

Computerized Management Information Systems and Their Impact on the Job Performance of Employees at Palestinian Cellular Communications Company (Jawwal)

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Abstract: This study aimed to identify the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal). The SPSS statistical package was adopted. The study reached several results, the most important of which are the presence of statistically significant impact of the requirements of operation and management of computerized management information systems (hardware, software, human, organizational) on the performance of the employees of Palestinian Cellular Communications Company (Jawwal), and the presence of statistically significant differences between the perceptions of the respondents on the "impact Computerized Management Information Systems (MIS) on the performance of the employees of Palestinian Cellular Communications Company (Jawwal), attributed to the demographic variables (scientific level, years of experience, workplace, job level). The study concluded with a set of recommendations, the most important of which are the following:

1. The need to keep abreast of technological developments in the field of management information systems and to ensure the use of modern hardware, and sophisticated software.
2. Attention to the availability of modern networks and work to solve network problems such as problems of interruptions and slow communication that came within the results of the study.
3. Conduct user and IT courses for operational and application software to increase users' awareness of the capabilities of the hardware and software used and not to focus on how to use it only.

Keywords: Computerized Management Information Systems (MIS), Staff Performance, Palestine Cellular Communications Company, Jawwal, Palestine.

1. INTRODUCTION

As a result of technological and economic developments and globalization, information systems have become a prominent place in all areas, especially in the administrative fields, where information systems have developed at a rapid pace and multiple applications in all administrative levels, these systems as mentioned (El-Maghraby, 2002) It is one of the most successful ways organizations face the challenges of the day as they represent integrated activities aimed at obtaining information and knowledge by means of technology for managers to make decisions in different locations.

Information is a wealth, and its importance lies not only in the decision-making process, but also in other administrative processes, such as planning, policy-making, monitoring, and evaluating performance (Madi et al., 2018). Information is a major source of the organization's resources and one of its most important sources of success (Al-Bashabsha, 2005).

Public and private organizations have witnessed a major shift in information systems, represented by the use of computers, databases and communication networks, in addition to other technological means that contributed to the existence of an

information system based mainly on the use of computers (Abu Amuna et al., 2017), (Zaqout et al., 2018) and (FarajAllah et al., 2018)

However, despite the technical progress of these systems, they still need to be accepted and satisfied by the user, in order to accept the use and benefit from them, hence the interest of users of computerized information systems, and organizations to walk in two parallel lines when developing and applying computerized information is the interest in technology And interest in IT users (Al Shobaki & Abu Naser, 2016) and (Abu Naser & Al Shobaki, 2016).

Thus, the culture of information systems suggests that there is a need for an understanding of information systems, which includes the behavioral understanding of the organization and the individuals who use the systems, as well as the knowledge and understanding of computer technology, associated with information systems.

Information is a wealth, and its importance lies not only in the decision-making process, but also in other administrative processes, such as planning, policy-making, oversight, and evaluation of opinions, but after the use of information and systems in the performance evaluation of the most attractive

and important uses, without information becomes a process. Performance evaluation is arbitrary. Performance evaluation is seen as one of the basic management processes, and sensitive topics that are necessary when thinking and planning the development processes in any organization, through which senior management can design and prepare development programs commensurate with the circumstances of the founder. Without an assessment of their situation, it will be difficult for the institution to develop appropriate plans and programs.

Jawwal aspires to be the leading institution in the telecommunications and information technology sector in Palestine by providing an advanced infrastructure capable of keeping abreast of the latest developments in this sector, and providing all the services of terrestrial, cellular, information, internet services and added services. It relies on information systems and regards it as the technical base for starting.

Jawwal is constantly working to improve its image among its subscribers and increase their satisfaction with its services and prices by improving the quality of its services and raising the efficiency of its employees, which will only be based on computerized information systems, which are the backbone of administrative development. It monitors the performance of the employee and improves his / her functional capacity, and has influences on the behavior of individuals and groups to make the performance results consistent with the objectives of the organization, and gives the worker the ability to accomplish the tasks and duties assigned to him and develop his capacity to assume additional responsibilities to achieve a high degree of Career satisfaction, and give it the ability to adapt to the work environment, and can thus explore the elements of the human performance in terms of efficiency and productivity, which reflected its impact on the overall effectiveness of the organization.

2. PROBLEM STATEMENT

This research seeks to identify the suitability of the main requirements for the management and operation of the computerized information system (physical, software, human and organizational) to the business needs of Palestinian Cellular Communications Company (Jawwal), as well as the effectiveness of its information system in meeting the needs of its users of information appropriate for the performance of business.

By knowing the impact, the telecommunications company can identify the defects in the computerized information system and thus try to remedy it and then be able to develop and raise the efficiency of the functional performance of its employees, the problem can be formulated in the following question:

What is the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal)?

The study seeks to answer the following questions:

Q1-: What are the perceptions of the respondents towards the computerized management information systems in Palestinian Cellular Communications Company (Jawwal)?

Q2-: What is the level of job performance of the employees of Palestinian Cellular Communications Company (Jawwal) from the perspective of the employees?

Q3-: Is there an impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal) from the perspective of employees?

Q4-: Do the opinions of respondents in Palestinian Cellular Communications Company (Jawwal) differ on the impact of computerized management information systems on the performance of employees according to their personal characteristics?

