)

The modern world is witnessing radical changes and transformations that extend from individuals and organizations to governments recently, as a result of the rapid technological and information revolution and tremendous technological progress, especially in the field of information and communication technologies, and the transition to a society and knowledge economy where countries are competing in

stimulating their government and private institutions to keep pace with development, and among The most important responses to these developments is the emergence of electronic management concepts and applications (Bataineh, 2017, pp. 155-157).

Electronic management is considered a revolution in the world of modern management as a result of the positive effects it provided in facilitating administrative processes, reducing the time and cost of completing tasks, making information available all the time, developing job performance, and raising the level of efficiency and productivity of the organization by employing technology and information systems to support the management process. The benefits of electronic management are not limited to administrative aspects but extend to the economic, political, and social aspects of the organization, which made its study and study of its effects one of the important topics that must be shed light on (Abdullah, 2014, pp. 301-302).

2. Study problem

Successfully implementing modern electronic management programs and systems with a degree of effectiveness requires a continuous evaluation process to measure their effectiveness and compare the achieved results with the desired goals, and then make developmental efforts to close any performance gap

between what is achieved and what is required of these systems, and perhaps one of the most prominent aspects The administration affected by the application of electronic management is the functionality of its users, as it is considered one of the most important determinants of the success of electronic management, and from this point of view we can identify the problems of the study in the following question:

What is the impact of the application of modern electronic management systems on increasing the performance of employees in the College of Administration and Economics / the University of Baghdad?

3. The importance of study.

The importance of this study lies in identifying and knowing the importance of modern electronic management systems, which have become an urgent requirement in light of the rapid digital and informational developments in our modern age and based on the decisions of the Iraqi Ministry of Higher Education and Scientific Research to work on the implementation and design of modern electronic management systems through systems with different goals. It was necessary to follow it, study it, and see how much change it has achieved through its application. The theoretical importance of this study is also reflected through its role in enriching previous studies in the field of electronic

management by examining the relationship between it and job performance as a special case in the Citizens Affairs Department in the Ministry of Higher Education in Iraq, where its importance is manifested through its measurement of the impact of the application of electronic management on the performance of employees The department is conducting the research and the development opportunities that result from this application that will contribute to the basic development of the core structures of the College of Administration and Economics / the University of Baghdad.

4. Study objectives

1. Defining the importance of modern electronic management systems and their role in developing administrative practices and processes.
2. Measuring the degree of impact of the application of modern electronic management systems on the development of administrative work in the College of Administration and Economics / University of Baghdad
3. Measuring the degree of impact of the application of electronic management systems on the performance of the employees of the College of Administration and Economics / University of Baghdad

4. Determining the degree of impact of obstacles to the effective application of electronic management systems in the College of Administration and Economics / University of Baghdad
5. Evaluation of the effectiveness of modern electronic management systems in the College of Administration and Economics / the University of Baghdad.

5. Questions of Study

This study lies in the main basic answer to the following question: Knowing the degree of impact of the implementation and application of modern electronic management systems on increasing the performance of all employees in the College of Administration and Economics / the University of Baghdad? This main research question has been divided into the following sub-questions:

1. To what extent are female employees familiar with the electronic management systems applied at the University of Baghdad?
2. Did electronic management systems contribute to the development of administrative work at the University of Baghdad?
3. Did the electronic management systems contribute to improving the performance of employees at the University of Baghdad?

4. What is the availability of the necessary facilities by the university to support electronic management systems?
5. What are the challenges faced by the application of electronic management concerning improving job performance?
6. How effective are the electronic management systems at the University of Baghdad?

6. Research Methodology

The study relied on the analytical descriptive approach, which is considered the most consistent approach with the nature and objectives of the current study, and this approach is based on: a theoretical study to build the knowledge framework by making use of various references and sources between books, articles, research and scientific papers published in periodicals, conferences and seminars, whether Available in the virtual library of the Iraqi Ministry of Education or published in electronic databases via the Internet, and the study in its other part relied on the field study through the use of the questionnaire method to obtain the sources, basic data and primary information required to complete the procedures and surveys related to research?.

7. Hypotheses of the study

1. There is a statistically significant difference in the extent of employees' knowledge of the electronic management systems

applied in the College of Administration and Economics / the University of Baghdad.

2. There is a statistically significant difference in the extent to which electronic management systems contribute to the development of administrative work in the College of Administration and Economics / the University of Baghdad.

3. There is a statistically significant difference in the extent to which electronic management systems contribute to improving the performance of employees in the College of Administration and Economics / the University of Baghdad.

4. There is a statistically significant difference in the availability of the necessary facilities by the university to support electronic management systems in the College of Administration and Economics / the University of Baghdad.

5. There is a statistically significant difference in the challenges facing the application of electronic management systems in the College of Administration and Economics / the University of Baghdad.

6. There is a statistically significant difference in the effectiveness of electronic management systems in the College of Administration and Economics / the University of Baghdad.

8. Study population and sample

The study population and sample were selected from all employees of the Department of Citizens Affairs of various occupational levels and educational attainment, which numbered 60 male and female employees of both sexes.

Statistical methods used in the study

9. Descriptive statistics

Many practices, procedures, and methods have been implemented to reach the results, and among these procedures are the frequencies and percentages to describe the study community about the initial information, the arithmetic means, to calculate the value given by the members of the study community to each of the axis phrases.

