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The Impact of the Use of Information Technology on Improving Institutional Performance in the Kingdom of Saudi Arabia (A Field Study on Engineering Consultancy Offices in Riyadh)

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Abstract:

The study aimed to identify the impact of the use of information technology in improving institutional performance in the Kingdom of Saudi Arabia, and the applied aspect was devoted to engineering consultancy offices in Riyadh, Saudi Arabia, to arrive at a set of results and recommendations that help in solving problems related to the study. The researcher targeted all employees, workers and stakeholders for (20) offices and engineering consultancy companies to represent the study population and (235) employees to represent the study sample. Due to the nature of the work of these offices and the presence of most of their employees in the construction sites and external workplaces, the researcher targeted 33% of the total study population, and accordingly the questionnaire was distributed to (85) workers, employees and stakeholders in the offices and engineering consultancy companies under study. The descriptive analytical approach was used, and the study relied on primary sources such as personal interviews, records, questionnaire and observation, and secondary sources such as scientific books, references, documents, official records, statistics and reports related to the subject of the study. The study reached a number of results, the most important of which are: The results of the study demonstrated the existence of a statistically significant relationship between the use of information technology (in its internal and external dimensions), and the improvement of institutional performance in the Kingdom of Saudi Arabia.

Keywords: Information Technology, Performance Evaluation, Competitiveness, Efficiency, Productivity.

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أثر استخدام تقنية المعلومات في تحسين الأداء المؤسسي في المملكة العربية السعودية (دراسة ميدانية على مكاتب الاستشارات الهندسية بالرياض)

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مخلص الدراسة

هدفت الدراسة الى التعرف على أثر استخدام تكنولوجيا المعلومات في تحسين الأداء المؤسسي بالمملكة العربية السعودية واختص الجانب التطبيقي منها مكاتب الاستشارات الهندسية بمدينة الرياض بالمملكة العربية السعودية للوصول الى مجموعة من النتائج والتوصيات التي تساعد في حل المشاكل المتعلقة بالدراسة. قام الباحث باستهداف جميع الموظفين والعاملين وأصحاب المصلحة لعدد (20) مكتب وشركة استشارات هندسية لتمثل مجتمع الدراسة وبعدد (235) موظف ليمثلوا عينة الدراسة. ونظرا لطبيعة عمل هذه المكاتب من تواجد معظم منسوبيها في المواقع الإنشائية وأماكن العمل الخارجية فقد قام الباحث باستهداف ما نسبته 33% من إجمالي مجتمع الدراسة، وعليه تم توزيع الاستبانة على (85) من العاملين والموظفين وأصحاب المصلحة في مكاتب وشركات الاستشارات الهندسية محل الدراسة. تم استخدام المنهج الوصفي التحليلي، واعتمدت الدراسة على المصادر الأولية مثل المقابلات الشخصية والسجلات والاستبيان والملاحظة والمصادر الثانوية مثل الكتب العلمية والمراجع والوثائق والسجلات الرسمية والإحصاءات والتقارير ذات الصلة بموضوع الدراسة. توصلت الدراسة إلى عدد من النتائج أهمها: أثبتت نتائج الدراسة وجود علاقة ذات دالة دلالة إحصائيا بين استخدام تكنولوجيا المعلومات (ببعديها الداخلي والخارجي)، وتحسين الأداء المؤسسي بالمملكة العربية السعودية.

الكلمات المفتاحية: تكنولوجيا المعلومات، تقييم الأداء، التنافسية، الكفاءة، الإنتاجية.

1. Introduction

Since the early years of the twentieth century, the world has been witnessing a revolution known as information technology, considered by some to be one of the most remarkable developments since the industrial revolution in the mid-18th century (Tom, 1991). This revolution changed our daily lives, whether personal or commercial. Today, the world has become a global village where the use of the Internet, mobile phones and satellite networks has reduced time and space and, thanks to computers and communications, has led to new ways of communicating, processing, storing and distributing vast amounts of information (United Nations Programme, 2001). Advances in the use of information technology, satellites, radio and optical fibers have made it possible for millions of people around the world to communicate electronically regardless of national or international borders. This explosion of communication is the latest and most significant wave of the information revolution (Evans & Worster, 1997).

It is clear that information technology is a major growth area in this century specifically, the business environment has become very dynamic and competitive which requires the use of advanced IT tools to improve efficiency and cost effectiveness and to provide high quality products and services to customers (Allen and Morton, 2004). Information technology is also a tool for marketing, customer contact and prospecting, as well as offering IT services as potential differentiated services to customers (Würthner & Klein, 2005). Organizations are increasingly using information technology to develop solutions to business problems, to improve the efficiency and effectiveness of the decision-making process, to enhance productivity and service quality, to achieve dynamic stability, and to compete for new markets.

(Boynton, 1993), Organizations have always sought and adopted technologies that enhance the efforts of their workforce in production and management indeed, they pointed out that despite the development of information technology over a long period of time, it has emerged as an important tool in managing organizational processes within an organization. The business environment has witnessed many successive changes and transformations, produced by a group of different factors, led by the phenomenon of economic globalization and the increasing trend towards knowledge based on the extensive use of information technology as a source of wealth in place of the capital economy,

Relying on the real revolution brought about by the wide spread of these technologies and what Its applications are accompanied by profound changes in the tools and methods of management, production and marketing, and in all the functions and operations of the institution.

Therefore, the integration of IT activities is seen as an important key not only to gain value from IT investments but also to improve organizational performance. The integration of IT systems in some companies and organizations continues to increase in complexity (Wang Han & Yang, 2015) which in turn leads to lower adoption rates for the use of new technologies. Thus, strategies, models, and methods must be developed to guide practitioners in creating and evaluating compatibility between technology and services. This alignment is achieved through a set of practices that can be understood from a social and technical perspective.

1.1 Problem Statement

Information technology plays a large and more important role in most organizations, especially within the companies and institutions of the study sample. The focus is on these companies because, compared to other industrial or commercial sectors, they have more problems in the dissemination and application of knowledge related to innovations and new technological tools such as information technology (OECD, 1997), (La Rovere, 1996).