3. RESEARCH IMPORTANCE

1. The study is expected to contribute to the evaluation of the computerized management information systems in Palestinian Cellular Communications Company (Jawwal), and its problems and difficulties, and to determine the suitability of these systems to the needs of employees and raise the level of performance.
2. The study of management information systems in Palestinian Cellular Communications Company (Jawwal) is of particular importance, as the company relies mainly on modern information systems.
3. The study is expected to improve the quality of services provided to subscribers, which will benefit both Palestinian Cellular Communications Company (Jawwal) and the community.
4. This study is useful in devising some useful lessons for researchers, which can be relied upon in the development of research in the field of management information systems and to identify the various aspects.
5. This study is the first of its kind to study the impact of computerized management information systems on the job performance of workers in the Palestinian business environment.

4. RESEARCH OBJECTIVES

This study aims to:

1. The impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal).
2. Identify the level of job performance of the employees of Palestinian Cellular Communications Company (Jawwal).
3. Determine the nature of the relationship between the requirements of management and operation of computerized management information systems and the performance of the employees of Palestinian Cellular Communications Company (Jawwal)
4. To know the significance of the differences between the respondents on the impact of computerized management

information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal).

5. Explanation of proposals to help improve the performance of employees by enhancing the role of management information systems in Palestinian Cellular Communications Company (Jawwal).

5. RESEARCH HYPOTHESIS

The study seeks to test the validity of the following hypotheses:

Ho 1: There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) between the requirements of the management and operation of computerized management information systems (physical, software, human and organizational requirements) and the performance of the employees of Palestinian Cellular Communications Company (Jawwal).

The following sub-hypotheses are derived:

1. There is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) between the material requirements and the performance of the employees of Palestinian Cellular Communications Company (Jawwal)
2. There is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) between the software requirements and the performance of the employees of Palestinian Cellular Communications Company (Jawwal).
3. There is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) between the human requirements and the performance of the employees of Palestinian Cellular Communications Company (Jawwal).
4. There is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) between the organizational requirements and the performance of the employees of Palestinian Cellular Communications Company (Jawwal).

Ho 2: There are statistically significant differences at the level of significance ($\alpha \leq 0.05$) between the average of the respondents opinions on the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal) due to the following variables (age, educational qualification, field of work, Number of years of service).

The following sub-hypotheses are derived:

1. There are statistically significant differences at the level of significance ($\alpha \leq 0.05$) between the average respondents' opinions on the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal) due to age.
2. There are statistically significant differences at the level of ($\alpha \leq 0.05$) among the average respondents' opinions on the impact of computerized management information

systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal) attributed to the educational qualification.

3. There are statistically significant differences at the level ($\alpha \leq 0.05$) between the average respondents' opinions on the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal) due to the field of work.
4. There are statistically significant differences at the level of ($\alpha \leq 0.05$) between the average respondents' opinions on the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal) attributable to years of service.

6. RESEARCH LIMITS AND SCOPE

1. **Human Limit:** This study is limited to the responses of administrative staff.
2. **Institutional limitation:** The study was conducted at Al-Azhar University.
3. **Time Limits:** This study was implemented in 2018 and therefore represents the reality at this time.

7. RESEARCH TERMINOLOGY

- **Computerized Information Systems:** A component of the administrative system; it collects, classifies, processes, analyzes and communicates physical and quantitative information for decision making to internal and external parties (Al- Dahrawi, 1998).
- **Job Performance:** A set of administrative behaviors expressing the knowledge of the employee, which includes the quality of performance and good implementation and technical expertise required in the job, as well as communication and interaction with the rest of the organization and abide by the administrative regulations governing his work and strive to respond with care (Al-Bashabsha, 2005).
- **Employee Performance Appraisal:** The process that includes procedures for evaluating the job performance of workers in their current work and exploring their future development (Al Shobaki & Abu Naser, 2016).

8. THEORETICAL FRAMEWORK

Firstly- Computerized Information Systems:

The complexity of the contemporary business environment has widened the circle of decisions to be taken under uncertainty conditions. Hence, computer and computer-based IT systems are seen as frameworks to support the integration of science with the manager's personal appreciation for adapting, developing, adapting, examining and testing alternatives to act and make decisions. The efficiency of the work of the Organization as a whole, therefore, computerized information systems in the current era is considered as the main artery responsible for the

management and other parties with physical and quantitative information.

The Director needs communication and access to relevant data and information, in addition to possessing the ability to analyze such data and information. Here, computer-based information systems can provide means of making communication accessible, This is an economically feasible and easier analysis for the decision maker (FarajAllah et al., 2018), (Sultan et al., 2018), and (El Talla et al., 2018).

Contribution of computerized information systems in achieving the objectives of the establishment

The computerized information system provides a number of contributions or returns to the entity. These contributions are measurable and some other contributions must be measured. Contributions that can be measured are a reduction in the costs incurred by the enterprise. Contributions that must be measured have a positive effect on the market value of the business, reputation, improved profitability and competitive advantage, and can be summarized as follows (Al-Kurdi, 2003):

1. Reduce errors.
2. Increased flexibility.
3. Increased activity speed.
4. Improve planning and management control and the ability to reduce uncertainty.
5. Open new markets and increase sales.
6. Increase organizational flexibility.

Second- Job performance:

Job performance is the net effect of an individual's efforts beginning with abilities, realizing the role or tasks, this means that performance in a given situation can be seen as a product of the interrelationship between:

1. Effort.
2. Capacity.
3. Recognize the role (s).

The effort that results from an individual gaining support (incentives) refers to the physical and mental energy, which is exerted by the individual to perform his task. The individual believes that it is necessary to direct his efforts to work through him, and the activities and behavior that the individual believes are important in the performance of his or her duties, define the perception of role (Mohammed, 2001).