The Pearson's Linear Correlation ship was applied and used and this test is used to verify the existence of a linear Coefficient (Pearson's Linear Correlation) between each of the questionnaire statements and the axis to which the statement belongs. The direction of the scale and the degree of agreement in terms of its strength or weakness were determined.

9.1. Inferential statistics

The following procedures were used to reach real results that support the researcher in completing the scientific research: (Pearson's Linear Correlation Coefficient)

To verify the existence of a linear correlation between the pairs of observations and data and information procedures, in addition to that to verify the knowledge of the strength and direction of the relationships between the two basic variables in the research.

9.2. One Way ANOVA (P-test)

The (F) test was used to identify and determine whether any statistical indications were diagnosed or if there were clear statistically significant differences between the trends of the study sample vocabulary towards the study axes according to their personal and functional variables, which are divided into more than two categories.

10.1. Previous Arabic literary studies

"Al-Khuwaidri study 2007, the application of electronic management in Benghazi, Benghazi, Libya"

This study aimed to shed light on the concept of electronic management and what distinguishes it from traditional management, and the stages through which the development of the licensing program at the University of Benghazi as an example of the electronic management programs that were developed at the university at that stage, which included: Appointments program and conference attendance

Assignments, promotions, the academic profile of a faculty member, scholarship systems, department and college councils' records, and the electronic procurement system. The study used the theoretical analytical method. The study concluded that among the most important advantages of applying electronic management at the university are the following:

Ensuring the implementation and application of bylaws and regulations, ensuring the application and activation of the university's organizational structure and the possibility of follow-up, the integration of the system with the systems and databases related to personnel, financial and procurement affairs, changing the pattern of dealing with transactions through electronic transformation (Alead and et al, 2011, pp,195-196).

10.2. Previous foreign literary studies

Taylor and Steinloy, 2010 "Information Technology Usage and Human Resource Roles and Effectiveness."

The study aimed to explore the potential impact of information technology (IT) on human resource functions and effectiveness and to identify the uses of information technology through nine broad areas (reviews and surveys, employee benefits, compensation and rewards, health and safety, management performance, planning and career development, recruitment,

training and development, and relationships This study is considered the first actual attempt to measure this impact. A survey was conducted on a sample of 1,556 senior human resources executives in leading Canadian companies. The study reached the following results:

1. Expanding the use of information technology applications for human resources is linked to their involvement in strategic functions and their consideration as a strategic partner and a pivotal factor in the change process.
2. The study demonstrated a strong positive relationship between the use of technology and technical and strategic effectiveness in resource functions (AbdulWahab, 2008, pp. 144-147).

11. Statistical methods and treatments

1. Correlation analysis :- It is a statistical tool that reveals the extent to which there is a significant correlation between two or more variables, as the Spearman correlation coefficient for rank correlation will be adopted in the statistical analysis, as the answers are in a qualitative and descriptive form (strongly agree, agree, average, disagree, Strongly disagree). and then test the significance of the computed correlation coefficients by using the T .test

2. Regression analysis: It is one of the statistical methods used to show the extent of the presence of the independent variable in the dependent variable
3. Confirmatory factor analysis: to show the extent of the factor validity of the data
4. Exploratory factor analysis: - One of the statistical methods that show the extent to which the paragraphs fall under a certain factor.
5. Pearson's correlation coefficient: - In order to show the stability of the data according to the coefficient (Alpha - Cronbach).

11.1. The assertive structural validity of the modern electronic management system variable

The confirmatory factor validity of the modern electronic management systems variable was conducted using the ready program (AMOS v.24) and the ready program (AMOS 23) and the results were obtained as in Table (1) which shows the model matching indicators adopted in the confirmatory factor analysis of the modern electronic management systems variable.

Table (1) shows the indicators of conformity to the model of modern electronic management systems

indicators	optimum range	the value
chi-square value	to be spiritual	2954.300
degree of freedom	What value?	1070
Chi-square ratio to degree of freedom	Do not exceed (5) good	4.01

CFI Comparative Match Index	ranges between (0.9 - 1)	0.92
TLI Tucker-Lewis Index	ranges between (0.9 - 1)	0.93
RMSEA square root mean approximate error	ranges from (0 - 0.08)	0.06

From the observation of the above table, it is clear that the variable of modern electronic management systems has achieved all the required standards and therefore the factor analysis can be conducted according to the method of the greatest possibility, as the results of the factor analysis through the use of the two programs (SPSS v.18) and (AMOS v.24) are as they are shown in table (2)

Questionnaire items	Factor saturations				
	Factor One	Factor Two	Factor Three	Factor Four	Factor Five
The first axis: the extent of female employees' knowledge of the electronic management systems applied in the College of Administration and Economics / University of Baghdad					
I have comprehensive knowledge of the services provided by all management systems	0.38				
electronic application at the university.	0.57				
I have extensive knowledge of the systems the Deanship uses and which I need in my work.	0.59				
I keep track of what is being activated from new electronic systems	0.92				
I have a background on the concept of electronic management.	0.83				
I have a background on the main elements of e-governance	0.80				
The second axis: the extent to which electronic management systems contribute to the development of administrative work in the College of Administration and Economics / University of Baghdad					
Organizational structure change (cancellation, creation or merging of some units) in excess of		0.38			
The effectiveness and efficiency of the organization		0.45			
Shift to decentralized management.		0.65			
Simplify administrative procedures.		0.72			
Reducing the number of paper transactions.		0.38			