(Ballantyne, 1998), stated that the main drivers and tools when selecting and implementing information technology in companies are pressures from key customers and focus on improving efficiency. Today, it is clear that companies are increasingly faced with more complex IT investment decisions. Over the years, engineering consultancy firms have continued to grow as organizations or institutions, whether large or small, and this has included a change in their operations. There has been a tremendous growth in the number of technology devices used by stakeholders in engineering consultancy firms and investments, whether in data management or communication systems. There was an urgent need to know whether this contributes positively to performance or not, hence the essence of the research, which includes the expected changes in the performance of these offices and companies, trying to reduce the time they take to process critical tasks and eliminate repetitive tasks, which leads to increased productivity and efficiency in addition to providing better service and quality.

Table 1.1:

Engineering Consulting Offices in the Kingdom of Saudi Arabia (February, 2021)

No.	Total number of licenses	N	%
1	initial	409	19
2	Effective	1708	78
3	Nearing completion	59	3

From this standpoint, it has now become clear the need to focus light on engineering consultancy offices in the Kingdom of Saudi Arabia as one of the commercial and service institutions, and through the following table, which shows the number of engineering consultancy offices in the Kingdom of Saudi Arabia according to the latest inventory carried out by the Saudi Council of Engineers in February 2021, it becomes clear to us The importance of this sector and the importance of this industry in the Saudi economy and the social responsibility it represents, which prompted us to draw the attention and attention of those in charge and stakeholders of these institutions to the importance of using information technology and its impact on improving institutional performance. **Through our study, we will answer the main research question:**

- **What is the role of information technology in improving the performance of engineering consultancy offices in Riyadh? Which stems from the following questions:**
  - What is the role of information technology in improving the performance of engineering consultancy offices in Riyadh from a financial perspective?
  - What is the role of information technology in improving the performance of engineering consultancy offices in Riyadh from the perspective of customers?
  - What is the role of information technology in improving the performance of engineering consultancy offices in Riyadh from the perspective of internal operations?
  - What is the role of information technology in improving the performance of engineering consultancy offices in Riyadh from the perspective of learning and growth?

1.2 Significance of the Study

- The importance of the study is evident from the fact that information technology is one of the modern topics that still attracts many researchers and scholars, especially in developing countries, of which we are a part, especially after the emergence of what is known as knowledge.
- The subject is considered one of the requirements of this era because of the role of information technology in the development of modern societies and what it achieves for the organization as a competitive advantage in addition to improving performance.
- The richness and complexity of the subject, which allows for the possibility of continuing and in-depth research in the future.
- A personal desire to provide a scientific product that contributes to improving the economy of the Kingdom of Saudi Arabia through the advancement of these companies to urge them to increase performance and from there to sustainability and competition.

1.3 Research Objectives

The study aimed, whether in its theoretical or practical aspect, to reach a number of objectives that can be summarized in the following points:

- Getting to know the concept of information and information technology, as well as being briefed on all its applications.
- Identifying the various applications of information technology and the areas of its use in engineering consultancy offices in Riyadh, as well as highlighting the importance of its use and its impact on improving its performance levels.
- To draw the attention of those in charge of engineering consultancy offices in the Kingdom of Saudi Arabia to the importance of using information technology and benefiting from its various applications.
- Clarifying the various theoretical dimensions related to performance, as well as recent trends in its evaluation and measurement.
- Identify the various models presented to measure performance.
- Access to a set of results and recommendations that help in solving the problems related to the study.

1.4 Research Hypothesis

- There is a statistically significant relationship between the use of information technology and performance improvement (internally and externally) in engineering consultancy offices in Riyadh, Saudi Arabia.
- There is a statistically significant relationship between the use of information technology (internally and externally) and improving performance from a financial perspective on the performance of engineering consultancy offices in Riyadh, Saudi Arabia.
- There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of clients on the performance of engineering consultancy offices in Riyadh, Saudi Arabia.
- There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of internal operations on engineering consultancy offices in Riyadh, Saudi Arabia.
- There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of learning and growth on engineering consultancy offices in Riyadh, Kingdom of Saudi Arabia.

2 Theoretical Framework

2.1 Theoretical framework

- **Technology:** The origin of technology goes back to the Greek word, which consists of two syllables (Techno), which means operation, and the second syllable (Logos), which is science or method. It can also be defined as a set of new knowledge, skills and experiences that can be transferred to a production party or used in Producing goods or services and then marketing and distributing them or using them to generate organizational structures, and technology can be defined as: "the application of procedures derived from scientific study and scientific expertise to solve real problems, and technology here does not mean only tools, but rather it is the theoretical and scientific foundations that aim to improve performance (Nouvel Hadid, 2007).

- **Data:** It is a set of irregular facts that may be in the form of numbers, words or symbols that are not related to each other, that is, they have no real meaning and do not affect the behavior of those who receive them (Mohamed Saber, 2005).
- **Information:** There are many definitions related to the concept of information, **the most important of which are:**
    - Structured facts and statements that describe a specific situation or problem (Wing, 2004).
    - Everything that brings us knowledge changes our view of things and weighs our experience (Mostafa Rebhi, 2010).
    - Data that has been processed in a specific way, starting with receiving data from its various sources, then analyzing, classifying and applying it until it is sent to the concerned concerned authorities (Sherif El-Asi, 2004)
- **Performance evaluation:** It is an organized and continuous administrative process, aimed at measuring, issuing judgments and evaluating the results of achieving the goals of the institution or organization according to the process of linking and integrating the organizational and strategic goals within the organization.
- **Competitiveness:** The ability of the institution to withstand competition in all its forms for a longer period (Potier, 2001).

- **<u>Definition of information technology:</u>**
    - **As defined by (Bakhti Ibrahim, 2009),** it is the sum of modern methods and techniques used for the purpose of simplifying a specific activity and raising its performance. And means of communication of all kinds, whether written, audio or visual, and its main objective is to facilitate bilateral and group communication through closed and open networks.
    - **Define it (Ken Haldon, 2007),** one of the management tools used, which consists of four components
        - **Informational hardware:** physical equipment for processing.
        - **Software:** software for organizing data on physical carriers
        - **Storage technology:** represented by physical carriers for storing data such as hard disks and optical disks

- **Communication technology:** It consists of equipment, physical means, and software that connects various hardware accessories and works to transfer data from one place to another so that computers can reach the communication equipment to form networks that connect these computers to exchange data.