Third- Evaluating the employees' performance:

The process of assessing the job performance of employees, although the designations differ, but it is a means to make an objective judgment on the ability of the employee in the performance of duties and responsibilities of the job, and thus verified his behavior and behavior in the performance of work, and the improvement in the manner in which his performance It also extends to verifying the employee's abilities to assume additional duties and responsibilities, to ensure the organization's effectiveness in the present, and its continued survival and effectiveness in the future as well (Al Shobaki & Abu Naser, 2016).

The role of computerized management information systems in improving job performance:

The importance of management information systems lies in their ability to achieve many of the benefits of the organization such as flexibility and speed, inventory control and production control and market research as well as help improve performance by increasing the speed and accuracy of transactions, and provide customer services in accordance with their needs and desires and help through reports provided by To support the decision-making process and thereby improve the quality, value and productivity of decisions based on information provided and associated with the productivity of the organization (Abu Naser et al., 2017), (Ahmad et al., 2018).

The use of these systems is not limited to one area but another, but used in organizations at the level of senior management taking the strategic and competitive dimension, and used at the level of middle management, where they are useful in the implementation processes and described here as a tactical predominantly repetitive nature, and used at the level of minimum management Strengthens the process of monitoring and direct supervision of the progress of repetitive operations (Al-Salem, and Mekawi, 2004).

9. LITERATURE REVIEW

➤ Study of (Msallam et al., 2019) aimed of the study was to identify computerized Management Information Systems and their relationship to improving the job performance of the employees of the Palestinian cellular communications company Jawwal. To achieve the objectives of the study, a questionnaire was designed and developed for the purpose of collecting data and measuring the study variables. SPSS was used. The study reached several results, the most important of which is the existence of a statistically significant role for the requirements of operation and management of computerized Management Information Systems (physical, software, human, organizational) in improving the performance of the employees of the Palestinian Cellular Telecommunications Company - Jawwal. There are statistically significant differences between the respondents' Computerized Management Information Systems and their relationship to improving the job performance of the employees of the Palestinian Cellular Telecommunications Company - Jawwal, due to the demographic variables (scientific level, years of experience, place of work, job level. The study concluded with a number of recommendations, the most important of which is the need to keep abreast of technological developments in the field of Management Information Systems and to ensure the use of modern equipment and advanced software. To take care of the availability of modern networks and work to solve network problems such as problems of interruptions and slow communication that came within the results of the study. Hold courses for users related to information

technology and operational software and application to increase users' awareness of the capabilities of the hardware and software used and not focus on how to use only.

- Study of (Abu Amuna et al., 2017) aimed to identify the role of Knowledge-Based computerized management information systems in the administrative decision-making process and that can lead to a reduction or limitation of potential problems, especially those related to unintended bias and ambiguous, these problems controls the collection of information for the primary knowledge base, and given that the knowledge based systems, computer information systems constitute a dynamic, constructed and programmed throughout specialized knowledge based systems programming languages. That is, they learn from the experience and knowledge gained. They can be used to build intelligent business decision making systems. The research found a set of recommendations, including: the need to use knowledge-based computerized information systems in the administrative decision-making process. And the configuration of tires capable of using modern applications of information technology in various administrative levels. As well as benefit from the advantages offered by the knowledge-based with respect to the effort, time and money and to be able to respond to environmental conditions and changes.
- Study of (Abdulla et al., 2017) the objective of the research is to identify the reality of integrating the dimensions of computerized health information systems in Dar Al-Shifa Medical Complex. The researchers used the questionnaire method to collect data. The researchers used the random stratified sample method, where 30 samples were distributed to test the internal consistency, structural validity and consistency of the questionnaire. After verifying the validity and reliability of the questionnaire for the test, (220) questionnaires were distributed to the study community. A total of 197 responses were retrieved with a return rate equal to (89.5%). The results showed that there were no statistically significant differences between the averages of the sample of the study on these areas and the domains combined due to the variables of (gender), (qualification), (place of work), (years of service), (Job title). The results showed that there were statistically significant differences between the mean of the sample of the study on these areas due to age for the benefit of those aged 40 years and over. The results confirmed that there are statistically significant differences between the averages of the sample estimates of the study on this field due to the nature of the work in favor of those whose nature is administrative. The results showed that there are statistically significant differences between the average of the sample of the study sample on these two fields due to the years of service in favor of those who have served for 10 years or more. The study reached a

number of recommendations including: The need to establish a specialized department of computerized health information systems, with clear responsibilities, and includes technical and administrative specialists and health personnel in the number and efficiency required, working as a team to implement mechanisms of work in computerized health information systems and have direct contact with staff in clinics and divisions to provide services and technical support as soon as possible with the best quality. Increase the support provided by senior management to users by encouraging them to use computerized health information systems and understanding their different needs. Interest in providing the material resources of the equipment and equipment used in the computerized health information system. The need to use database systems in the administrative and medical decisions in clinics and sections that have an impact in raising the effectiveness of decisions by improving the quality.

- Study of (Al-Otaibi, 2007) aimed to identify the role of automation in improving the performance of human resources departments using descriptive approach, by applying the social survey approach to workers who directly practice the functions and activities of human resources departments in the central security agencies in Riyadh. In general, it was weak, automation could contribute to the planning and recruitment of human resources and the identification of training needs significantly. The performance of human resources departments significantly, and the study proved that there are obstacles that limit the application of automation.
- Study of (Supattra, 2007) aimed to measure the impact of management information systems and information technology on the efficiency of management of the company. The study has reached several results, the most important of which is that the administrative information systems and information technology increase the effectiveness of the organization, the efficiency of its performance and the improvement of its strategic work. The more efficient the organization, the more effective it is, and the better the culture of employees in the organization towards the efficiency and effectiveness of performance.
- Study of (Al-Buheisi, 2006) discussed the advantages that can be achieved by business organizations as a result of their use of modern information technology, especially Internet technology and communication networks. The study included an exploratory study of the reality of the use of these modern technologies in the Palestinian reality. Information transfer technology has access to information for internal users and for decision-making. The researcher has reached the most important results that most of the Palestinian companies do not use these techniques and that the lack of knowledge of the managers of the importance of the Internet and their

weak ability in English are the most important factors that lead to the failure of Palestinian companies to use these techniques, while the qualifications of those managers and the quality of training courses that They received and the size of the companies is an important factor in determining their use of these technologies.