Facilitate the process of communication between different departments.		0.40			
Increase the rate of administrative flexibility in dealing with any change that occurs.		0.76			
Improving the level of services provided by the Deanship.		0.86			
Providing the information needed to make decisions in a timely manner.		0.87			
Save material resources and reduce costs.		0.80			
Reducing the phenomenon of administrative corruption.		0.83			
The third axis: The extent to which electronic management systems contribute to improving the performance of employees in the College of Administration and Economics / University of Baghdad					
Increase the employee's knowledge of work tasks.			0.30		
Speed of work.			0.53		
Low percentage of errors in the work.			0.70		
Increase employee productivity.			0.80		
Achieving transparency and making information available.			0.85		
Facilitate the monitoring and follow-up process.			0.89		
Stimulating creativity and self-development among female employees.			0.87		
Training employees for new tasks.			0.79		

The fourth axis: the availability of the necessary facilities by the university to support electronic management systems					
The university provides computers with appropriate specifications that enable female employees to				0.39	
Access to electronic management systems.				0.31	
The university provides fast and secure communication networks.				0.45	
The university provides all the programs that the employee needs to operate the systems				0.59	
used in its field of work.				0.81	
The university provides all computer accessories (printer, storage units, etc.)				0.83	
What the employee needs in his field of work				0.93	
There are sufficient databases to store data and information.				0.73	
The Fifth axis: the effectiveness of electronic management systems in the College of Administration and Economics / University of Baghdad					
The process of entering the electronic management systems is easy and smooth.					0.34
Systems interfaces clearly describe all the services they provide.					0.33
Some tasks and work procedures are still done on paper due to system deficiencies					0.74
e					0.70

The systems are characterized by ease of navigation and use.					0.79
Systems are quick to respond to required commands.					0.77
Any information can be easily accessed and retrieved.					0.65
The information retrieved from the systems is up-to-date.					0.79
The information retrieved from the systems is accurate and reliable.					0.75
The information retrieved from the systems is appropriate to the needs of the business.					0.66
The systems provide security and privacy to its users.					0.82
There are backup copies of data and information in case it is lost.					0.76
The systems allow the workflow to be monitored.					0.75
The value of the latent root	18.967	3.793	3.223	2.586	2.400
The percentage of the explained variance	39.515	7.902	6.714	5.387	5.000
The percentage of cumulative variance explained	39.515	47.417	54.131	59.518	64.518

Through Table (2) of the confirmatory factor analysis, there are five factors with a different number of items within the modern electronic management systems scale out of the 48 items contained in that scale. Note that all the items have achieved acceptance because their saturations have exceeded (0.30), and this exploration is consistent with the assumptions of the previous literature regarding the dimensions of this scale.

It is also noted from the table that the values of the latent roots achieved by each factor exceed the correct one and are ide

ntical to the previous hypotheses. As for the value of the explained total variance, the three factors together were able to explain a variance percentage of approximately (65%) of the total variance, and this is a good indicator provided by Factor analysis to support the construction of this scale.

11.2. The assertive constructivism of the employee performance improvement variable

The confirmatory factor validity of the job performance improvement variable was conducted using the ready program (SPSS v.18) and the ready program (AMOS 23) and the results were obtained as in Table (3) which shows the model matching indicators approved in the confirmatory factor analysis of the job performance improvement variable.

Table (3) shows the conformity indicators of the job performance improvement model

indicators	optimum range	Values
chi-square value	to be spiritual	70.3
degree of freedom	What value?	27
Chi-square ratio to the degree of freedom	Do not exceed (5) good	4.12
CFI Comparative Match Index	ranges between (0.9 - 1)	0.91
TLI Tucker-Lewis Index	ranges between (0.9 - 1)	0.90
RMSEA square root mean approximate error	ranges from (0 - 0.08)	0.03

From the observation of the above table, it is clear that the job performance improvement variable has achieved all the required criteria and therefore the factor analysis can be carried out according to the method of greatest possibility, as the results of the factor analysis were through the use of the two programs (SPSS v.18) and (AMOS v.24) as shown in table (4)

Table (4) shows the results of the factor analysis of the measure of job performance improvement

Questionnaire items	Factor saturations
	Factor One
Job performance improvement	
Increase the employee's knowledge of work tasks.	0.51
Speed of work.	0.68
Low percentage of errors in the work.	0.59
Increase employee productivity.	0.70
Achieving transparency and making information available.	0.77
Facilitate the monitoring and follow-up process.	0.84
Stimulating creativity and self-development among female employees.	0.89
Training employees for new tasks.	0.75
The value of the latent root	5.002
The percentage of the explained variance	55.573
The percentage of cumulative variance explained	55.573

Through Table (4) of the confirmatory factor analysis, there are five sub-paragraphs (questions) for the measure of job performance improvement out of the (9) items contained in that scale. Note that all the paragraphs have achieved acceptance since their saturations have exceeded (0.30) and this exploration is identical to the assumptions of the previous literature regarding the dimensions of this scale. It is also noted from the table that the values of the latent roots achieved by the factor exceed the correct one and are identical to the previous hypotheses, as for the value of the variance The explained total, the factor was able to explain the percentage of the variance of

approximately (55%) of the total variance, and this is a rather good indicator provided by the factor analysis to support the construction of this scale.