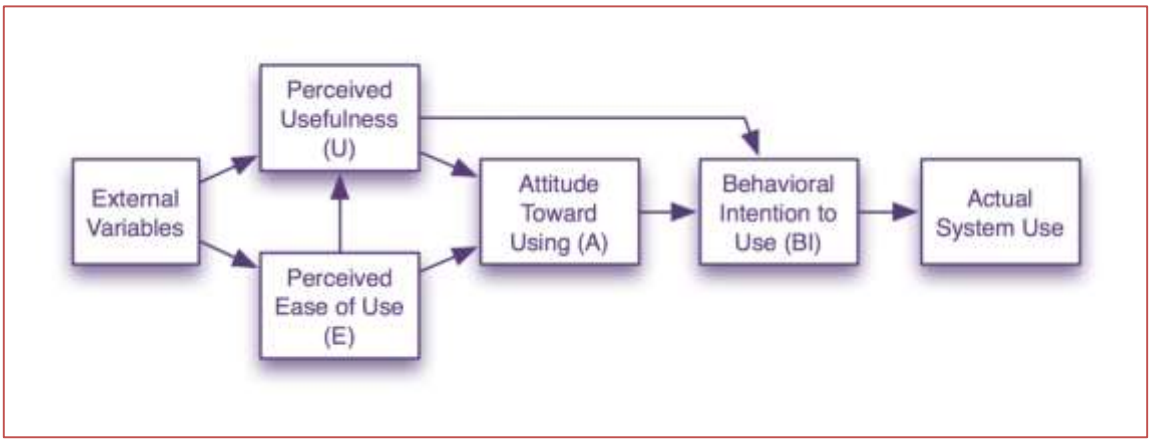
- **The relationship between information technology and organizational performance:**

The modern administration has acquired an amazing electronic power, which made it able to link between the internal functions and the various external environmental variables, thanks to the services provided by the information and communication technology in its union with the qualified human resource, and this was demonstrated by the effectiveness of the performance. There are a number of theories that dealt with this important aspect, and we will cover some of them through the following points:

Technology acceptance theory:

(Davis, 1989), is considered one of the most prominent who worked on studying the extent of user acceptance of dealing with any new technology through his development of the defined technology acceptance model as a method of prediction and to justify the extent of acceptance of information technology for the purpose of evaluating the use of software applications within organizations. The user's view of the new technology as being easy to use and useful, whenever there is a positive trend towards it and thus the availability of desire and motivation towards it (Abdulaziz Al-Fraih, 2014).

***Figure 2.1*: Technology Acceptance Theory Model**



This theory came as a development of the theory of rational action, which is based on the basic assumption that consumer behavior is rational and that he collects and evaluates all available information in a systematic manner and thinks about the effects of his possible actions. For the use of information technology, these factors were the perceived benefit or benefit, the perceived ease of use and the attitude towards using the system. It was also assumed that the user's attitude is a major determinant of actual use or non-use, and this attitude, in turn, is influenced by two main beliefs: perceived benefit and ease of use. (Laila Al-Taweel, 2001).

Perceived utility refers to the degree to which a person believes that the use of a particular system can enhance and improve his performance at work, while perceived ease of use refers to the degree to which a person believes that using the system can be easy so that it does not require any effort or suffering, etc. YRA Attitude factor refers to individual's feelings and emotions toward the use of technology. The model has occupied the first place in the past years among the models that try to explain the success and failure of information systems in the organization, as it has been experimentally tested extensively and intensively, which led to the belief in its strength, credibility and reliability, and thus its adoption by many researchers in studying the success of information technology and systems (Khaled Barakat, 2005)

2.2 Previous Studies

2.2.1 Study (Rofi, 2014)

Entitled: The impact of information technology on the development of medium-sized companies

The study aimed to measure the impact of the use of information technology on the performance of medium-sized enterprises in light of the varying economic and social conditions that characterize the environment in which the enterprise operates. There is a positive correlation between the use of information technology (mobile phone, personal computer and the Internet), and the improvement of performance levels from a general perspective also.

2.2.2 Study (Anita Ismail, 2013)

Entitled: The impact information technology and innovation on organizational performance

research aimed to analyses the relationship between the usage of information technology adoption and product innovation on performance at the organization. Data for the empirical investigation originates from a sample of the technology based companies in Malaysia. It was decided to focus the study on the Information, Communication, and Technology (ICT) companies located at Technology Park Malaysia designated as cyber cities under Multimedia Super Corridor (MSC). These researches are produced the following output: new findings and knowledge that benefited the researchers and managers in organizations that emphasize the strategic importance of information technology adoption and product innovation on organizational performance. The study provided empirical evidence of information technology adoption and product innovation on organizational performance. The results suggest that there is a good relationship between information technology adoption and product innovation on performance of the organization.

2.2.3 Study (Abdul Karim, 2013)

Entitled: The role of information technology in the rehabilitation of Algerian institutions

Where the main problem of the study was to search for the possibility of rehabilitating institutions through effective exploitation of what information and communication technology applications provide. The study was applied to a sample problem of 360 institutions, and the most important results are:

- Weak percentage of information technology ownership and exploitation in the institutions under study, especially with regard to information networks.
- Information technology has contributed to achieving speed in business performance, ease of information circulation, simplification of procedures, and to lesser degrees, in increasing sales, reducing costs, and being open to customers.
- The lack of training and lack of qualification of human resources are among the most important obstacles that prevent the adoption of information and communication technology applications in the institutions covered by the study.

3 Research Methodology

3.1 Study Approach:

One of the basic and essential components of conducting scientific research in a decent and scientific manner is the necessity for the researcher to adhere to the use of the scientific method, and to adhere to its principles, stages, laws, and types accurately so that his research reaches the correct scientific results in an organized and accurate manner (Ammar Awaidi, 1987).

In this context and in order to achieve the objectives of the study, the descriptive analytical approach was used, which is defined as a research method that deals with existing events, phenomena and practices available for study and measurement as they are without the researcher's intervention in their course. It is also "a set of methodological procedures that integrate the description of the phenomenon." Depending on the collection, classification, processing and analysis of facts and data, an adequate and accurate analysis to derive its significance and reach conclusions or generalizations about the phenomenon or topic under study (Rasheed, 2008). Therefore, the study adopted the descriptive analytical approach, as it is the most widely used method in social and human phenomena, and it is the appropriate approach to describe the case of the study. A field survey was conducted, and a questionnaire was designed covering all aspects of the use of technology in engineering consultancy institutions and offices. All collected data were analyzed by answering these questionnaires, and using the appropriate statistical methods (SPSS).