- Study of (Al-Muasher and AL-khasbah, 2006) aimed at demonstrating the impact of regulatory and technical factors on the applications of management information systems in the banking sector. The study found that there was a statistically significant effect of the technical factors and organizational variables in the MIS applications. The study concluded that employees and employees should be involved in the design and development of management information.
- Study of (Abu Sabt, 2005) aimed at evaluating the role of these systems in the decision-making in the Palestinian universities in Gaza Strip, the study is based on exploring the existence of differences between the components of management information systems in the universities Management Information Systems - the efficiency of individuals working in the system) The study also focused on measuring the role of information quality and the use of management information systems in the decision-making process. The study concluded that there are differences in the components of management information systems for the Islamic University, and that there is a very strong relationship between the organizational level of the Department of Information Systems and the quality and use of information in the decision-making process.
- Study of (Chang & King, 2005) developed a model to measure the performance of information systems based on the input and output models of information systems functions used to support the efficiency of functional processes and improve the performance of institutions. The model or management proposed in this research contains three outputs and trends to evaluate, namely, the efficiency of the system, the effectiveness of information, the effectiveness of information, the efficiency of the service, the efficiency of the system in terms of ease of use, rapid response, etc., as well as its impact on the functional performance of employees, and the effectiveness of information represented The quality of information in the design, use and value as well as its impact on the performance of staff and service efficiency in all activities ranging from the development of the system to its use in support and consultation. The effectiveness of the model and its positive impact on the effectiveness of the organizations and the improvement of the efficiency of operations in them.

Comment on Previous Studies:

The review of previous studies shows the different environments in which they were conducted, the different

nature of the activity of the organizations to which they were applied, the variety of variables addressed and the variety of statistical methods used to obtain and analyze data. These studies have revealed the importance of management information systems and their key role in achieving the mission and goals of the Organization if used properly, provide the required support from the management of the organization, and provide the appropriate environment for application. This study agreed with previous studies on the importance of information systems and their significant impact on performance, and on the importance of the technological dimension of information systems. This study is distinct from all previous studies in its focus and analysis of two variables are independent variable of computerized management information systems in all its dimensions on the other hand, and not on one factor alone.

10. THE PRACTICAL FRAMEWORK OF THE STUDY:

First- Study Methodology:

The researchers used the descriptive analytical approach, which attempts to study the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal). An analytical descriptive approach tries to compare, interpret and evaluate in the hope of reaching meaningful generalizations that increase the balance of knowledge on the subject.

The researchers used two main sources of information:

1. **Secondary sources:** Where researchers have dealt with the theoretical framework of the study to the sources of secondary data, which is the books and references of Arabic and foreign related, periodicals, articles, reports, researches and previous studies that dealt with the subject of study, research and reading in various Internet sites.
2. **Primary sources:** To address the analytical aspects, researchers have resorted to the collection of primary data through the questionnaire as a main tool of the study, designed specifically for this purpose.

Second- Society and Sample of Study:

The study population consists of approximately 60 employees of Palestinian Cellular Communications Company (Jawwal) in the Central Region. The researchers used the method of random sample, where 70 questionnaires were distributed to the study population and 60 questionnaires were obtained, with a recovery rate of 85.7%.

Third- Study Tool:

A questionnaire was prepared on "The Impact of Computerized Management Information Systems on the Functional Performance of the Employees of Palestinian Cellular Communications Company (Jawwal)".

Likert scale was used to measure the respondents' responses to the questionnaire paragraphs according to table (1):

Table 1: Likert scale scores

Response	Strongly Disagree	Not Agree	Neutral	Agree	Strongly Agree
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Class	1	2	3	4	5
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The researchers chose Grade 1 for the "strongly disagree" response, so the relative weight in this case is 20% and is proportional to this response.

Fourth- The questionnaire is valid

The honesty of the questionnaire is intended to measure the questions of the questionnaire what was developed to measure, and the researchers have verified the validity of the questionnaire through the sincerity of the scale.

Fifth- Validity of the scale:

1. Results of internal consistency:

Internal consistency refers to the consistency of each paragraph of the questionnaire with the field to which this paragraph belongs. Researchers have calculated the internal

consistency of the questionnaire by calculating the correlation coefficients between each paragraph of the questionnaire fields and the overall score of the same field.

2. Structure Validity:

Structural validity is a measure of instrument validity, which measures the extent to which the objectives you want to achieve, and shows how each area of study relates to the overall score of the questionnaire. Table (2) shows that all correlation coefficients in all resolution fields are statistically significant at $\alpha = 0.05$.

Thus, all areas of the questionnaire are true to what has been measured.

Table 2: Correlation coefficient between the degree of each field and the total questionnaire

Scope	Pearson Coefficient Of Correlation	Probability Value (Sig.)
Physical Supplies	.900	*0.000
Software supplies.	.886	*0.000
Human Supplies.	.753	*0.000
Organizational requirements	.861	*0.000
Requirements for the management and operation of computerized information system	.967	*0.000
Computerized Management Information Systems	.749	*0.000

*The correlation is statistically significant at $\alpha = 0.05$.