12. Statistical Analysis:

12.1. Statistical analysis of the relationship between the dimensions of modern electronic management systems and improvement of job performance

To decide on the first main hypothesis of the research, which is composed of five sub-hypotheses, the relationship will be found by calculating the Spearman correlation coefficient for the correlation of ranks between each dimension of modern electronic management systems (knowledge, contribution, availability of facilities, challenges, effectiveness) with the axis of improving job performance. And then test that relationship by using the (T) test to show the significance of the correlation coefficients calculated through the statistical program (SPSS) and the interpretation of the results as follows:

Table (6) the values of Spearman's correlation coefficient and (T) test for the significance of the relationship between the dimensions of the axis of modern electronic management systems and the axis of improving job performance

Y	X Dimensions of modern electronic management systems axis	R Spearman's correlation coefficient	T (T) value computed	Indications
	Knowledge	0.501**	4.096	Significantly
	Contribute	0.769**	8.958	Significantly

Job performance improvement	Availability of facilities	0.761**	8.550	Significantly
	Challenges	0.631-**	5.731	Significantly
	Effectiveness	0.819**	9.276	Significantly

Tabular (T) value at the level of significance (0.05) and degree of freedom (53) = 2.006

Tabular (T) value at a level of significance (0.01) and a degree of freedom (53) = 2.673

(*) Significant effect at the level of significance 0.05.

(**) Significant effect at the level of significance 0.01.

1. The results of Table (6) indicated that the value of Spearman's correlation coefficient between the dimension of knowledge and the axis of job performance improvement reached (0.501), which is a positive direct-direction value with significant significance at the level of significance (0.05) and (0.01) since (T) values calculated for it and amounting to (4.096) and the interpretation of this result is that the more knowledge develops in the College of Administration and Economics, the University of Baghdad in question, this will contribute to the improvement of job performance in it, and thus the first sub-hypothesis is accepted, which states that “there is a significant correlation relationship between knowledge and performance improvement.” career.”

2. The results of Table (6) also showed that the value of Spearman's correlation coefficient between the contribution dimension and the axis of job performance improvement reached (0.769), which is a positive direct-direction value with significant significance at the level of significance (0.05) and (0.01) because the calculated (T) values It is (8.958), which is greater than its tabular counterpart, which is equal to (2.006) and (2.673) at the same levels of significance (0.05) and (0.01), respectively, and the interpretation of this result is that whenever knowledge improves in the College of Administration and Economics, University of Baghdad, this will contribute to the advancement of Improving the job performance of professors and employees in that college, and thus accepting the second sub-hypothesis, which states that "there is a significant correlation relationship between the contribution and the improvement of job performance".

3. The results of Table (6) indicated that the value of Spearman's correlation coefficient between the dimension of availability of facilities and the axis of improving job performance reached (0.761), which is a positive direct directional value with significant significance at the level of significance (0.05) and (0.01) because (T) values The calculated level is (8.550), which is greater than its tabular counterpart, which is equal to (2.006)

and (2.673) at the two levels of significance (0.05) and (0.01), respectively, and the explanation of this result is that the higher the level and the greater the availability of facilities in the College of Administration and Economics, University of Baghdad. It will contribute to the improvement of job performance in that college, and thus the third sub-hypothesis is accepted, which states "there is a significant correlation relationship between the availability of facilities and improving job performance".

4. The results of table (6) showed that the value of the Spearman correlation coefficient between the challenges dimension and the axis of job performance improvement reached (-0.631), which is a negative, reversible value with significant significance at the level of significance (0.05) and (0.01) because the calculated (T) values It is (5.731), which is greater than its tabular counterpart, which is equal to (2.006) and (2.673) at the same levels of significance (0.05) and (0.01), respectively, and the interpretation of this result is that the fewer challenges in the College of Administration and Economics, University of Baghdad, this will contribute to the advancement of And improving the job performance of the employees in that college, and thus accepting the fourth sub-hypothesis, which

states “there is a significant correlation relationship between challenges and improving job performance”.

5. The results of Table (6) indicated that the value of Spearman's correlation coefficient between the effectiveness dimension and the axis of job performance improvement reached (0.819), which is a positive direct-direction value with significant significance at the level of significance (0.05) and (0.01) because the calculated (T) values It is (9.276), which is greater than its tabular counterpart, which is equal to (2.006) and (2.673) at the two levels of significance (0.05) and (0.01), respectively, and the interpretation of this result is that the more effective the electronic management systems in the College of Administration and Economics, University of Baghdad, that is It will contribute to the improvement of job performance in it, and thus the fifth sub-hypothesis is accepted, which states "there is a significant correlation between effectiveness and improving job performance".

Overall, as a result of the achievement of acceptance of five sub-hypotheses out of five (i.e., acceptance of 100%) of the first main hypothesis, we conclude the acceptance of the first main hypothesis, which states “there is a significant correlation relationship between modern electronic management systems and improving job performance”.

12. Impact Hypothesis Test

12.1. Test the main effect relationship hypothesis of the research

The second main hypothesis of the research states: “There is a significant effect relationship of modern electronic management systems in improving job performance.”

In order to decide on the second main hypothesis, from which five sub-hypotheses emerge, the effect of modern electronic management systems in the dimensions of job performance improvement is measured by calculating the simple linear regression equation: $Y = a + \beta_i X_i$

And then testing the effect relationship using the (F) test to show the significance of the calculated regression equation (effect), as well as using the coefficient of determination (R²) to explain the amount of variance explained by modern electronic management systems in the axis of job performance improvement, and using the statistical program (spss), Table (6) shows the values of the coefficients used to measure the effect among the studied variables.

