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# The impact of information systems and technology to the planning function in the Saudi telecoms companies

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**Abstract:** This study aimed to identify the impact of Information Systems and Technology in the preparation and implementation of plans for telecommunications companies in the Kingdom of Saudi Arabia, through the availability of information in telecoms system, and perceptions of employees of its importance, and determine the relationship between information systems and technology and to identify objectives and develop plans and identify alternatives, implementation and evaluation plans. The study found an effective information necessary elements needed by the physical requirements of humans and technical's, also showed provide full awareness of the importance of information system among workers in helping to perform the function of planning properly and required a system available. The study also found that there were significant relationship statistically significant differences between the information system and all of the set objectives, develop plans, and identify alternatives to the necessary plans, and implement plans and straightened, according to the Chi-Square Tests, which explained that the value calculated is less than Tabulated value and moral them all level was less than (0.05).

Keywords: Information Systems and Technology, Planning, Saudi telecoms companies.

# 1. Introduction

International and local organizations face many changes and challenges, whether they are industrial or service organizations. These challenges have led to the emergence of new concepts in the management of organizations that seek to achieve the goal of survival and continuity in the world of competition by changing their traditional methods that are not commensurate with the challenges faced by organizations and adopting modern management concepts that enable the organization to deal with the challenges it faces to achieve the best performance level, the use of these information systems by organizations is efficient and effective, which will achieve their objectives. The importance of these systems for their critical role in the development of organizations has increased, where they provide all the appropriate information at the most appropriate times for different administrative levels, In order to support all tasks and administrative functions in addition to improving and developing the communication movement and information flow between these levels, all of which would positively reflect on their overall performance (Mosawi and Mohammed, 2009)

As a result of technological and economic developments and globalization, information systems have become widely regarded as important in all areas, especially in administrative fields where the information systems have developed at a rapid pace and diversified applications at all levels of management .These systems, which AL-Magrabi has described as one of the most successful ways in which organizations face the challenges of the times, represent integrated activities aimed at obtaining information and knowledge by means of technology that managers can use to make decisions in different locations(AL-Magrabi 2002)

Therefore, these been systems have used at operational, technical and strategic levels, and these developments have been accompanied by an expansion in the use of IT systems and technologies which have made computer applications one of its main components in order to take advantage of its great capabilities in setting goals, gathering information, developing planning assumptions, developing alternatives to achieving objectives, choosing among them, selecting the appropriate alternative and then implementing, evaluating and following up the plan.

# 2. Research Problem

This research seeks to identify the contribution of information systems and technology in the preparation and implementation STC plans in Saudi Arabia and can formulate the problem in the light of the following questions:

- 1 / Is there an information system in the telecommunications company? Do workers have full awareness of its importance?
- 2 / Is there a statistically significant relationship between IT systems and goal setting?
- 3 / Is there a statistically significant relationship between the systems and information technology and the development of plans?
- 4 / Is there a statistically significant relationship between the systems and information technology and the identification of alternatives and differentiation between them and choose the appropriate alternative?
- 5 / Is there a statistically significant relationship between IT systems and application and evaluation of plans?

# 2.1. The Importance of Research

The importance of the study is as follows:

- 1 / The study is expected to contribute to the assessment of information systems and technology in the telecommunications sector in Saudi Arabia, in terms of suitability of these systems to the planning needs of the sector and raise its level.
- 2 / The study of information systems and technology in the Saudi telecommunications sector is of particular importance, as the company relies heavily on its work on modern information technology systems.
- 3 / The study is expected to contribute to emphasizing the importance of information systems and technology in planning processes, which will benefit the company and society at the same time.

#### 2.2. The Objectives of The Research

The study aims to achieve the following objectives:

- 1 / Identifying the impact of information systems and technology in planning in the telecommunications sector.
- 2 / Identify the extent of application of information systems and technology of these companies.
- 3 / Identify the obstacles that affect the application of information systems and technology in the planning of the telecommunications sector.
- 4 / Test the validity of the relationships assumed in the research model in Figure (1)

#### 2.3. Research Hypotheses

The study aims to test the following hypotheses:

- 1- The company has an effective information system and its components are available.
- 2. There is a statistically significant relationship between information systems and technology and goal setting.
- 3. There is a statistically significant relationship between information technology systems and plans.
- 4. There is a statistically significant relationship between information systems and technology and identification of alternatives.
- 5. There is a statistically significant relationship between information systems and technology and the application and evaluation of plans.

# 2.4. Study Approach

The following methods were used in this research:

# 2.4.1. Historical Descriptive Approach:

Depending on the nature of the objectives of the study, the historical descriptive approach was used to trace the research topic to clarify the theoretical framework and enrich it by collecting information from references, scientific books, periodicals and Arab and foreign journals.

# 2.4.2. Descriptive Analytical Method

The descriptive analytical approach describes what it is, explains it and analyzes it. It is concerned with defining the conditions and the relations between the phenomena.