3.2 Sources of data

3.2.1 Primary data

Primary sources of data are first-hand information. The data was generated by the researcher for the purpose of this study. Primary data for this study was collected through observations, questionnaires and interviews. But it was mainly through questionnaires

3.2.2 Secondary data

In addition to the data collected from the primary source, which is the basis of the analysis process, some data were also extracted through secondary budgets, publications and circulars within the offices and engineering consultancy companies under study.

3.3 Study Population

With the aim of studying the impact of using information technology on improving institutional performance in the Kingdom of Saudi Arabia, then selecting the study population from a group of offices and engineering consultancy firms in Riyadh, Saudi Arabia, and given the large number of it and its geographical distribution within the city of Riyadh, which made it difficult to target all of them. The researcher targeted all employees, workers and stakeholders for (20) offices and engineering consultancy companies to represent the study population and (235) employees to represent the study sample. Due to the nature of the work of these offices and the presence of most of their employees in the construction sites and external workplaces, the researcher targeted 33% of the total study population, and accordingly the questionnaire was distributed to (85) workers, employees and stakeholders in the offices and engineering consultancy companies under study. In sampling, the researcher relied on the "regular sampling" technique, whereby in this method, members of a sample are selected at regular intervals for the population. This requires defining a starting point for the sample and for the sample size that can be repeated at regular intervals. Noting that this type of sampling method has a predetermined interval, thus this sampling technique is the least time consuming.

3.5 Study sample

Table 3.1:

Distribution of the questionnaire to the study sample

	No.	%
Retrieved	69	81.18
Non-retrieved	16	18.82
Total	85	100

Eighty-five respondents from employees, workers and stakeholders working in this important sector were targeted, and questionnaires were distributed to the respondents.

3.4 Study tool

3.4.1 Questionnaires

It is defined as a tool that contains a set of declarative questions or sentences, which the sample member is asked to answer personally and in the manner determined by the researcher according to the research objectives. The sample answers and the name of this person is the respondent (Alyan and Ghoneim, 2001).

As for (Kandilji, 2000), the questionnaire is defined as a set of different questions and inquiries related to each other. In order to achieve the goals that the researcher is looking for in light of his subject and the problem he has chosen for his research, written inquiries are sent to a group of individuals and institutions that the researcher has chosen as a research sample. The method used in this research was to answer a set of questions included in the questionnaire designed specifically for this study. The questionnaire contained forty-seven closed questions apart from other demographic questions related to gender, gender, experience and educational qualification. Each was measured on a five-point Likert scale, i.e. of five scores ranging from "strongly disagree" to "strongly agree" to indicate the rate at which respondents felt. The value (1) was given a qualitative rating of "strongly disagree" and the value (5) was given a qualitative rating of "strongly agree" with the average answers for each statement representing the degree of satisfaction of the sample members with a question. When this average rises to Approach (5), the respondents' satisfaction score is 'very high', and conversely, as this average decreases to Approach (1), the respondents' satisfaction score is 'very low or non-existent'

3.4.2 Interview

The fact that the researcher is interested in the field of engineering consultancy, and by virtue of his work in it, facilitated this matter in the researcher's dependence on interviews as one of the qualitative methods of data collection, in order to reveal the respondents' opinions about the subject of the study and its main and subsidiary problems. These interviews were of great value in preparing the exploratory study that culminated in exploring the field of study and determining the work system within the institutions, including the formulation of problematic and appropriate hypotheses for the subject of the study, through which the objectives related to each dimension of the study were identified,

and the necessary initiatives and measures taken by the institutions To achieve these goals, as well as extract the appropriate indicators to measure the extent to which these goals are achieved

3.4.3 Note

During his field visit, the researcher recorded observations, followed up on the variables, and compared them with previous visits, in an attempt to understand and draw conclusions.

3.7 Statistical methods

The analytical descriptive approach was used, which is defined as a research method that deals with existing events, phenomena and practices that are available for study and measurement as they are without the intervention of the researcher in their course. Accurately to extract its significance and reach conclusions or generalizations about the phenomenon or topic under study (Rasheed, 2008). **To achieve the objectives of the study and verify its hypotheses, the following statistical methods and procedures were used:**

- Cronbach's alpha analysis coefficient.
- Percentages and frequencies.
- Mean arithmetic.
- Standard deviation.
- Multiple regression analysis coefficients.

To apply the above-mentioned statistical methods and methods to the data obtained from the sample answers, the statistical analysis program (SPSS) was used.

3.8 Reliability and Validity

3.8.1 Reliability

The reliability of the questionnaire (the study tool) is intended to give almost the same results in the event of its repeated submission under the same conditions in different time periods. The stability is expressed statistically through the Cronbach Alpha stability coefficient, whose value generally ranges between zero and the correct one, as the greater the value of the coefficient and it was close to one. This indicates that the tool has high stability and vice versa.

In general, most studies indicate that the tool has an acceptable degree of stability in about the average exceeding a value of 0.6. The Alpha Cronbach method was used to measure the stability of the questionnaire, and the results are shown in the following table:

Table 3.2:

Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.894	6

3.8.2 Validity

In an attempt to verify the validity of the questionnaire and whether it was appropriate in terms of phrases and formulation, the researcher presented the questionnaire form to the supervisor and some faculty members, and they suggested making some modifications regarding the way of formulating some of the phrases so that they express more accurately. The researcher responded and did the necessary deletion and modification in light of the suggestions presented, and thus the questionnaire came out in its final form.

4 Analysis of the Results

4.1 Demographic variables

Table 4.1:

distribution of the study sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	49	71	71	71
	Female	20	29	29	100
Age	Less than 30	8	11.6	11.6	11.6
	From 30 < 45	24	34.8	34.8	46.4

	From 45 < 60	37	53.6	53.6	100
Qualification	Secondary	11	15.9	15.9	15.9
	Diploma	8	11.6	11.6	27.5
	Bachelor	38	55.1	55.1	82.6
	Master/DBA	12	17.4	17.4	100
Experience	Less than 5 Years	9	13	13	13
	From 5 to 10 Years	17	24.6	24.6	37.7
	From 10 to 15 Years	31	44.9	44.9	82.6
	More than 15 Years	12	17.4	17.4	100
Total		69	100.0	100.0	

4.2 Descriptive analysis of study variables

4.2.1 Analysis of the questionnaire's axes

4.2.1.1 The first axis: the impact of the use of information technology on use within the institution

Table 4.2:

Standard deviation and averages of the axis of the impact of the use of information technology on use within the organization