Sixth- Reliability

Stability of the questionnaire is intended to give this questionnaire the same result if the questionnaire was redistributed more than once under the same conditions and conditions, or in other words that the stability of the questionnaire means stability in the results of the questionnaire and not to change significantly if it was redistributed to the sample members several times over time periods Certain. The value of the Alpha-Cronbach coefficient was found to be high (0.930), so the final resolution was usable. Thus, the researchers have confirmed the validity and reliability of the questionnaire of the study,

which makes him fully confident in the validity and validity of the questionnaire to analyze the results and answer the questions of the study and test hypotheses.

11. ANALYZING AND DISCUSSING THE RESULTS OF THE STUDY:

The results of the study will be presented and discussed as follows:

Firstly- Characteristics of the study sample according to personal information:

Table 3: Distribution of the study sample according to personal information

Personal Information		The Number	Relative Weight%
Age	Less than 30 years	16	26.7
	From 30 - 40 years	28	46.7
	From 41 - 50 years	14	23.3
	More than 50 years	2	3.3
	Total	60	100.0
Qualification	Diploma	20	33.3
	Ba	36	60.0
	Postgraduate	4	6.7
	Total	60	100.0
Field of Work	Senior management	20	33.3
	Middle management	25	41.7
	Minor management	15	25.0
	Total	60	100.0

Years of Service	Less than 5 years	14	23.3
	5-10 years	33	55.0
	More than 10 years	13	21.7
	Total	60	100.0

Table (3) shows the following:

26.7% of the sample were under 30 years old, 46.7% were aged 30-40 years, 23.3% were aged 41-50 years, while 3.3% were over 50 years old.

33.3% of the sample hold a diploma, 60.0% hold a bachelor's degree, while 6.7% hold a graduate degree.

33.3% of the study sample had their work in senior management, 41.7% in middle management, and 25.0% in lower management.

23.3% of the sample study years of service have less than 5 years, 55.0% have years of service ranging from 5 to 10 years, while 21.7% have years of service over 10 years.

Second- Analysis of the questionnaire:

1. Analysis of the paragraphs "Requirements for the management and operation of computerized information system"

▪ **Analysis of paragraphs of the field of " material supplies"**

The T test was used to find out whether the average response rate reached neutrality of 3. The results are as follows:

Table 4: Arithmetic mean and probability value (Sig.) for each paragraph of the "Material Requirements" field

No.	Item	SMA	Relative Arithmetic Mean	Test Value	Probability Value (Sig.)	Ranking
1.	There are suitable computers to get the job done.	4.58	91.67	20.76	*0.000	1
2.	The system provides enough space for the process of storing information.	4.07	81.33	11.64	*0.000	2
3.	The company provides data entry methods suitable for business need.	3.35	67.00	2.39	*0.010	4
4.	The speed of the devices is proportional to the workload required in the company.	3.25	65.00	1.65	0.052	6
5.	The company's network has a fast connection.	3.35	67.00	2.36	*0.011	4
6.	The information network used in the company provides sufficient capabilities to achieve the objectives of the information system.	4.00	80.00	12.68	*0.000	3
All paragraphs		3.77	75.33	9.14	*0.000	

*The correlation is statistically significant at $\alpha=0.05$.

Table (4) shows that the arithmetic mean of all paragraphs is 3.77, ie the relative arithmetic mean of all paragraphs of the field is 75.33%, the probability value (.sig) is equal to 0.000. Therefore, the field is statistically significant at the level of significance ($\alpha = 0.05$), which indicates that the average degree of response to this field has exceeded the degree of

neutrality of 3, which means that there is approval by the respondents on this field.

▪ **Paragraph analysis of the "software requirements" field**

The T test was used to find out whether the average response rate reached neutrality of 3. The results are as follows:

Table 5: Arithmetic mean and probability value (.sig) for each paragraph of the "Software Requirements" field

No.	Item	SMA	Relative Arithmetic Mean	Test Value	Probability Value (Sig.)	Ranking
1.	The software used meets the business requirements of the company.	3.98	79.67	11.26	*0.000	2
2.	The software is updated to suit the company's business need.	3.97	79.33	10.88	*0.000	3
3.	The software used covers all the activities of the company.	3.40	68.00	2.84	*0.003	6
4.	Computer programs and applications are easy to use.	3.75	74.92	5.77	*0.000	4
5.	I have all the necessary instructions to run the programs I need to perform my work.	3.48	69.67	3.68	*0.000	5
6.	There is control over the programs used to ensure the safety of electronic data processing.	4.25	85.00	17.91	*0.000	1
All paragraphs		3.80	76.07	10.60	*0.000	

*The correlation is statistically significant at $\alpha=0.05$.

Table (5) shows that the arithmetic mean of all paragraphs is 3.80, ie the relative arithmetic mean of all paragraphs of the field is 76.07%, the probability value (.sig) is equal to 0.000. Therefore, the field is statistically significant at the level of significance ($\alpha \leq 0.05$), which indicates that the average degree of response to this field has exceeded the degree of

Table 6: Arithmetic mean and probability value (Sig.) For each paragraph of the “Human input” field

No.	Item	SMA	Relative Arithmetic Mean	Test Value	Probability Value (Sig.)	Ranking
1.	Contact with the department responsible for the information system directly.	3.77	75.33	7.33	*0.000	2
2.	The technical department of the computerized system quickly answers my queries.	3.40	68.00	2.97	*0.002	5
3.	The section on the computerized system addresses problems with the workflow.	3.55	71.00	4.34	*0.000	4
4.	I have good relations with the staff in the department responsible for the information system.	3.72	74.33	6.90	*0.000	3
5.	The computerized system section provides the same level of services at all times.	3.20	64.00	1.47	0.074	6
6.	Employees of the computerized system department shall have sufficient qualifications and skills for the work need.	3.92	78.33	10.58	*0.000	1
All paragraphs		3.59	71.83	7.94	*0.000	

*The correlation is statistically significant at $\alpha=0.05$.