The impact of the dimensions of the modern electronic management systems variable in improving job performance will be studied by calculating a simple linear regression equation for the dimensions of the modern electronic

management systems variable with the axis of improving job performance, each separately, using the statistical program (SPSS) and interpreting the results shown in Table (6) as follows:

Table (7) the results of the coefficient values used in measuring the impact of modern electronic management systems in the dimensions of job performance improvement.

Variables		Transactions				
Y	X Dimensions of modern electronic management systems	fixed limit A	Regression parameter Beta	(F) computed value	coefficient of determination (R ²)	indication
Job performance improvement	Knowledge	1.93	0.49	16.77	0.24	Significantly
	Contribute	0.34	0.78	80.24	0.60	Significantly
	Availability of facilities	0.85	0.76	73.10	0.58	Significantly
	Challenges	1.17	0.62	32.84	0.38	Significantly
	Effectiveness	0.49	0.79	86.04	0.62	Significantly

Tabular value (F) at degree of freedom (53.1) and level of significance (0.05) = 4.02

Tabular value (F) at the degree of freedom (53.1) and the level of significance (0.01) = 7.13

A - The first sub-hypothesis states that "there is a significant influence relationship of knowledge in improving job performance".

The results of the statistical analysis showed a significant effect at the level of significance (05.0) and (0.01) for the dimension of knowledge in the variable of improving job performance because the calculated value of (F) of (16.77) is greater than its tabular counterpart, which equals (4.02) and (7.13) on the Consecutively and for both levels of morale, as the independent variable (knowledge) explained (24%), i.e. approximately a quarter of the total deviations or changes in the values of the variable dependent on the variable (improving job performance), which was reflected in the value of the coefficient of determination, which is the least of the factors in terms of interpretation compared to other factors, and the remaining percentage (76%) is attributed to the contribution of other variables not included in the model. Thus, the estimated regression equation for the effect of the dimension of knowledge on the variable of improving job performance is as follows:

$$\text{Job performance improvement} = 1.93 + (0.49) \text{ knowledge}$$

The value of the regression coefficient in the above equation (0.49) indicates that an increase in the knowledge dimension by one unit will also be accompanied by an increase in the job performance improvement variable by (49%), and thus the first sub-hypothesis is accepted, which states that “there is a

significant influence relationship Significance of the knowledge dimension in the job performance improvement variable.

B - The second sub-hypothesis states that “there is a significant effect related to the dimension of contribution to the job performance improvement variable.”

The results showed the presence of a significant effect at the level of significance (05.0) and (0.01) for the dimension of contribution to the variable of improving job performance, given that the calculated (F) value of (80.24), which is greater than its tabular counterpart of (4.02) and (7.13) on the respectively and for both levels of morale, and the independent variable (contribution) was able to explain (60%) more than half of the total changes or deviations in the values of the dependent variable (improving job performance) in the college understudy, depending on the value of the coefficient of determination, and the remaining percentage (40%) is attributed to the contribution of other variables that are not included in the model. Thus, the estimated regression equation for the impact of the contribution to the job performance improvement variable can be formulated as follows:

Job performance improvement = 0.34 + (0.78) contribution

The value of the regression coefficient in the above equation (0.78) means that an increase in the contribution dimension by one unit will lead to an increase in the job performance improvement variable by (78%). It has a significant significance for the dimension of contribution to the job performance improvement variable.

T - The third sub-hypothesis states that "there is a significant effect related to the dimension of availability of facilities in the variable of improving job performance."

The results highlighted the existence of a significant effect at the level of significance (05.0) and (0.01) for the dimension of availability of facilities in the variable of improving job performance, given that the calculated (F) value, which reached (73.10) is greater than its tabular counterpart of (4.02) and (7.13) For both levels of significance (05,0) and (0.01), respectively, and the value of the coefficient of determination gives an impression of the interpretation of the independent variable (the availability of facilities) at a rate of (58%), that is, more than half of the total changes occurring in the values of the dependent variable (the variable of improving job performance), and the remaining percentage (42%) is attributed to the contribution of other variables not included in the model, and thus the estimated regression equation can be formulated for the

effect of the dimension of availability of facilities on the job performance improvement variable as follows:

Improving job performance = (0.85) + (0.76) availability of facilities

The value of the regression coefficient in the above equation (0.76) indicates that an increase in the dimension of availability of facilities by one unit leads to an increase in the variable of improving job performance by (76%). Significance of the dimension of availability of facilities in the job performance improvement variable.

d- The fourth sub-hypothesis states that "there is a significant effect related to the challenges in improving job performance".

The results of the statistical analysis showed the presence of a significant effect at the level of significance (05.0) and (0.01) for the dimension of challenges in the variable of improving job performance because the calculated (F) value of (32.84) is greater than its tabular counterpart, which is (4.02) and (7.13) on the Consecutively and for both levels of morale, as the independent variable (knowledge) explained its percentage (38%), slightly more than a third of the total deviations or changes in the values of the variable dependent on the variable (improving job performance), which was reflected by the value of the coefficient of determination, and the remaining

percentage (62%) is attributed to the contribution of other variables not included in the model, and thus the estimated regression equation for the impact of the dimension of the challenge on the job performance improvement variable is as follows:

Improving job performance = 1.17 + (-0.62) challenges

The value of the regression coefficient in the above equation, which is (-0.62), indicates that an increase in the dimension of challenges by one unit will be accompanied by a decrease in the job performance improvement variable by (62%) and vice versa. Significant significance for the dimension of the challenges in the job performance improvement variable.

C - The fifth sub-hypothesis states that "there is a significant effect relationship for the effectiveness dimension in the job performance improvement variable".