	Mean	**Std. Deviation**	**Approval Degree**	**Arrange**
1. The institution owns computers and equipment to provide electronic services.	3.69	.712	Agree	5
2. Equipment's are periodically renewed in your institution.	3.42	.717	Agree	8
3. Information technology is used in all departments of the organization.	3.41	1.185	Agree	10
4. The organization uses multiple software for the purpose of organizing its functions	4.08	.358	Agree	2

5. Expanding the use of technology requires raising the scientific qualification of the human resource.	4.27	.363	Strongly Agree	1
6. The institution provides modern technical methods and methods in the internal and external communication process.	2.93	1.124	Neutral	12
7. There is information integration between the various departments of the institution.	3.83	.640	Agree	4
8. The exchange of information between the different administrations takes place electronically.	3.41	.668	Agree	9
9. All the Corporation's reports are prepared electronically.	3.40	.783	Agree	11
10. Enhancing collaborative electronic work within the institution.	3.99	.694	Agree	3
11. Electronic archiving of the institution's operations is done.	3.60	.689	Agree	6
12. Supporting creativity and innovation processes in the organization.	3.55	.557	Agree	7
Total	**3.62**	**.168**	**Agree**	**-**

It appears from the table above, that the answers of the research sample members showed a general trend towards approval of the positivity of the internal use axis, with an arithmetic mean of (3.62), and a standard deviation of (0.168), which generally indicates the benefit of most of the uses that it provides information technology in this field. We also note that the most important phrases were phrase 5 (the expansion of the use of technology requires raising the scientific qualifications of human resources) with an average of (4.27), followed by phrase 4 (the institution uses multiple software for the purpose of organizing its functions),

With an average of 4.27. (4.08), and the third place in terms of importance was for phrase 10 (promoting collaborative electronic work within the institution), this arrangement reflects the reality of the use of information technology in engineering consultancy offices in Riyadh, which we find based primarily on the traditional use associated with office operations in the first place.

The seventh phrase (there is information integration between the various departments of the institution), the first phrase (the institution owns computers and equipment to provide electronic services), the eleventh phrase (electronic archiving of the enterprise's operations is done), and the twelfth phrase (supporting creativity and innovation processes in the enterprise) , ranked fourth, fifth, sixth and seventh, respectively, in terms of importance, with arithmetic averages whose values were estimated to be 3.83, 3.69, 3.60, 3.55, and they are all within the limits of the approval field. These results confirm the presence of some other uses of information technology in engineering consultancy offices in Riyadh. In addition to its traditional use as office processing tools, its contribution to providing various work-related directives, in addition to its use in the management of various departments and departments, in addition to its use in achieving collaborative work and relying on it as a basis for supporting innovation processes, which are all processes provided by various The information technology tools available to it have specialized software, the Internet and the Intranet, which appeared at acceptable rates for most of them.

The second phrase came (the devices are periodically renewed in your organization), the eighth phrase (the exchange of information between different departments takes place electronically), the third phrase (information technology is used in all departments of the institution), and the ninth phrase (all the corporation's reports are prepared electronically). With arithmetic averages within the field of approval, but all of them approach the minimum, as their values amounted to (3.42, 3.41, 3.41, 3.40), respectively, which results show the weak use of information technology as a tool for achieving integration in most of the engineering consultancy offices in the city of Riyadh under study.

The sixth phrase (the institution provides modern technical methods and methods in the communication process internally and externally), ranked last in terms of importance with an average of (2.93),

Which also confirms the traditional use of information technology in engineering consultancy offices, which is also reflected in the absence of information technology tools developed, which usually form the basis for decision-making in the institution.

4.2.1.2 The second axis: the impact of the use of information technology on use outside the institution

By calculating the arithmetic mean and standard deviation of the sample's answers to the questions in the axis related to the external use of information technology, we obtained the following results:

Table 4.3:

Standard deviation and averages of the axis of the impact of the use of information technology on use within the organization

	Mean	**Std. Deviation**	**Approval Degree**	**Arrange**
1. The institution's services are introduced electronically.	3.70	.778	Agree	06
2. The relationship between the institution and its clients is managed electronically.	3.74	.381	Agree	05
3. The relationship between the institution and its suppliers is managed electronically.	3.69	.689	Agree	07
4. The institution's electronic services continue throughout the day.	2.88	.622	Neutral	13
5. The institution provides a database that is constantly updated.	2.93	.960	Neutral	12
6. Information systems work on collecting, processing, storing, and then transmitting them through external communication networks.	3.47	.958	Agree	09
7. The activity of competitors is monitored electronically.	3.87	.701	Strongly Agree	3

8. The conclusion of contracts and deals is done electronically	4.24	.704	Strongly Agree	1
9. Information security techniques reduce the risks of using information technology and external communication.	4.10	.471	Agree	2
10. Marketing of services and products is done electronically.	3.26	.781	Neutral	11
11. The institution is distinguished from its counterpart in its electronic services.	3.63	.778	Agree	8
12. The network used has a fast connection.	3.33	.952	Neutral	10
13. The Foundation works to enhance community communication electronically.	3.77	.534	Agree	4
Total	**3.58**	**.144**	**Agree**	

It appears from the table above that the study sample members showed a general interest towards the positive approval of the external use of information technology, with an arithmetic mean of 3.58 and a standard deviation of 0.144. Thus, it can be said that there is a use of information technology from this perspective in the engineering consultancy offices in Riyadh. The eighth phrase (all the institution's reports are prepared electronically) ranked first, which means that the most uses of information technology from this perspective are the efforts of engineering consultancy offices to make their work electronic, and in the second place in terms of importance came the ninth phrase (information security techniques work On reducing the risks of using information technology and external communication), the seventh (the activity of competitors is monitored electronically) and the thirteenth (the institution works to enhance community communication electronically) came third and fourth, respectively, with an average of 3.87 and 3.77, which can be explained How keen the engineering consultancy offices are in reducing the risks of using technology and reliance on the Internet in following up on the activities of the project Evsin.

In the fifth rank came the second phrase (the relationship between the institution and its customers is managed electronically), the first phrase (the institution's services are defined electronically) in the sixth rank, and in the seventh rank came the third phrase (the relationship between the institution and its suppliers is managed electronically), and in the eighth rank came the phrase The eleventh (the institution is distinguished from its counterpart in its electronic services) with close arithmetic averages of 3.74, 3.70, 3.69, 3.63, respectively, which are values that all fall within the field of approval, which means that there is a diversity in the use of various information technology tools in the management of relations and external operations of most consulting offices Engineering, which is due to the fact that most of them possess various technological tools that allow these uses. In addition to the fact that most of the engineering consultancy offices have their own website on the information network and pages on social networking sites, and both means allow introducing the institution and its various products or services.