This approach aims to study the phenomenon in all its characteristics and dimensions in a specific framework, and analyzes it based on the data gathered around it and then attempt to reach the reasons and factors that control, and thus access to the results can be generalized and applied, starting with the compilation of data and information and the classification and codification and try to interpret and analyze in order to know the impact of factors on causing the phenomenon under study, The results and how to control their causes, in addition to predicting the behavior of the phenomenon under study in the future and prepare to confront them

#### 2.4.3. Statistical Methods

Numerous statistical methods were used to analyze the data and information to be collected through the questionnaire, from personal interviews and observations, in order to prove the hypothesis of the study and achieve its objectives. And is represented in The following methods:

- 1 / the arithmetic mean to indicate the extent of the concentration of data to a given value and equal the sum of the values divided by their number).
- 2 / standard deviation to indicate the extent of the dispersion of data from each other and equal the sum of squares of deviations of values divided by their number).
  - 3 / Alpha Kornbach (to measure the stability of the resolution).
- 4/(T) for one sample (This test is used to detect the existence of a significant difference of the average of the society (theoretical average) from which the sample was withdrawn from the sample (respondents) to determine the availability of the dimensions of the information system and its components.
- 5 / Ka 2 test box to see the relationship between independent variable and dependent variables. 6 / correlation coefficient to determine the level of relationship between variables.

#### 2.5. Study Content

This study contains a theoretical framework dealing with the concept of information systems and technology, the function of planning concept and definition, stages and types of planning process.

It also included an applied study that tested the hypotheses that were developed for research through the data and information collected from the research community after its processing according to the methods that were determined in the methodology to be followed in the research.

#### 2.6. Previous Studies

# 2.6.1. Arabic Studies

- 1 / A study of (Abdel Hadi and Bouza, 1995) entitled (The role of information in decision-making and management of crises). The study aimed to identify the role of information in decision making and crisis management. It found that the information is the basis of any decision taken by officials at any location. It also indicated that the accuracy and validity of the decision depended on the availability of information in a timely manner. It also showed that it has an important role in dealing with and managing crises
- 2/ A study of (Ayoub, 2000) entitled "Efficiency of information systems from the point of view of the beneficiary in small Saudi enterprises". The aim was to identify the efficiency of information systems

from the point of view of the beneficiary in the small Saudi enterprises, and the extent of their degree varies according to the intensity of the use of the systems and the length of their use. It concluded that the majority of beneficiaries in the industrial establishments believe that the use of the applications of these systems was useful for the implementation of the operational and basic activities in the establishment. It also showed that their use in administrative decisions was limited. And confirmed the existence of a positive relationship between the degree of efficiency of systems and the support of senior management and the experience of the beneficiary in the use of the system, and its trends towards the system, and then support the external expertise of the beneficiaries of the system.

3/A study of (Zir, 2002) entitled "Effect of Information on Decision Making in Jordanian Commercial Banks". The aim was to identify the impact of information on decision making in Jordanian commercial banks. It found that banks use information technology such as internet, smart card, ATMs, check banks, electronic archiving. As well as their poor use in decision support and senior management support. She also explained the existence of a positive effect between the amount of information and accuracy, and that the most influential information in the decisions of managers is their reliance on information from outside the banks in addition to their personal information.

4/ A study of (Al-Mahasna, 2005) (Effectiveness of Information Systems in the Effectiveness of the Decision Making Process in the Jordanian Customs Department), aimed at identifying the efficiency of information systems in the effectiveness of the decision-making process in the Jordanian Customs Department. And reached the high perceptions of the respondents of the efficiency of systems, as well as their perceptions of the efficiency of decision-making. It also found a statistically significant effect of system efficiency in decision-making efficiency. She also pointed out that it is necessary to create an atmosphere of active participation among employees and follow-up and development.

5/ A study of (Al-Hayari, 2007) entitled "The compatibility of MIS with competitive business strategies and its impact on the institutional performance of industrial companies in Jordan." The aim was to identify the extent to which management information systems are compatible with competitive business strategies and their impact on the institutional performance of the general industrial companies in Jordan and identify the elements to be used. It found that the alignment of management information systems with competitive business strategies leads to increased productivity, sales and profitability in these companies. The clarity of the strategic directions, the commitment to effective communication, cooperation and exchange of knowledge and the shared visions between the IT executives and business executives are key elements for achieving strategic alignment.

6/ A study of (Sadeq, 2011) entitled "The Role of Characteristics of Strategic Information in Marketing Decision Making: An Exploratory Survey of Directors of Selected Industrial Organizations in Mineral Water Production in the Kurdistan Region of Iraq". The objective was to identify the reality of the strategic information in the mentioned organizations and the extent to which this fact contributes to the decision making process. It found that the characteristics of strategic information (cost - timing - reliability - flexibility - quantitative - cumulative - excellence) played a major role in marketing decision making and marketing mix decisions. It also showed the existence of links between the characteristics of strategic information and marketing decisions related to marketing mix elements.

7/ A study of (Ismail, 2011) entitled "Characteristics of information systems and their impact in determining the strategic competition option in the higher and middle administrations: An applied study on commercial banks in the Gaza Strip". Aimed at identifying the characteristics of the information systems and their impact in determining the strategic competition option in the higher and middle administrations of the commercial banks in the Gaza Strip. And reached the application of banks sector information systems in all parts, and keen to make maximum use of their use in keeping pace with technological developments in the business environment. As well as the efficiency of its work in coordination between branches and work to increase the revenues of banks, and reduce the cost of banking. It also demonstrated the important role it plays in achieving the competitive advantage of banks in the sector.