The results showed the existence of a significant effect at the level of significance (05.0) and (0.01) for the effectiveness dimension in the variable of improving job performance, due to the fact that the calculated (F) value of (86.04) is greater than its tabular counterpart of (4.02) and (7.13) on the respectively and for both levels of morale, and the independent variable (efficiency) was able to explain a rate (62%) of approximately two-thirds of the total changes or deviations in the values of the

dependent variable (improving job performance) in the college understudy, depending on the value of the coefficient of determination, which is the largest value he was able after the effectiveness Its interpretation compared to the other dimensions, and the remaining percentage (38%) is attributed to the contribution of other variables not included in the model. Thus, the estimated regression equation for the effect of the effectiveness dimension on the job performance improvement variable can be formulated as follows:

Improved job performance = 0.49 + (0.79) effectiveness

The value of the regression coefficient in the above equation (0.79) means that an increase in the effectiveness dimension by one unit will lead to an increase in the job performance improvement variable by (79%). Significantly significant for the effectiveness dimension in the job performance improvement variable.

Overall, as a result of achieving acceptance of five sub-hypotheses out of five (ie, acceptance of 100%) of the second main hypothesis, we conclude the acceptance of the second main hypothesis, which states that "there is a significant effect of modern electronic management systems in improving job performance".

12.2. Influencing factor analysis (factor analysis)

The factor analysis method aims to reduce the variables or paragraphs affecting within specific factors to the least number and the most important impact, in the light of which the process of determining the saturation percentages for each paragraph is conducted. Improving job performance) and its saturation rates, and the following are the results of the analysis based on the statistical program SPSS).

12.2.1. Factor analysis of modern electronic management systems axis

The results of the factorial analysis of the sub-paragraphs of all the variables of the axis of modern electronic management systems showed the most important factors affecting according to the respondents' opinion, which were classified into (48) factors arranged according to the order of the questions in the questionnaire form and as shown in Table (8)

Table (8) In-kind values and variance ratios explained by the factors for the axis of modern electronic management systems

Factors	Specific values	Contrast ratio	Cumulative Contrast Ratio
1	18.967	39.515	39.515
2	3.793	7.902	47.417
3	3.223	6.714	54.131
4	2.586	5.387	59.518
5	2.400	5.000	64.518
6	2.010	4.187	68.705
7	1.637	3.410	72.116
8	1.365	2.843	74.959
9	1.207	2.515	77.474
10	1.108	2.309	79.783
11	0.932	1.941	81.725
12	0.879	1.831	83.556

13	0.792	1.650	85.205
14	0.755	1.573	86.778
15	0.661	1.377	88.155
16	0.647	1.347	89.502
17	0.524	1.092	90.595
18	0.515	1.072	91.667
19	0.502	1.046	92.713
20	0.443	0.923	93.636
21	0.387	0.806	94.442
22	0.317	0.661	95.103
23	0.301	0.628	95.731
24	0.285	0.593	96.324
25	0.259	0.540	96.864
26	0.217	0.451	97.315
27	0.193	0.403	97.718
28	0.170	0.355	98.073
29	0.152	0.316	98.389
30	0.127	0.265	98.654
31	0.107	0.223	98.877
32	0.082	0.171	99.048
33	0.080	0.166	99.214
34	0.076	0.157	99.372
35	0.058	0.120	99.492
36	0.053	0.110	99.602
37	0.046	0.097	99.699
38	0.034	0.070	99.769
39	0.028	0.058	99.827
40	0.020	0.042	99.869
41	0.018	0.038	99.907
42	0.014	0.030	99.936
43	0.010	0.021	99.958
44	0.008	0.016	99.974
45	0.005	0.011	99.985
46	0.004	0.008	99.993
47	0.003	0.006	99.999
48	0.000	0.001	100.000

Based on the results presented in Table (8), the most influential variables of modern electronic management systems were identified in ten main factors using the basic components method, which states that (the potential root of the extracted

factor is not less than the correct one), and these factors together contributed to the interpretation of what Its percentage (79.783%) of the total variance, which is a very good interpreted percentage, exceeded three-quarters of the total variance, and the following is a summary of the results of the factor analysis and saturation rates for each factor:

1. The first factor: (I have comprehensive knowledge about the services provided by all the modern electronic management systems applied in the college) represents the first factor, which is the most explanatory of the variance, with a percentage of (39.515%) of the total variance, which included 29 items from the variables of the axis of management systems Modern electronic out of (48) paragraphs

٢. The second factor: (I have comprehensive knowledge about the systems used by the Deanship and which I need in my work) This factor contributed to the interpretation of (7.902%) of the total variance, and it contained 29 influential items out of 48 items as shown in the table, which shows the saturations of the variable In the second factor and its degree of excellence.

3. The third factor: (I constantly follow what is being activated from the new electronic systems) Explain this factor (6.714%) of the total variance, and it contained 7 influential paragraphs out of 48 paragraphs as shown in the table, which shows the

saturations of the variable in the third factor and its degree of excellence.

4. The fourth factor: (I have a background of knowledge about electronic management): This factor explained the percentage (5.387%) of the total variance and it contained (11) influential paragraphs.

5. The Fifth Factor: (I have a background of knowledge about the main elements of electronic management): This factor explained the percentage of (5.000%) of the total variance and it contained (3) influential and basic paragraphs in the study.