The twelfth phrase (the network used is characterized by the speed of communication), the tenth phrase (the marketing of services and products is done electronically), the fifth phrase (the institution provides a database that is constantly updated), and the fourth phrase (the corporation's electronic services continue throughout the day), ranked tenth , eleventh, twelfth, thirteenth, respectively, and with averages of 3.33, 3.26, 2.93, 2.88, respectively, in a neutral direction, and this seems very logical in the Saudi business environment because the experience of universal electronic services is still in its early stages.

4.2.1.3 The third axis: the impact of information technology on improving performance (the financial dimension)

The results of calculating the arithmetic mean and standard deviation of the financial dimension items showed the results:

Table 4.4:

Standard deviation and averages of the axis of the impact of information technology on improving performance (financial dimension)

	Mean	Std. Deviation	Approval Degree	Arrange
1. An improvement in the added value to the institution.	3.86	.616	Agree	2
2. Depreciation of the total costs.	3.74	.851	Agree	4
3. An increase in the profitability of the enterprise.	3.86	.969	Agree	3
4. Increasing the corporation's business numbers.	3.76	.634	Agree	5
5. An improvement in the rate of return on investment.	4.10	.424	Agree	1
Total	**3.86**	**.379**	**Agree**	

The results contained in the above table show that the study sample members showed a general trend in approving the paragraphs included in the financial dimension with a mean of 3.86 and a standard deviation of 0.379, and the first statement (improvement in the rate of return on investment) ranked first in terms of importance with an average An arithmetic of 4.10 and a standard deviation of 0.424, and the first phrase (improvement in the value added to the institution) came in second place in terms of importance with a mean of 3.86 and a standard deviation of 0.616, while in the third place in terms of importance came the third phrase (increase in the rate of The profitability of the institution), with an arithmetic mean of 3.86 and a standard deviation of 0.969, while the second statements (decrease in the value of total costs), and the fourth (increase in the institution's business numbers) appeared with two very close arithmetic averages (3.74 and 3.76, respectively), and they are also shown to be located within Limits of approval, which in turn means that the sample members confirm the existence of a contribution to the use of information technology in improving financial performance, which appears through an improvement in the added value and rates of return on investment.

4.2.1.4 It impact of performance improvement (customer dimension)

Table 4.5:

Standard deviation and averages of the axis of the impact of information technology on improving performance (customer dimension)

	Mean	Std. Deviation	Approval Degree	Arrange
1. An increase in the number of customers of the institution.	3.80	.584	Agree	05
2. There is a growth in market share.	3.98	.705	Agree	01
3. Decline in the number of customer complaints.	3.71	.538	Agree	06
4. An improvement in the speed of response to customer complaints.	3.88	.575	Agree	03
5. Improvement in processing time for customer requests.	3.83	.593	Agree	04
6. An improvement in the quality of our products compared to competitors.	3.97	.599	Agree	02
Total	**3.86**	**.263**	**Agree**	

The results presented in the above table show that the study sample members showed a general tendency to agree to the items included in the customer dimension. Where the value of the arithmetic mean was 3.86 with a standard deviation of 0.263, and the second phrase (there is a growth in the market share), came first in terms of importance with an arithmetic mean of 3.98 and a standard deviation equal to 0.705, followed by the sixth phrase (improvement in the quality of our products compared to Competitors.), with a mean of 3.97 and a standard deviation of 0.599. The third place was the fourth statement (improvement in the speed of response to customer complaints.) with a mean of 3.88 and a standard deviation of 0.575. These results indicate the multiplicity of approaches that can contribute Through it, information technology improves the relationship of engineering consultancy offices with its various clients, which mainly stands out in its contribution to the growth of its market share in addition to the speed in responding to customer complaints and improving the quality of products provided to them.

The fifth phrases (improvement in the time of meeting customer requests), the first phrase (an increase in the number of the institution's customers), the third phrase (a decrease in the number of customer complaints) came in the fourth, fifth and sixth ranks, respectively, with arithmetic averages estimated at (3.83), (3.80).), (3.71) respectively, as this reflects another aspect of the use of information technology in the institution's dealings with its current customers, which appears through its contribution to improving response time to meet customer requests, a decline in customer complaints, as well as acquiring new customers.

4.2.1.5 Impact of information technology on performance improvement (internal operations dimension)

The results of calculating the arithmetic mean and standard deviation of the answers of the sample members to the questions in the axis related to the dimension of internal operations showed the following results:

Table 4.6:

Standard Deviation and Means of the Axis of the Impact of Information Technology on Improving Performance (Dimension of Internal Operations)

	Mean	**Std. Deviation**	**Approval Degree**	**Arrange**
1. Increasing employee productivity rates.	4.01	.600	Agree	1
2. Increasing the production capacity of the enterprise.	3.60	1.136	Agree	4
3. Improvement of general working conditions.	3.98	.611	Agree	2
4. Reducing the time to complete the activities.	3.35	.842	Neutral	6
5. A decline in the percentage of defects and errors in the work.	3.56	1.073	Agree	5
6. Diversity and multiplicity of ways of working in the institution.	3.91	1.074	Agree	3
Total	**3.73**	**.406**	**Agree**	

The results contained in the above table show that the study sample members showed a general trend in approving the paragraphs included in the internal operations dimension, where the arithmetic mean value reached 3.73 with a standard deviation of 0.406, and the first statement (increasing employee productivity rates) ranked first in terms of importance with an average An arithmetic of 4.01 and a standard deviation of 0.600, followed by the third statement (improving general working conditions) with an arithmetic mean of 3.98 and a standard deviation of 0.611. As for the third place, it came back to the sixth phrase (diversity and multiplicity of ways of working in the institution), which are results that reflect the approval of the study sample members that there is a contribution of information technology applications in improving the internal operations dimension in the generalization of the use of information technology and the various communication tools that appeared available in high rates in most engineering consultancy offices He had a positive role in improving the various items mentioned.

As for the rest of the phrases, they were all within the scope of approval with close arithmetic averages, except for the fourth phrase (reducing the time for completing activities), which was within the impartiality range. Which can be explained by the lack of human competencies in some engineering consultancy offices, which are the subject of research and analysis, especially in the field of information technology.