Table (6) shows that the arithmetic mean of all paragraphs is 3.59, ie the relative arithmetic mean of all paragraphs of the field is 71.83%, the probability value (.Sig) is equal to 0.000. Therefore, the field is statistically significant at the level of significance ($\alpha \leq 0.05$), which indicates that the average response rate for this field is greater than the degree of

Table 7: Arithmetic mean and probability value (Sig.) for each paragraph of the “Regulatory Requirements” field

No.	Item	SMA	Relative Arithmetic Mean	Test Value	Probability Value (Sig.)	Ranking
1.	The information available in the system is suited to the job needs.	4.00	80.00	11.24	*0.000	1
2.	There is no exaggeration in the confidentiality of information between different administrative levels.	3.42	68.33	2.60	*0.006	3
3.	Senior management provides financial support to use the computerized information system	2.90	58.00	-0.62	0.268	6
4.	Encourages senior management to use computerized information system.	3.88	77.67	8.74	*0.000	2
5.	Top management provides training programs related to the use of computerized information system	3.25	65.00	1.84	*0.035	5
6.	Senior management is interested in his views and suggestions on the use of the computerized information system	3.35	67.00	2.70	*0.005	4
All paragraphs		3.47	69.33	5.04	*0.000	

*The correlation is statistically significant at $\alpha=0.05$.

From Table (7) it was found that the arithmetic mean of all paragraphs is 3.47, that is, the relative arithmetic mean of all paragraphs of the field is 69.33%, and that the probability value (.Sig) is 0.000. Therefore, field D is statistically significant at the level of significance ($\alpha \leq 0.05$). This indicates that the average degree of response to this field has exceeded the degree of neutrality of 3, which means that there is approval by the respondents on this area.

neutrality of 3, which means that there is approval by the respondents on this field.

▪ **Analysis of paragraphs of the field of "human supplies"**

The T test was used to find out whether the average response rate reached neutrality of 3. The results are as follows:

neutrality of 3, this means that there is approval by the respondents to this area.

▪ **Analysis of paragraphs of the field of "regulatory requirements"**

The T test was used to find out whether the average response rate reached neutrality of 3. The results are as follows:

Analyze all the paragraphs of "Requirements for the management and operation of computerized information system"

The T test was used to find out whether the average response rate reached neutrality of 3. The results are shown in Table (8).

Table 8: Arithmetic mean and probability value (Sig.) for all “Computerized Information System Management and Operation Requirements” clauses

The Field	SMA	Relative Arithmetic Mean	Test Value	Probability Value (Sig.)
Requirements for the management and operation of computerized information system	3.66	73.14	9.44	*0.000

*The correlation is statistically significant at $\alpha=0.05$.

Table (8) shows that the mean of all paragraphs of the "requirements of the management and operation of the computerized information system" is 3.66 (the total score of 5), ie the relative average of 73.14%, and that the probability value (.Sig) is 0.000. At the level of significance ($\alpha \leq 0.05$), which indicates that the average degree of response to this field is fundamentally different from the degree of average

approval and this means that there is approval by the respondents on the "requirements for the management and operation of computerized information system" in general.

2. Paragraph analysis of the "Job performance" field

The T test was used to find out whether the average response rate reached neutrality of 3. The results are as follows:

Table 9: Arithmetic mean and probability value (.sig) for each paragraph of the Job performance field

No.	Item	SMA	Relative Arithmetic Mean	Test Value	Probability Value (Sig.)	Ranking
1.	Increase the efficiency of the job performance of the employees.	4.20	84.00	17.02	*0.000	3
2.	Contribute to increased decision-making capacity.	4.08	81.67	14.95	*0.000	4
3.	Contribute to reduce the effort to accomplish the daily work.	3.83	76.67	6.49	*0.000	12
4.	Helps employees participate and be interested in new ideas.	4.07	81.33	12.51	*0.000	6
5.	Lead to speedy completion of work efficiently.	4.24	84.75	14.57	*0.000	2
6.	Lead to increased ability to solve business problems.	4.03	80.69	10.87	*0.000	8
7.	Contributes to increased ability and willingness to collaborate with co-workers.	4.02	80.33	13.88	*0.000	9
8.	Provide sufficient information on the work.	4.07	81.36	14.06	*0.000	5
9.	Contribute to the completion of work in accordance with the required quality standards.	4.37	87.33	12.56	*0.000	1
10.	Assists in adhering to business rules and procedures.	4.00	80.00	12.14	*0.000	10
11.	Improves overall performance.	3.97	79.33	11.76	*0.000	11
12.	Increases competition in performance among colleagues in the same work.	4.07	81.33	13.03	*0.000	6
All paragraphs		4.08	81.56	20.01	*0.000	

*The correlation is statistically significant at $\alpha=0.05$.

Table (9) shows that the arithmetic mean of all paragraphs is 4.08, ie the relative arithmetic mean of all paragraphs of the field is equal to 81.56%, the probability value (.Sig) is equal to 0.000. Therefore, field is statistically significant at the level of significance ($\alpha \leq 0.05$), which indicates that the average response rate for this field is greater than the degree of neutrality of 3, this means that there is approval by the respondents to this area.

Third- Test hypotheses of the study:

Ho 1: There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) between the requirements of the

management and operation of computerized management information systems (physical, software, human and organizational requirements) and the performance of the employees of Palestinian Cellular Communications Company (Jawwal).