6. The sixth factor: (I have a background of knowledge about the advantages of electronic management): This factor was able to explain (4.187%) of the total variance and it contained (3) influential and important paragraphs.

7. The seventh factor: (Changing the organizational structure to increase the effectiveness and efficiency of the organization): This factor was able to explain (3.410%) of the total variance and it contained (2) two main influential paragraphs.

8. The eighth factor: (the shift to decentralized administration): This factor was able to explain (2.843%) of the total variance and it contained (3) effective paragraphs.

9. The ninth factor: (simplifying administrative procedures): this factor explained the rate of (2.515%) of the total variance

and contained (9) influential paragraphs that are related and explain the importance of simplifying administrative procedures in the administrative environment in the college.

10. The tenth factor: (reducing the number of paper transactions): this factor was able to explain (2.309%) of the total variance, which is the least explained among the factors, and it contained (1) an influential paragraph, where the importance of this factor lies in Reducing and reducing the number of transactions and paper files used in administrative work among employees.

13. Results:

1. The results indicated that the more knowledge developed in the College of Administration and Economics, University of Baghdad investigated, this would contribute to the improvement of job performance in it, and thus the first sub-hypothesis was accepted, which states “there is a significant correlation relationship between knowledge and job performance improvement.”

2. The results also showed that whenever knowledge is improved in the College of Administration and Economics, University of Baghdad, this will contribute to improving the job performance of professors and employees in that college, and thus the second sub-hypothesis is accepted, which states that

“there is a significant correlation between contribution and job performance improvement.

3. The results indicated that the higher the availability and the availability of facilities in the College of Administration and Economics, University of Baghdad, this would contribute to the improvement of job performance in that college, and thus the third sub-hypothesis was accepted, which states that “there is a significant correlation between the availability of facilities and the improvement of job performance.” ”.

4. The results showed that the fewer challenges in the College of Administration and Economics, University of Baghdad, that would contribute to the upgrading and improvement of job performance for employees in that college, and thus the fourth sub-hypothesis was accepted, which states “there is a significant correlation relationship between challenges and improving job performance.”

5. The results indicated that the greater the effectiveness of electronic management systems in the College of Administration and Economics, University of Baghdad, this will contribute to the improvement of job performance in it, and thus the fifth sub-hypothesis is accepted, which states “there is a significant correlation between effectiveness and improving job performance” .

6. The results showed that there is a significant effect at the level of significance (05.0) and (0.01) for the dimension of availability of facilities in the variable of improving job performance, given that the calculated (F) value, which reached (73.10) is greater than its tabular counterpart of (4.02) and (7.13) for both levels of significance (05,0) and (0.01), respectively, and the value of the coefficient of determination gives an impression of the interpretation of the independent variable (the availability of facilities) at a rate of (58%), that is, more than half of the total changes in the values of the dependent variable (the variable improve job performance).

7. The results showed to achieve acceptance of five sub-hypotheses out of five (ie, acceptance of 100%) of the second main hypothesis, we conclude the acceptance of the second main hypothesis, which states: “There is a significant effect of modern electronic management systems in improving job performance.

14. Recommendations

1. Focus on electronic administrative processes and work to activate all activities and practices that were routinely active.
2. Work to spread the spirit of culture and job awareness at all administrative levels in the College of Administration and Economics, and encourage employees to work in modern

electronic management systems through the development of training programs, seminars, and awareness conferences that lead to an increase in the spirit of work in the new administrative systems.

3. Ending or eliminating the centralization of work or the centralization of decision-making by senior management in the work environment, through rehabilitating or designing the administrative organizational structure at the College of Administration and Economics, which will lead to the involvement and contribution of all the workforce in the strategic decision-making processes that concern career work.

4. Emphasis on full and direct coordination between the practices and procedures of electronic management and the systems that operate on them, while defining the actual needs of the work environment, and ensuring successful communication and continuous communication between management and employees on the one hand, and electronic management systems on the other hand, which will contribute to the success of administrative operations in all directions. And the sectors at the different administrative levels, who in turn will reduce the paperwork and the accumulated transactions that are outside the work of the electronic systems approved in the functional work.

5. Determining the importance of training needs and the most important programs that lead to the effectiveness and success of electronic systems used in administrative and organizational work, with knowledge of most of the training requirements, plans, and the type of communication techniques that electronic administration needs to ensure the effective work of electronic management systems.

References:

- Mahmud,(2017).Abdullah, A. (2014). Electronic Government and Its Impact on the Efficiency of Operations. Unpublished Master thesis, Management and Economy Faculty, King AbdulAziz University, Ryadh, Saudi Arabia. *Electronic Management. Dar AlThaqafa press, Amman, Jordan.,* 301-302.
- AbdulWahab, I. (2008). Computers in Business Administration: Systems Applications Administration. *journal of busines adminastration* , 144-147.
- Aboud. (2014). The Level of Applying the Electronic Management in Yarmouk University from the Perspective of the Administrators and Educational Board Members. *Jordanian Magazine for Educational Sciences,* 199-203.
- AlA'ani. (2014). The Quality of Electronic Management and Government in the Digital World; Survey Study. King Soud University Magazine, Administrative Sciences. *International Journal of Business and Management,* 55-56.
- AlAjez. (2015). The Role of Organizational Culture in Activating Applying the Electronic Management. *International Journal of Business Administration,* 112-113.
- Al-bahussin. (2015). The Impact of Human Resource Management Practices Organisational Culture. Organisational Innovation and Knowledge Management on Organisational Performance in Large Saudi