1/ A study of (Huang,2000)entitled the impacts of information technology on (organizational effectiveness in human service Organizations. The study aimed at identifying the relationship between information technology and organizational effectiveness based on the awareness of public sector

employees of their organizations. The study proposed an integrated model that unifies the social technology systems with the idea of internal processes based on the theory of competitive values, and then test hypotheses derived from the idea of internal processes. It is also assumed that IT systems will affect organizational effectiveness in the light of social regulations of organizations. It found that this model was a sound framework for assessing the impact of information technology on organizational effectiveness issues or issues. It also demonstrated that information technology as a variable has a strong association with organizational effectiveness after adjusting other variables in the model.

2/ A study of (Gebauer & Schober, 2005) entitled "

Information System Flexibility and Performance of Business Processes. Aimed at identifying the impact of the flexibility of information systems on the performance of internal business processes of the construction organizations in the state of California, United States. And found that there is an impact of the flexibility of information systems on the performance of operations of internal companies.

- 3/ A study of (Newkirk & Lederer, 2006) entitled "The effectiveness of strategic information system planning under environmental uncertainty." It aimed to identifying the impact of planning strategic information systems on the success of planning in the environment of uncertainty on a sample of executives in the Eastern and Western companies in the United States. And reached a number of results, the most important of which is the relationship between the planning of strategic information systems and the success of the planning stage in the light of the confirmation.
- 4/ A study of Misdolea, 2010 (Decision support system and customer: Relationship Management as components of the cybernetic system enterprise.). Aimed at identifying the role played by the information systems represented in decision support systems in enhancing the relationship with customers in French companies. It found that decision support systems enhance customer relationships, through which companies get the demands and needs of their customers.
- 5/ A study of (Lu & Ramamurthy, 2011) entitled Understanding the link between Information technology capacity and organizational agility: An empirical examination. The aim was to identify the extent to which information technology capabilities and organizational lightness are associated with organizations in the United States. It found that there is a positive correlation between IT capabilities and two types of organizational lightness (ease of process modification lightness associated with market capital).

The present study is an extension of the previous studies on which this study was based as an information base in guiding it. Its importance stems from the fact that it deals with the function of planning in the telecommunications services organizations, which have become the most traded in the Saudi stock market and globally for the services they need all members of society.

# 2.7. Summarize The Main Characteristic of the Current Study on Previous Studies in the Following

- 1 / In terms of the objective of the study, the objectives that previous studies sought to achieve such as the importance of information systems their role in achieving competitive advantages achieve high levels of performance efficiency of decision-making. The current study sought to know the impact of information systems on the planning function in the Saudi telecom companies.
- 2/ In terms of the variables of the study, the variables in the previous studies varied according to the goals mentioned previously. The study sought to test the information

system in terms of its impact on identifying goal, setting plans, identifying alternatives to plans, and implementing and implementing plans.

#### 3. The Theoretical Framework of Research

# 3.1. The Concept of Information Systems

The system is defined as a unit composed of overlapping subsystems, all of which aim to achieve a set of objectives or a set of interrelated and interrelated elements that work in harmony to achieve the goals and common goals (Hafez & Abbas, 2014)

The information system is defined as a group of employees, procedures and resources that collect, process and transfer data to become useful information and communicate it to beneficiaries in an appropriate and timely manner to help them perform their assigned functions (Hayali, 2006)

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Others believe that they are integrated systems of a group of individuals, devices, procedures and subsystems of information, by providing the Department with all the necessary accurate and adequate information about the functional and accurate activities, in order to accomplish the administrative functions of planning, organization and awareness and effective and effective decisions. & Reynolds

# 3.2. The Concept of Information Technology

There is a clear contrast in the definition of the concept of information technology by the writers and researchers, depending on the views of each of them, and the historical stages experienced by information technology in the stages of development, began to pay attention to them since the early sixties of the last century, which began to use systems designed to automate the operation of data, As well as the replacement of personnel with machines for the purpose of developing operational efficiency. Administrative information systems were subsequently used on a large scale in a manner that allowed the use of these systems to increase the efficiency of management and to satisfy its information needs (Al-Buhaisi, 2006)

It was also defined as "all that man has used in processing information from tools and devices, including processing, recording, conclusion, research, organization and retrieval." (Al-Tayeb, 2007)

And defined as "the equipment and means to help the success of the process of sending raw materials and information to customers in order to add value to them and achieve the strategic objectives of the organization (Slack, 2004)

- 3.3. Components of Information Systems
- 3.3.1. Information Systems Consist of
- 3.3.1.1. Devices
- A) group of personal computers, medium-sized or large computers or a network of various computers.
- B) Software: The systems by which computers work. It is divided into two parts: systems software. These are programs that assist in the execution of operations such as data order and retrieval, and application software, which run the organization's data such as payroll, accounting and manufacturing programs
- C Databases: A set of data linked to each other and organized in a manner that is compatible with the needs and requirements of users.
- D) Actions: are processes that describe and arrange the total steps and instructions for performing computer operations, called a system path map and explain what to do. E- Individuals: It is the main resource for the operation and control of other components. It is considered one of the most important components of the system. It analyzes information, develops programs and manages information systems. (Robert, 2004)