Table (10) shows that the correlation coefficient is equal to .556 ,the probability value (Sig.) is 0.000 and is less than $\alpha = 0.05$ this indicates a statistically significant relationship between computerized information system management and operation requirements and job performance at a statistical level ($\alpha = 0.05$).

Table 10: Correlation coefficient between computerized information system management and operation requirements and job performance

Hypothesis	Pearson Coefficient Of Correlation	Probability Value (Sig.)
There is a statistically significant relationship at the level of significance ($\alpha \leq 0.05$) between the requirements of management and operation of the	.556	*0.000

computerized information system and job performance.		
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*The correlation is statistically significant at $\alpha=0.05$.

The following sub-hypotheses are derived:

1. **There is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) between the material requirements and the performance of the employees of Palestinian Cellular Communications Company (Jawwal)**

Table (11) shows that the correlation coefficient is .386, and that the probability value (Sig.) Is 0.000 which is less than $\alpha = 0.05$. This indicates a statistically significant relationship between material inputs and job performance at a statistical level ($\alpha = 0.05$).

Table 11: Correlation coefficient between material requirements and job performance

Hypothesis	Pearson Coefficient Of Correlation	Probability Value (Sig.)
There is a statistically significant relationship at the level of ($\alpha \leq 0.05$) between material inputs and job performance.	.386	*0.000

*The correlation is statistically significant at $\alpha=0.05$.

2. **There is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) between the software requirements and the performance of the employees of Palestinian Cellular Communications Company (Jawwal).**

Table (12) shows that the correlation coefficient is .383, and the probability value (Sig.) is 0.000 which is less than the indication level $\alpha = 0.05$ this indicates a statistically significant relationship between software requirements and job performance at a statistical level ($\alpha = 0.05$).

Table 12: Correlation coefficient between software requirements and job performance

Hypothesis	Pearson Coefficient Of Correlation	Probability Value (Sig.)
There is a statistically significant relationship at the level of ($\alpha \leq 0.05$) between material inputs and job performance.	.383	*0.000

*The correlation is statistically significant at $\alpha=0.05$.

3. **There is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) between the human requirements and the performance of the employees of Palestinian Cellular Communications Company (Jawwal).**

Table (13) shows that the correlation coefficient is .576, and the probability value (Sig.) is 0.000 which is less than the indication level $\alpha = 0.05$ this indicates a statistically

significant relationship between human inputs and functional performance at a statistical level ($\alpha = 0.05$).

Table 13: Correlation coefficient between human requirements and job performance

Hypothesis	Pearson Coefficient Of Correlation	Probability Value (Sig.)
There is a statistically significant relationship at the level of ($\alpha \leq 0.05$) between human inputs and job performance.	.576	*0.000

*The correlation is statistically significant at $\alpha=0.05$.

4. **There is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) between the organizational requirements and the performance of the employees of Palestinian Cellular Communications Company (Jawwal).**

Table (14) shows that the correlation coefficient is .546, and the probability value (Sig.) is 0.000 which is less than the indication level $\alpha = 0.05$ this indicates a statistically significant relationship between organizational inputs and job performance at a statistical level ($\alpha = 0.05$).

Table 14: Correlation coefficient between organizational requirements and job performance

Hypothesis	Pearson Coefficient Of Correlation	Probability Value (Sig.)
There is a statistically significant relationship at ($\alpha \leq 0.05$) between organizational inputs and job performance.	.546	*0.000

*The correlation is statistically significant at $\alpha=0.05$.

Ho 2: There are statistically significant differences at the level of significance ($\alpha \leq 0.05$) between the average of the respondent's opinions on the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal) due to the following variables (age, educational qualification, field of work, Number of years of service).

A "mono-variance" test was used to determine whether there were statistically significant differences, this parameter test is suitable for comparing 3 or more averages.

1. **There are statistically significant differences at the level of significance ($\alpha \leq 0.05$) between the average respondents' opinions on the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal) due to age.**

The results shown in Table (15) show that the probability value (Sig.) Corresponding to the test "mono-variance" is greater than the level of significance ($\alpha \leq 0.05$) for all fields and fields combined together, so it can be concluded that

there are no significant differences between the mean estimates of the study sample About these areas and areas combined together attributed to age.

Table 15: Single Variance Test Results - Age

The Field	Averages				Test Value	Probability Value (Sig.)
	Less Than 30 Years	30-40 Years	41-50 Years	More Than 50 Years		
Physical Supplies	3.88	3.77	3.65	3.58	0.329	0.804
Software supplies.	3.98	3.76	3.68	3.92	0.763	0.520
Human Supplies.	3.66	3.58	3.57	3.42	0.134	0.940
Organizational requirements	3.66	3.50	3.29	2.75	1.380	0.258
Requirements for the management and operation of computerized information	3.79	3.65	3.55	3.42	0.646	0.589
Computerized Management Information	4.16	4.13	3.93	3.71	1.506	0.223
All areas together	3.91	3.81	3.67	3.51	0.972	0.413

2. **There are statistically significant differences at the level of ($\alpha \leq 0.05$) among the average respondents' opinions on the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal) attributed to the educational qualification.**

The results shown in Table (16) show that the probability value (Sig.) Corresponding to the test of "single variance" is greater than the significance level ($\alpha \leq 0.05$) for all fields and fields combined together, so it can be concluded that there are no statistically significant differences between the mean estimates of the study sample About these areas and areas combined together attributed to scientific qualification.