- Organisations: Structural Equation Modeling With Conceptual Framework. *International Journal of Business and Management*, 33-34.
- AlBakhar. (2012). The Electronic Payment Tools, Electronic Business and Commerce. University Press, Alexandria. *Journal of Knowledge and Electronic Management and It Modern Applications*, 266-268.
- AlBakhar. (2013). The Electronic Payment Tools, Electronic Business and Commerce. *University Press, Alexandria*, 323-324.
- Alead. (2011). Knowledge and Electronic Management and It Modern Applications. *Dar Alsafa, Jordan.*, 195-196.
- AlHadi. (2009). Electronic Government as a Tool for Development and Administrative Reform. *Cybraiou Journal, AlSadat Academy for Administrative Sciences*, 77-78.
- AlRasasi. (2013). The Impact of Applying Electronic Management of Achieving Knowledge Management in the Jordanian Banks. Unpublished Master Thesis, Jadara University, Jordan. *Unpublished Master Thesis*, 99-102.
- Alsamawi. (2014). The Effect of Training and Development (T&D) on Employees' Performance in the Presence of Knowledge Management. The Ministry of Finance in Yemen. *As A Case Study. Unpublished Master's Thesis, Middle east University, Jordan.*, 444-446.
- AlSameraei. (2009). The Effect of Training and Development (T&D) on Employees' Performance in the Presence of Knowledge Management. *journal of Management Information Systems*, 55-57.
- AlTaei. (2011). 2009. *Introduction to Management Information System: Information Technology Management*, 170-173.
- AlUteibi. (2011). The Impact of the Electronic Government on the Level of Employees' Performance. *King AbdulAziz university, Ryadh, Saudi Arabia.*, 66-70.
- Awamleh. (2012). Electronic Government and the Future of the Public Administration/ Survey Study for the Public Sector in Qatar. *journal of Alkuwait Studies*, 44-65.
- Badreddin. (2015). The Role of Information Systems Components in Improving the Administrative Performance in the West of Darfur. *Magazine for Applied Science and Literature*, 25-44.
- Bataineh. (2017). Impact of Information Systems on Innovation (Product Innovation, Process Innovation) - Field Study on the Housing Bank in Jordon. *International Journal of Business Administration*, 155-157.

- Darsana. (2015). The Influence of Personality on Employee Performance through Organizational Citizenship Behavior. *The International Journal of Management*, 88-92.
- Effects of Reward Management on Employee Performance in Hotels in North Coast. (2012). *Baraxilan Business Review*, 160-175.
- Gungor. (2012). The Relationship between Reward Management System and Employee Performance with the Mediating Role of Motivation. *Procedia Social and Behavioral Sciences. European Journal of Business and Social Sciences*, 155-160.
- Irtaimeh. (2016). Impact of Business Intelligence on Technical Creativity: A Case Study on AlHekma Pharmaceutical Company. *European Journal of Business and Social Sciences*, 333-342.
- Khammas. (2015). Information Technology and Its Impact on the Etechnical Setting in the Elibraries. *European Journal of Business and Social Sciences*, 133-139.
- Laudon, K. (2017). *Management Information Systems (12th ed.)*. Pearson Prentice Hall, New Jersey. *European Journal of Business and Social Sciences*, 114-120.
- Leonard, J. M. (2013). Information Technology and Its Impact on the Etechnical Setting in the Elibraries. *Iraqi Magazine for Libraries And Information*, 146-158.
- Njanja, W. L. (2013). Effect of Reward on Employee Performance: A Case of Kenya Power and Lighting Company Ltd., Nakuru, Kenya. *International Journal of Business and Management*, 41-49.
- Okoth.N.H. (2013). Effects of Reward Management on Employee Performance in Hotels in North Coast, Kenya. *International Journal of Business and Management*, 260-265.
- Qandeel. (2011). Effect of Reward on Employee Performance. *International Journal of Business and Management*, 130-136.
- Qasem, B. (2016). The Information System and Its Role in Decision Making. A Case Study, Algeria Communication Corporation- Alwadi. *Unpublished Master Thesis*, 49-57.
- Ruth. (2016). Does Information technology provides competitive Advantage and improves performance? An empirical Study of Trading Companies In Barazil. *Baraxilan Business Review. European Journal of Business and Social Sciences*, 177-195.

- Shakkah. (2016). An Investigation for Electronic Management Use in Educational Projects Management (A Case Study in AL Baha-KSA Area). *American Journal of Economics and Business Administration*, 270-283.
- Shamkant. (2010). Fundamentals of Database Systems, Massachusetts: Pearson Education. *The International Journal of Management*, 188-195.
- Sommer. (2009). Market Trends: Business Intelligence, worldwide, 2011-2014. p1. Gartner Group. *School of Business, University of Nairobi*, 90-104.
- Strategic Planning for the Applications of Information Technology, Field Study on a Sample of the Jordanian Universitie. (2017). *journal of Balqa applied university.*, 189-192.
- Sultana, A. I. (2011). Impact of Training on Employee Performance: A Study of Telecommunication Sector in Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 446-455.
- Vratskikh, I. M. (2016). The Impact of Emotional Intelligence on Job Performance via the Mediating Role of Job Satisfaction. *International Journal of Business and Management*, 69-76.
- Whiteley. (2004). Introduction To Information Systems, Organizations, Applications, Technology And Design (P.222). Palgrave Macmillan, New York. *International Journal Of Advancement In Engineering Technology. Management and Applied Science*, 295-304.