#### 3.4. The Importance of Information Systems for Administrative Devices

Information systems use all types of technology to operate, process, store and transmit information in electronic form, which is known as information technology, which includes computers, communication devices, networks, fax machines and other equipment. An information system triggers and presents data to users, possibly an individual or group of individuals who operate the information system outputs themselves as a result of the availability of computers. The outputs of many systems may be routinely used to monitor the performance of the administrative system itself or to simplify the operation of user orders. Decisions on technology used in the administrative system are considered the governing element in the success of that system, For example, in the United States, 50% of the capital invested in administrative bodies is related to information, and there are about 63 computers per 100 workers, while some sources estimate that One out of every three employees uses a computer. The percentage of managers who use computers in their work is about 88%. US companies spent \$ 500 million on information technology in 1996, while the total amount spent in the world amounted to about \$ 1 trillion (Haidar, 2002)

# 3.5. Administrative Officials See Information as One of the Following

# 3.5.1. Information as Resource

Information is one of the resources used to achieve the objectives of a project, just like money, raw materials, machinery and other resources that officials are working to make good use of and coordinate them to achieve the project. For example, providing officials with good information about consumers demand for project products will enable them to schedule production in the best possible way and minimize inventory levels.

# 3.5.2. Information as Origin

Information can be seen as an asset of the management, as are buildings, machinery and materials that contribute to the production process. This emphasizes the importance that officials treat information systems as investment from investments, which gives the administrative body a comparative advantage in the face of competitors in the markets.

# 3.5.3. Information as Commodity

Information can be considered a commodity of the goods produced by management, whether for internal use such as monitoring, performance evaluation or decision support, or for the purpose of selling in the market, such as the production of information films (Gordon & Gordon, 1999)

# 3.5.4. Types of Information Systems Used in Administrative Devices

Information systems used within government administrative agencies to assist in the management processes can be divided into four main types as follows:

#### 3.5.5. Process Processing Systems

The main functions of these systems are data processing and report production. Examples of process processing systems are: personnel affairs system, financial system, warehouse system and inventory monitoring (Qandilji and Samrani, 2002)

# 3.5.6. Management Information Systems:

Consists of a set of systematic processes that support the different administrative levels with the information needed to assist them in carrying out business and decision making within the administrative system. Examples of such systems are: marketing information system, finance information system, senior management information system (Mr.

# 3.5.7. Decision Support Systems

Are systems whose primary purpose is to assist decision makers in deciding whether to research and gather information or to choose appropriate models. It can be found at the workstations, through what is known as human and machine dialogue, data and models for assisted decision-making. Examples of their applications include analysis of the region's sales of its services and products, production scheduling, cost and price analysis, Vidal & Planeix, 2005).

#### 3.5.8. Office Information Systems

It aims to improve the efficiency of the secretarial and administrative staff through the possibility of modifying or changing the structure of office activities. These systems use modern techniques to facilitate operations: processing information, storing and retrieving information, and transferring information.

#### 3.6. Planning Function

The function of planning is the primary function of the administrative process, starting with its other functions which provide the manager with information on what has been accomplished in the organization as a result of the planning process. After setting the objectives of the plan, it sets a time limit for the implementation of each goal known as the beginning and the end, in order for senior

management to ensure the implementation of the objectives, a system of policies, rules and procedures that govern the behavior of individuals, especially department heads, is established to ensure compliance with the objectives set out in the plan. (Dori et al., 2010)

The need to plan for the desire to develop and increase the performance rates in the organization has grown, and the economic planning has become the most sensitive to achieve the objectives of the organization. This shows that there is a strong relationship between the efficiency of the planning and the commitment to its application and the improvement of the overall performance of the organization (Henry, 1981)

# 3.7. Planning Definition

Planning is defined as predicting what can happen in the future and reaching goals with minimal cost and effort. It is also known as the conscious identification of the act in order to reach the specific goals and it includes the pre-determination of what to do, who will do it and how it will be done. It is also known as a scientific method that management relies on to uncover the way forward for future work in order to reach and achieve the objectives of the previously established entity at its inception (Ahmed, 2014).

# 3.8. Stages of the Planning Process

The planning process consists of the following stages and steps: (Al Ali and Moussawi, 2006)

# 3.8.1. Develop Plans

When administrators plan, they begin to set goals that the organization wishes to achieve within a certain period. This period varies according to the nature of the goals may be a month or a year or more.

#### 3.8.2. Prediction

Is to estimate the probability of one or more events occurring in a certain period. It is two types: the first depends on the event and the guesswork is lacking in precision. The second is based on accurate statistical bases and increases the likelihood of reaching real and objective results.

#### 3.8.3. Defining Tasks, Duties and Possibilities

In the light of the estimates, it is easy to identify the activities that must be provided to reach the required level of performance. The requirements for the implementation of such activities could also be identified.

# 3.8.4. Develop Plans

From the above, objectives are set in detailed work programs linked to time-bound implementation schedules. A work system is also developed that regulates the behavior of individuals and controls their behavior. This system includes policies, procedures and rules developed by senior management.

# 3.8.5. Implementation of Plans

At this stage, the programs of the plans are distributed at the administrative levels of the organization. And define what is required of each level of implementation and completion of the cessation of specific standards and times.

#### 3.8.6. Evaluation Plans

The final stage of planning is the management should evaluate its plans after each stage of implementation in order to know the level of performance and the size of the achievement achieved, and identify errors and deviations to address them. The percentage of implementation of the plan is also determined to determine the extent of its success or failure.