Table 16: Results of Single Contrast Test - Educational Qualification

The Field	Averages			Test Value	Probability Value (Sig.)
	Diploma	BA	Postgraduate		
Physical Supplies	3.80	3.75	3.79	0.047	0.954
Software supplies.	3.83	3.79	3.83	0.030	0.970
Human Supplies.	3.51	3.68	3.21	1.547	0.222
Organizational requirements	3.48	3.49	3.25	0.192	0.826
Requirements for the management and operation of computerized information system	3.65	3.67	3.52	0.144	0.866
Computerized Management Information Systems	3.92	4.19	3.81	0.047	0.954
All areas together	3.74	3.85	3.62	0.684	0.509

3. **There are statistically significant differences at the level ($\alpha \leq 0.05$) between the average respondents' opinions on the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal) due to the field of work.**

software inputs, information system management and operation requirements ". The fields are attributed to the field of work and for the benefit of those whose field of management is minimal.

From the results shown in Table (17), it can be concluded that:

For the rest of the fields, the potential value has been shown that the (Sig.) is greater than the significance level of ($\alpha \leq 0.05$) so it can be concluded that there are no statistically significant differences between the mean estimates of the study sample on these fields and the fields combined together due to the field of work.

It was found that the probability value (Sig.) Corresponding to the single variance test "is less than the level of significance ($\alpha \leq 0.05$) for the fields" physical inputs,

Table 17: Single Variance Test Results - Field of Work

The Field	Averages			Test Value	Probability Value (Sig.)
	Senior Management	Middle Management	Minor Management		
Physical Supplies	3.48	3.81	4.07	3.919	*0.025
Software supplies.	3.48	3.94	4.00	5.139	*0.009

Human Supplies.	3.42	3.68	3.68	1.399	0.255
Organizational requirements	3.24	3.53	3.66	1.646	0.202
Requirements for the management and operation of computerized information system	3.41	3.74	3.85	3.756	*0.029
Computerized Management Information Systems	4.09	4.09	4.04	0.066	0.936
All areas together	3.63	3.86	3.91	2.070	0.136

* Difference between averages is statistically significant at $\alpha=0.05$.

4. There are statistically significant differences at the level ($\alpha \leq 0.05$) between the average respondents' opinions on the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal) attributable to years of service.

From the results shown in Table (18) it was found that the probability value (Sig.) Corresponding to the test of "mono-

variance" is greater than the level of significance ($\alpha \leq 0.05$) for all fields and fields combined together, so it can be concluded that there are no statistically significant differences between the mean of the study sample estimates About these areas and areas combined together attributed to years of service.

Table 18: Single Contrast Test Results - Years of Service

The Field	Averages			Test Value	Probability Value (Sig.)
	Less Than 5 Years	10-5 Years	More Than 10 Years		
Physical Supplies	4.00	3.70	3.69	1.186	0.313
Software supplies.	4.04	3.73	3.73	1.454	0.242
Human Supplies.	3.65	3.60	3.51	0.200	0.819
Organizational requirements	3.64	3.46	3.28	0.848	0.434
Requirements for the management and operation of computerized information system	3.83	3.62	3.55	1.053	0.356
Computerized Management Information Systems	4.18	4.05	4.03	0.605	0.550
All Areas Together	3.95	3.77	3.71	1.132	0.329

12. RESULTS

Through statistical analysis, several results are shown:

- The degree of approval of the material requirements in Palestinian Cellular Communications Company (Jawwal) reached 75.33%.
- The degree of approval of the software requirements in Palestinian Cellular Communications Company (Jawwal) was 76.07%.
- The degree of approval of human supplies in Palestinian Cellular Communications Company (Jawwal) reached 71.83%.
- Approval of the regulatory requirements in Palestinian Cellular Communications Company (Jawwal) reached 69.33%.
- The degree of approval of the requirements for the management and operation of the computerized information system in Palestinian Cellular Communications Company (Jawwal) in general reached 73.14%.
- The degree of approval of the performance of the employees working in Palestinian Cellular Communications Company (Jawwal) reached 81.56%.
- The results showed that there was a statistically significant relationship at the level of significance (α

≤ 0.05) between the requirements of management and operation of the computerized information system and job performance.

- The results showed a statistically significant relationship at ($\alpha \leq 0.05$) between physical inputs and functional performance.
- The results showed a statistically significant relationship at ($\alpha \leq 0.05$) between software requirements and job performance.
- The results showed that there was a statistically significant relationship at the level of ($\alpha \leq 0.05$) between human inputs and functional performance.
- The results showed a statistically significant relationship at ($\alpha \leq 0.05$) between organizational inputs and functional performance.
- The results showed that there were no statistically significant differences at the level of ($\alpha \leq 0.05$) between the average of the respondents' opinions on the impact of computerized management information systems on the performance of the employees of Palestinian Cellular Communications Company (Jawwal) due to the following variables (age, educational qualification, field of work, number of years of service).

13. RECOMMENDATIONS

Through statistical analysis and the results of the study shows several recommendations, the most important of which are:

- Jawwal should provide data entry methods that are appropriate to the work needs of the employees.
- The speed of the devices should be commensurate with the workload required by the employees of Palestinian Cellular Communications Company (Jawwal).
- The need to increase the speed of the network in Palestinian Cellular Communications Company (Jawwal) to suit the employees' work.
- The software used by Palestinian Cellular Communications Company (Jawwal) should cover all its activities.
- All employees must have the necessary instructions to run the programs they need to do their job.
- The computerized system department should provide the same level of services at all times.
- The technical department of the PCS-JAWWAL system should respond quickly to the employees' inquiries.
- Senior management should provide financial support to use the computerized information system.
- Senior management should provide training programs related to the use of computerized information system.

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