4.2.1.6 Impact of information technology on performance improvement (learning and growth dimension):

The results of calculating the arithmetic mean and standard deviation of the answers of the sample members to the questions in the axis related to the dimension of learning and growth showed the following results:

Table 4.7:

Standard deviation and averages for the axis of the impact of information technology on improving performance (after learning and growth)

	Mean	Std. Deviation	Approval Degree	Arrange
1. An improvement in the	4.00	.541	Agree	01

organization's work style.				
2. Improving the organization's ability to attract talent.	3.99	.459	Agree	02
3. An improvement in the skill of the employees of the institution.	3.64	.657	Agree	05
4. A decrease in the number of workers' complaints.	3.88	.669	Agree	03
5. Multiple employee initiatives to improve work.	3.76	.751	Agree	04
Total	3.85	.317	Agree	

The results contained in the above table show that the study sample members showed a general tendency to agree to the paragraphs included in the internal operations dimension, where the arithmetic mean value reached 3.85 with a standard deviation of 0.317. The first phrase (improvement in the method of work in the institution) ranked first in terms of importance , with a mean of 4.00 and a standard deviation of 0.541, followed by the second phrase (improving the organization's ability to attract talent) with a mean of 3.99 and a standard deviation of 0.459. These results can be explained by generalizing the use of information technology and specialized information software in the vast majority of engineering consultancy offices under study.

The fourth statement came in third place (a decline in the number of employee complaints) with a mean of 3.88 and a standard deviation of 0.669, which means that the sample members agreed that the use of information technology contributed to reducing employee complaints. As for the last two terms, the fifth (multiplicity of workers' initiatives to improve work), and the third (improvement in the skill of workers in the organization), they were in turn within the extent of approval with an arithmetic mean of 3.76 and 3.64, respectively. These results generally reflect the approval of the sample members that information technology has a role in improving the learning and growth dimension, and the order of the paragraphs of this dimension reflects the nature of the contribution of information technology.

4.3 Testing The Hypotheses Of The Study

The general hypothesis test will be based on the analysis of the multiple regression coefficient to calculate the value of F-Statistics, which aims to know the significance of the relationship between the independent variables and the dependent variables based on two types of hypotheses (the null hypothesis, the alternative hypothesis).

4.3.1 The first main hypothesis: there is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement in engineering consultancy offices in riyadh, saudi arabia

In order to find out the significance of the relationship between the independent and dependent variables, the hypothesis will be divided into:

Ho: There is no statistically significant relationship between the use of information technology (internally and externally) and performance improvement in engineering consultancy offices in Riyadh, Saudi Arabia.

H1: there is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement in engineering consultancy offices in riyadh, saudi arabia.

Table 4.8:

Multiple regression coefficient analysis between IT use and performance improvement

Variables Entered/Removed a				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1	.591a	.350	.334

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.472	2	2.736	22.319	.000b
Within Groups	10.176	83	.123		
Total	15.648	5			

Coefficients a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.26	.389	.240	3.206	.002
Internal use	.251	.118		2.122	.037
External use	.466	.128	.412	3.650	.000

a. (Dependent Variable: overall performance)

The results of the multiple regression analysis show that the value of F-Statistics (22.319) is statistically significant at a significant level less than (0.05), and the value of the correlation coefficient (R = 0.591) indicates a relatively strong correlation between the use of information technology with its internal and external dimensions. And the performance improvement in the engineering consultancy offices in Riyadh. In addition, the value of the coefficient of determination (0.350 = R2) indicates that the use of information technology in its internal and external dimensions has explained its value (35%) of the discrepancy in performance, and on this basis, the validity of the approved model can be judged.

And the acceptance of the alternative hypothesis which states that "there is a statistically significant relationship between the use of information technology and performance improvement in engineering consultancy offices in Riyadh, Saudi Arabia" at a significant level ($\alpha = 0.05$).

4.3.2 The second main hypothesis: there is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from a financial perspective on the performance of engineering consultancy offices in riyadh, saudi arabia

In order to find out the significance of the relationship between the independent and dependent variables, the hypothesis will be divided into:

Ho: There is no statistically significant relationship between the use of information technology (internally and externally) and performance improvement from a financial perspective on the performance of engineering consultancy offices in Riyadh, Saudi Arabia.

H1: There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from a financial perspective on the performance of engineering consultancy offices in Riyadh, Saudi Arabia.

Table 4.9:

Multiple regression coefficient analysis between information technology use and performance improvement from a financial perspective

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,436[a]	,190	,170	,56065

a. Predictors: (Constant), Internal use, External Use

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6,106	2	3,053	9,713	,000[b]
	Residual	26,089	83	,314		
	Total	32,195	85			

a. Dependent Variable: Finance Variable

b. Predictors: (Constant), Internal use, External Use

It is clear from the above table that the value of F-Statistics amounted to 9.713, which is a statistical function with a significant level equal to (0.000), which means that there is a statistically significant relationship between the independent variable (information technology use) and the dependent variable (the financial dimension), and on this basis the decision is Rejection of the null hypothesis and acceptance of the alternative hypothesis "There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from a financial perspective on the performance of engineering consultancy offices in Riyadh, Saudi Arabia"

4.3.3 The third main hypothesis: There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of clients on the performance of engineering consultancy offices in Riyadh, Saudi Arabia.

In order to find out the significance of the relationship between the independent and dependent variables, the hypothesis will be divided into:

Ho: There is no statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of clients on the performance of engineering consultancy offices in Riyadh, Saudi Arabia.

H1: There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of clients on the performance of engineering consultancy offices in Riyadh, Kingdom of Saudi Arabia.

Table 4.10:

Multiple regression coefficient analysis between IT use and performance improvement

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,498[a]	,248	,230	,44968

a. Predictors: (Constant) Internal use. External Use

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5,542	2	2,771	13,702	,000[b]
	Residual	16,784	83	,202		
	Total	22,326	85			

a. Dependent Variable: Customers' perspective

b. Predictors: (Constant). Internal use, External Use

It is clear from the above table that the value of F-Statistics amounted to 13,702, which is a statistical function with a significant level equal to (0.000), which means that there is a statistically significant relationship between the independent variable (information technology use) and the dependent variable (customers' perspective), and on this basis, the decision Rejection of the null hypothesis and acceptance of the alternative hypothesis "There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of clients on the performance of engineering consultancy offices in Riyadh, Saudi Arabia"

4.3.4 The fourth main hypothesis: there is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of internal operations on engineering consultancy offices in Riyadh, Saudi Arabia.