# 3.9. Planning Types

Business organizations use different types of planning to choose from for their purposes. They can be classified into:

# 3.9.1. Planning by Activity

Includes repetitive plans that contain strategies - non-recurrent plans that are temporary in nature and placed to cope with a particular situation that is rare.

# 3.9.2. Planning by Time Range

This type is divided into: Short-term planning - Medium-term planning - Long-term planning (Abu Shanab, 2012)

#### 3.10. Field Study

#### 3.10.1. Study Procedures

A questionnaire was prepared to collect the data, which included 21 words to study five axes to determine the effect of IT systems on the performance of the planning function in the Saudi communication companies. Their locations were selected in Riyadh region, and 200 questionnaires were distributed on the sample of the research sample. Of the total distributed questionnaires, which is an appropriate proportion to enable the study.

# 3.11. Data Analysis Method

To analyze the data of the study, the Statistical Package for Social Sciences (SPSS) was used, and the T.test test was used to determine the extent to which the employees of the company understand what the information system is and what its availability is. The weighted average and the standard deviation were used to determine the extent to which an information system existed and the availability of its components. The method of square Ka 2 was used at a significant level of 5% (0.05) and more, as is the case in social sciences to determine the relationship between the independent variable and dependent variables. This means that if the value of Ca 2 calculated at 5% (0.05) or 95% confidence is greater than its value in the Ka 2 distribution table. If the value of a square of Ka 2 is less than its value in the square distribution table of Ka 2 or at a significance level less than 5%, this means acceptance of nullification and thus rejection of the alternative hypothesis (Hypothesis of research).

The coefficients were also used in this study, the correlation coefficient (Q R) was used to measure the level or degree of relationship between the independent and dependent variables for each alternative hypothesis.

# 3.12. Characteristics of the Research Sample

**Table 1.**The frequency distribution of the personal characteristics of the research sample.

Variable	Statement	Frequency	Percentage %
	Male	412	100.0
Sex	Female	0	0.0
	Total	142	100%
Age	Less than 20 years	5	3.5
	From 20 to 29 years	70	49.3
	From 30 to 39 years	48	33.8
	From 40 to 49 years	13	9.2
	From 50 years up	6	4.2
	Total	54	%100
Education level	Below secondary	7	4.9
	Secondary	39	27.5
	Diploma	47	33.1

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College student	44	31.0
Post graduate	5	3.5
Total	142	100%

From Table 1 of the characteristics of the study sample, the following is shown:

# 3.12.1. Type

It is clear from the table that all employees in the company are male, due to the nature of Saudi society and the laws that prevent women from working in many activities and jobs in the country, especially jobs that have direct contact with the public.

# 3.12.2. Age

The table shows that the majority of respondents were aged (20-26) with 44.4%, followed by (30-39) with 33.8%, while the lowest rate was 3.5% for those under the age of 20 years.

# 3.12.4. Level of Education

It is clear from the table that the majority of the respondents had a degree of 64.1% in the two categories of diplomas and bachelor's degrees, while the lowest percentage was over 3.5%. This is due to the preference of university graduates due to many reasons, The type of companies need to have a university degree in technical and executive technology and their ability to give and move in this type of activity.

# 3.13. Reliability and Stability of the Study Tool (Questionnaire)

To verify the authenticity of the tool and then to measure what was put for it, it was presented to specialized referees, and the observations that appeared in the tool were included, and then the tool was put in its final form. The stability of the tool means the consistency of the results when the tool is applied more than once. The stability coefficient values were calculated in the Alpha-Cornpach method of the scale as shown in Table 2.

**Table 2.** Stability coefficient for all terms.

Number of phrases	Alpha-Cornpach
21	0 .93

Table 2 shows the Alpha Kronbach coefficient to confirm the stability of the questionnaire as a whole and the stability value is (93), a very high value indicating that the tool has a high degree of stability and achieves the objectives of the study.

#### 3.14. Employees' Awareness of the Importance and Importance of the Information System

**Table 3.** Information system and its importance to companies

		T	df	Sig.	Sig. value	Probable average	Standard deviation	Direction
1	The company has full faith in the importance of the information system and its role in its success	79.187	141	0.000	Sig.	4.44	0.669	Strongly agree
2	The Company provides physical and software requirements and	54.108	141	0.000	Sig.	4.04	0.890	Agree

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		1		1		T	T	<del></del>
	effective information							
	systems							
3	The company has a database that contains information, information, value and correct information	58.772	141	0.000	Sig.	4.25	0.862	Strongly agree
4	The information owned by the Company is clearly stated	75.987	141	0.000	Sig.	4.64	0.728	Strongly agree
5	The information owned by the company reflects the position in which you operate	54.974	141	0.000	Sig.	4.00	0.867	Agree
6	The company's goal setting is based on information systems and technology	64.857	141	0.000	Sig.	4.39	0.807	Strongly agree
7	The systems and information technology used by the company help to identify objective objectives	59.557	141	0.000	Sig.	4.13	0.827	Agree
8	The systems and information technology used by the company help to set measurable targets	59.630	141	0.000	Sig.	4.07	0.813	Agree
9	The information systems and technology used by the company help to define clear objectives	50.137	141	0.000	Sig.	3.99	0.949	Agree
10	The information systems and technology used by the company help to define flexible targets	45.591	141	0.000	Sig.	3.90	1.020	Agree
11	The systems and information technology used by the company help to provide the basic information of the plan	53.818	141	0.000	Sig.	4.01	0.887	Agree
12	The systems and information technology used by the company help predict future conditions affecting the plan	42.744	141	0.000	Sig.	3.80	1.060	Agree
13	The systems and information technology used by the company help to understand the internal factors affecting	45.835	141	0.000	Sig.	3.87	1.005	Agree

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	the company's current and future position							
14	The information systems and technology used by the company help to understand the external factors affecting the company's current and future position	43.920	141	0.000	Sig.	3.87	1.051	Agree
15	The systems and information technology used by the company help identify possible alternatives (solutions) to achieve the objectives of the plan	53.152	141	0.000	Sig.	3.99	0.895	Agree
16	The systems and information technology used by the company assist in evaluating each of the alternatives presented to achieve the objectives of the plan	49.212	141	0.000	Sig.	3.78	0.916	Agree
17	The systems and information technology used by the company help to choose the optimal alternative to achieve the objectives of the plan	46.417	141	0.000	Sig.	3.85	0.989	Agree
18	The systems and information technology used by the company assist in the proper application of the plan (effectiveness)	46.216	141	0.000	Sig.	3.85	0.991	Agree
19	The systems and information technology used by the company help to implement the correct plan (efficiency)	41.132	141	0.000	Sig.	3.65	1.059	Agree
20	The systems and information technology used by the company assist in following up the implementation of the plan	48.357	141	0.000	Sig.	3.85	0.948	Agree
21	The systems and information technology used by the company assist in evaluating the plan	44.986	141	0.000	Sig.	3.88	1.028	Agree

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Total	53.466	141	0.000	4.01	0.917	Agree

In Table 3 it is clear that the sample members have confirmed the availability of the information system and its components and its commitment to the company, and this is shown by the averages of the sample for most of the statements, which exceeds the average of the statement (3) Study terms. The value of the T.test test is statistically significant for all axle expressions this can be seen from through their probability values below the statistical significance level (0.05) for all terms. The above table also shows that there are statistically significant differences between the average of the sample and the average of the scale for the benefit of the sample. The mean of the sample respondents (4.01) and the standard deviation (0.917) ). The value of (T), which amounted to (53,466), confirmed that difference, as it was statistically significant to (0.05) for the benefit of the sample members. This indicates the availability of the information system and its elements and its application in the company

# 4. Test Research Hypotheses

# 4.1. Analysis Of Basic Data

After the analytical description of the data of the research phenomena and to arrive at the availability of the information system and availability of its elements in the company, and knowing the relationship between the information system and the identification of goals and the development of plans and the identification of alternatives and their application. The use of the mean and the standard deviation for the test of the first hypothesis. The Ka2 method is used to give some basis for making decisions about the state of the relationship between the independent variable and the dependent variable. The test is based on the null hypothesis that there is no relationship between the information system as an independent variable, setting goals, setting plans, identifying alternatives and applying them as dependent variables. Calculated at a significant level of 5% and more. Is greater than the value of Ka 2. The tabular then refuses to impose nullity and the alternative hypothesis (the imposition of the search) is true.

# 4.2. First Hypothesis

(The company has an information system and the required elements are available).

**Table 4.** Availability of the information system and its components in the company.

	Statements	Probable average	Standard deviation	Direction
1	The company has full faith in the importance of an information system and its role in its success	4.44	0.669	Strongly agree
2	The company is equipped with physical and human inputs and effective software programs	4.04	0.890	Agree
3	The company has a database and information that contains valuable data and information	4.25	0.862	Agree Strongly
4	The information owned by the company is absolutely clear	4.64	0.728	Strongly agree
5	The information owned by the company reflects the position in which you operate	4.00	0.867	Agree
	Total	4.27	0.803	Strongly agree

Table 4 shows that the weighted average of the terms respectively was as follows: (4.44), (4.04), (4.25), (4.64), (4.00) which is greater than the average of the answers (3). The standard deviation is: (669), (890), (862), (728), (867). The weighted average of the total expressions was 4.27, while the standard deviation of the total was (.803).

From the above, it is clear that there is strong agreement on the existence of an information system and the availability of its elements, which emerged from the values of the probable average and standard deviation of the total phrases.

If we can say that the correct assumption that says (the company has an information system and has the elements required) a true and acceptable imposition. And therefore rejects the imposition of nothingness, which says (the company does not have an information system and does not have the elements required).

# 4.3. Second Hypothesis

(There is a statistically significant relationship between the information system and goal setting)

The primary purpose of this hypothesis is to test the relationship between the availability of the information system and the setting of objectives. To achieve this goal, the first phenomenon was divided. It provides the information system (the independent variable) to (strongly disagree, disagree, disagree, agree, strongly agree), and divide the second phenomenon, targeting (the dependent variable) also to (strongly disagree, Agree, Neutral, Agree, Strongly Agree). The two phenomena can be studied together according to this division as shown in Table 5.