In order to find out the significance of the relationship between the independent and dependent variables, the hypothesis will be divided into:

Ho: There is no statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of internal operations on engineering consultancy offices in Riyadh, Saudi Arabia.

H1: There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of internal operations on engineering consultancy offices in Riyadh, Saudi Arabia.

Table 4.11:

Analysis of the multiple regression coefficients between the use of information technology and performance improvement from the perspective of internal operations

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,398[a]	,159	,138	,59153

a. Predictors: (Constant). Inter nal use. External Use

ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	5,497	2	2,739	7,829	,001[b]
Residual	29,042	83	,350		
Total	34,521	85			

a. Dependent Variable: Internal Operations Perspective

b. Predictors: (Constant). Internal use, External Use

It is clear from the above table that the value of F-Statistics amounted to 7.8292, which is a statistical function with a significant level equal to (0.001), which means that there is a statistically significant relationship between the independent variable (the use of information technology) and the dependent variable (the internal operations perspective), and on this basis it is The decision rejected the null hypothesis and accepted the alternative hypothesis "There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of internal operations on engineering consultancy offices in Riyadh, Saudi Arabia."

4.3.5 The fifth main hypothesis: there is a statistically significant relationship between the use of information technology (internally and externally) and improving performance from a learning and growth perspective on engineering consultancy offices in Riyadh, Saudi Arabia.

In order to find out the significance of the relationship between the independent and dependent variables, the hypothesis will be divided into:

Ho: There is no statistically significant relationship between the use of information technology (internally and externally) and performance improvement from a learning and growth perspective on engineering consultancy offices in Riyadh, Saudi Arabia.

H1: There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from a learning and growth perspective on engineering consultancy offices in Riyadh, Saudi Arabia.

Table 4.12:

Analysis of the multiple regression coefficient between the use of information technology and performance improvement from the perspective of learning and growth

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.425[a]	.180	.161	.51554

a. Predictors: (Constant). Internal use. External Use

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.854	2	2.427	9.132	.000[b]
	Residual	22.060	83	.266		
	Total	26.914	85			

a. Dependent Variable: Learning and growth perspective

b. Predictors: (Constant). Internal use. External Use

It is clear from the above table that the value of F-Statistics amounted to 9.132, which is a statistical function with a significant level equal to (0.000), which means that there is a statistically significant relationship between the independent variable (use of information technology) and the dependent variable (learning and growth), and on this basis it is The decision rejects the null hypothesis and accepts the alternative hypothesis "There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of learning and growth on engineering consultancy offices in Riyadh, Saudi Arabia"

4.4 Conclusion

- The results of the multiple regression analysis proved the validity of the general hypothesis of the study, which states that there is a statistically significant relationship between the uses of information technology in improving institutional performance in the Kingdom of Saudi Arabia within the engineering consultancy offices in the Kingdom of Saudi Arabia.

- The value of the correlation coefficient (R) indicated that there is a relatively strong relationship between the use of information technology and performance improvement in engineering consultancy offices in the Kingdom of Saudi Arabia.
- The result of the regression coefficients test confirmed the validity of the first hypothesis and that the relationship between internal and external use of information technology and performance improvement was statistically significant for both, while the values of the regression coefficient (beta) indicated that the external use of information technology was more contributing to improving performance compared to its internal use.
- The study proved the validity of the second hypothesis, which states that "there is a statistically significant relationship between the use of information technology and performance improvement in engineering consultancy offices in Riyadh, Saudi Arabia."
- The study proved the validity of the third hypothesis "there is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of customers on the performance of engineering consultancy offices in Riyadh, Saudi Arabia"
- The study proved the validity of the fourth hypothesis "there is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of internal operations on engineering consultancy offices in Riyadh, Saudi Arabia."
- The study proved the validity of the fifth hypothesis: "There is a statistically significant relationship between the use of information technology (internally and externally) and performance improvement from the perspective of learning and growth in engineering consultancy offices in Riyadh, Saudi Arabia."

4.5 Recommendations

- The need to redouble efforts by officials and those in charge of the engineering consultancy office sector in the Kingdom of Saudi Arabia, especially the Ministry of Commerce, to overcome the obstacles faced by these institutions by adopting policies and programs to ensure their support and stability.

- The necessity of benefiting from the experiences and expertise of developed countries in the field of supporting and upgrading these offices and adapting them to suit the Saudi environment.
- Make all efforts to improve and educate owners and owners of engineering consultancy offices in the Kingdom of Saudi Arabia of the importance of acquiring information technology and disseminating its use in the various operations of the institution. And that is through the establishment of specialized agencies or through the conduct of exhibitions and seminars that explain its importance.
- Motivating and educating working individuals about the importance of this information technology, and convincing them of its effective role in raising their performance and facilitating their tasks.
- Develop regular training programs for all individuals within the engineering consultancy offices in the Kingdom of Saudi Arabia and enable them to view all available information technology applications and their various uses.
- Strengthening the engineering consultancy offices in the Kingdom of Saudi Arabia with human competencies specialized in the field of information technology.
- Strengthening and supporting the information technology infrastructure in various informational applications, especially advanced ones, as well as encouraging and generalizing its use in the various operations and transactions of engineering consultancy offices in the Kingdom of Saudi Arabia.
- The necessity of providing an internal network linking the various departments and encouraging the various individuals and departments to use it and deal only through it.
- Ensuring the appearance of engineering consultancy offices on the international network by designing their own websites with intensifying advertising and using them to introduce these offices and promote their products and services.
- The necessity for engineering consultancy offices to appear on various social media sites and use them to introduce themselves, their products or services, and get closer to their workers, clients and all those who deal with them, by interacting with their opinions, complaints and suggestions.

- Reducing communication costs by circulating the use of e-mail to all users within the organization and encouraging them to use it in all their communications.
- The state must allocate an independent body to sponsor and support engineering consultancy offices.
- Building cooperation and partnership relations with the same companies in Arab or foreign countries working in the same field of activity to exchange experiences, especially information technology fields and applications.
- Encouraging workers within the engineering consultancy offices to present various initiatives that help improve working conditions.
- The necessity of paying attention to all dimensions and aspects of improving performance by adopting a set of indicators of a financial and non-financial nature to be measured and evaluated.
- Developing an integrated model for measuring and improving performance with indicators that are compatible with the specificity of engineering consultancy offices.

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