**Table 5.** Relationship between information system and goal setting.

				Mal	ing plans			Total		
Description			Strongly disagree	Disagree	Neutral	I agree	I totally agree	No.	The percentage	
Availability of company	Strongly disagree	No.	0	О	0	0	0	0	0	
information	Disagree	No.	0	2	1	0	0	3	%2.1	
system	Neutral	No.	0	2	2	3	0	7	%4.9	
	I agree	No.	0	2	4	28	30	64	%45.1	
	I totally agree	No.	О	О	3	21	44	68	%47.9	
		No.	0	6	10	52	74	142	%100	
	Total	The percentage	0%	4.3%	%7.0	36.6%	52.1%	100%		
Chi square te	st and comp	patibility facto	r							
Chi-square calculated 6.341		6.341	Degrees of		224	Morale	level	·	0.000	
Chi-square tabular 213.263		213.263	Degrees of	ffreedom	224	Morale level		0.686		
Compatibility	y factor				Morale le	vel	•	0.000		

From Table 5 the Ka 2 test shows that the value of the Ka 2 computed is 6.341, at 224 degrees freedom and below the significant level = 0.000. While the value of square Ka 2 (critical value) at 244 degrees of freedom and a significant level of 0.686 = 213.263.

By comparing the square Ka 2 calculated by the value of the square Ka 2 box, it refuses to correct the nullity. Thus, the relationship between the availability of the information system and the setting of goals is essential, and therefore the assumption that there is a significant statistical significance between the information system and goal setting is a valid and acceptable imposition. This result supports the results of most previous studies and scientific theories in this area.

The Ka2-square method also determined the existence of the statistically significant relationship between the availability of the information system and goal setting, but did not specify the level or degree of the relationship. The correlation coefficient determines this. The Ka2 test shows that the coefficient of compatibility coefficient (kR) is 0.904. This value for the compatibility coefficient means that the correlation coefficient between the availability of the information system and the target setting = 91%.

# 4.4. The Third Hypothesis

(There is a significant relationship of statistical significance between the information system and the development of plans)

The main purpose of this hypothesis is to test the relationship between the availability of the information system and the development of plans. To achieve this goal, the first phenomenon was divided. It provides the information system (the independent variable) to (strongly disagree, disagree, disagree, agree, strongly agree), and divide the second phenomenon of plans (dependent variable) also to (strongly disagree, Agree, Neutral, Agree, Strongly Agree). The two phenomena can be studied together according to this division as shown in Table (6).

**Table 6.** Relationship between the information system and the development of plans.

				Mak	ing plans			Total	
Description			Strongly disagree	Disagree	Neutral	I agree	I totally agree	No.	The percentage
Availability of company	Strongly disagree	No.	0	0	0	0	0	0	0
information	Disagree	No.	0	3	0	0	0	3	%2.1
system	Neutral	No.	1	1	2	3	0	7	%4.9
	I agree	No.	2	4	14	10	1	31	%21.8
	I totally agree	No.	0	1	9	32	59	101	%71.2
		No.	3	9	25	45	60	142	%100
	Total	The percentage	2.1%	6.3%	%17.6	31.7%	42.3%	100%	
Chi square te	st and comp	oatibility facto	r						
Chi-square calculated 4.969		4.969	Degrees of	of freedom	182	Morale level		0.000	
Chi-square tabular 237.321		237.321	Degrees of freedom		182	Morale level		0.004	
Compatibility	y factor		0.0	382	M	orale leve	el	0.000	

From Table (6), the Ka 2 test shows that the value of the Ka 2 box is 4.969, at 182 degrees of freedom and below the significant level = 0.000. While the value of square Ka 2 (critical value) at 182 degrees of freedom and a significant level of 0.004 = 237.321.

By comparing the square Ka 2 calculated by the value of the square Ka 2 box, it refuses to correct the nullity. Therefore, the relationship between the availability of the information system and the development of plans in the company has a fundamental relationship and therefore the assumption that (there is significant relationship of statistical significance between the information system and the development of plans) is a valid and acceptable imposition. This result supports the results of most previous studies and scientific theories in this area

We also find that the method of square Ka 2 determined the existence of the relationship of statistical significance between the availability of information system and the development of plans, but did not specify the level or degree of this relationship. The correlation coefficient determines this. The Ka2 test shows that the correlation coefficient (QAR) value is 0.882. This value for the compatibility coefficient means that the correlation coefficient between the availability of the information system and the development of the plans = 88%.

#### 4.5. Fourth Hypothesis

(There is a significant relationship of statistical significance between the information system and identification of alternatives to plans)

The primary purpose of this hypothesis is to test the relationship between the availability of the information system and the alternatives to the plans. To achieve this goal, the first phenomenon was divided. It provides the information system (the independent variable) to (strongly disagree, disagree,

disagree, agree, strongly agree), and divide the second phenomenon of alternatives (dependent variable) to (strongly disagree) Agree, Neutral, Agree, Strongly Agree). Both phenomena can be studied by this division as shown in Table 7.

**Table 7.**Relationship between information system and identification of alternatives to plans.

•		<u> </u>		Mak	ing plans			Total		
Description			Strongly disagree	Disagree	Neutral	I agree	I totally agree	No.	The percentage	
Availability of company	Strongly disagree	No.	0	0	О	О	0	0	0	
information	Disagree	No.	0	1	1	1	0	3	%2.1	
system	Neutral	No.	0	3	2	1	1	7	%4.9	
	I agree	No.	0	3	12	13	3	31	%21.8	
	I totally agree	No.	1	3	9	44	44	101	%71.2	
		No.	1	10	24	59	48	142	%100	
	Total	The percentage	0.7%	7%	%16.9	41.6%	33.8%	100%		
Chi square tes	t and compa	tibility factor								
Chi-square calculated 2.204		2.204	Degrees o		140	Morale	e level	0.000		
Chi-square tabular 156.216		156.216	Degrees of freedom		140	Morale level		0.165		
Compatibility	factor	·	0.7	80	Me	orale level		0.000		

From Table 7 the Ka2 test shows that the value of the calculated Ka 2 box is 2.204, at 140 degrees freedom and below a significant level = 0.000. While the value of square Ka 2 (critical value) at 140 degrees freedom and a significant level 0.165 = 156.216.

By comparing the square Ka 2 calculated by the value of the square Ka 2 box, it refuses to correct the nullity. Therefore, the relationship between the availability of the information system and the identification of alternatives to the plans of the company is essential and therefore the assumption that there is a significant statistical significance between the information system and the identification of alternatives to the plans is a valid and acceptable imposition. This result supports the results of most previous studies and scientific theories in this area.

We also find that the Ka2 method determined the existence of the statistically significant relationship between the availability of the information system and the identification of plan alternatives, but did not specify the level or degree of this relationship. The correlation coefficient determines this. The Ka2 test shows that the coefficient of compatibility coefficient (kR) is 0.780. This value for the compatibility coefficient means that the correlation coefficient between the availability of the information system and the identification of plan alternatives = 78%.

#### 4.6. Fifth Hypothesis

(There is a significant relationship of statistical significance between the information system and the application of plans and calendars).

Vol. 8, No. 6: 7517-7535, 2024 DOI: 10.55214/25768484.v8i6.3629 © 2024 by the authors; licensee Learning Gate **Table 8.**Relationship between the information system and the application and evaluation of plans.

		<u> </u>		Mak	ing plans	•		Total	
Description			Strongly disagree	Disagree	Neutral	I agree	I totally agree	No.	The percentage
Availability of company	Strongly disagree	No.	0	О	0	0	0	0	0
information	Disagree	No.	1	1	1	0	0	3	%2.1
system	Neutral	No.	1	1	2	3	0	7	%4.9
	I agree	No.	О	3	10	15	3	31	%21.8
	I totally agree	No.	2	4	8	34	53	101	%71.2
		No.	4	9	21	52	56	142	%100
	Total	The percentage	2.9%	6.3%	%14.8	36.6%	39.4%	100%	
Chi square te	st and comp	oatibility facto	r						
Chi-square calculated 5.445		5.445	Degrees of		224	Morale	level	0.000	
Chi-square ta		203.056	Degrees of freedom		224	24 Morale level		0.839	
Compatibility	y factor		0.891		Morale le	evel		0.000	

From Table 8 the Ka2 test shows that the value of Ka 2 computed is 5.445, at 224 degrees freedom and below the significant level = 0.000. While the value of square Ka 2 (critical value) at 224 degrees freedom and a significant level of 0.839 = 203.056.

By comparing the square Ka 2 calculated by the value of the square Ka 2 box, it refuses to correct the nullity. Therefore, the relationship between the availability of the information system and the application of plans and calendar is essential, and therefore the assumption that there is a significant relationship between the information system and the application and evaluation of the plans is a valid and acceptable imposition. This result supports the results of most previous studies and scientific theories in this area.

We also find that the method of square Ka 2 determined the existence of the relationship of statistical significance between the availability of the information system and the application and evaluation of the plans, but did not specify the level or degree of this relationship. The correlation coefficient determines this. The Ka2 test shows that the coefficient of compatibility coefficient (kR) is 0.891. This value for the correlation coefficient means that the correlation coefficient between the availability of the information system and the application and evaluation of the plans is 89%.

#### 5. Conclusions and Recommendations

# 5.1. Results

- 1 / The company has an effective information system and has the necessary elements needed by material, human and technical requirements.
- 2 / Employees of the company fully aware of the importance of the information system in helping to perform the function of planning correctly and required.
- 3 / There is a significant relationship between the information system and determine the objectives that the company seeks through the function of planning to achieve.
- 4 / There is a significant relationship between the information system and the development of plans in a sound manner.
- 5 / There is a significant relationship between the information system and identify alternatives to the plans necessary to take advantage of them when needed.
- 6 / There is a significant relationship between the information system and the implementation of plans and implementation in ways appropriate to achieve the planning process.

#### 5.2. Recommendations

- 1 / Serious interest by organizations in information systems, procedures and modern techniques of devices and programs and management as it is today the real capital and the main source of its resources in light of the challenges and continuous changes in the business environment, so must be common research and development of material and moral in this area.
- 2 / The need to follow the scientific and practical methods and methods in the process of planning to link the fate and future of these organizations from the identification of the problem and the collection of information about them and the alternatives for their work and then evaluate them and to test the best alternatives through the optimal decision through continuously updating the information.
- 3 / Utilization of scientific qualifications and practical experience in the planning process, and taking into account the role of the human resources specialized in information systems, and the necessary training and appropriate quantity.
- 4 / Increase awareness of the importance of the implementation of administrative information systems by attending seminars and conferences and intensifying training courses.
- 5 / To build a common database for all departments and thus rely on electronic reports that allow managers to make planning decisions as quickly as possible, away from paper reports and procedures, and thus create integrated information systems.
- 6 / Automate SOA process fully to save time and effort and to help control quality and costs continuously.

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