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The role of information technology in improving service quality

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Abstract:

This study came to know the role that information technology plays in improving service quality within the framework of what is known as the quality of electronic service.

The study reached several results, the most important of which is that it is not possible to study measuring the quality of electronic service away from studying the behavior of the customer for this website on the one hand, and on the other hand, many researchers have tried to adapt the traditional SERVQUAL service quality measure with websites, but the difference in the environment and its virtual and interactive dimensions and confidentiality of information transforms Without it;

Keywords: information technology, service quality, the quality of electronic service.

JEL Classification: M10, M19

1. Introduction:

Since ancient times, or rather, since the inception of humanity, man has been trying, based on his nature, to acquire information that helps him to face life and its difficulties, and with the passage of time this information began to accumulate to form what is now known as knowledge. And man began to think about how to manage this latter and benefit from it in various fields, to create what is known as knowledge management, which is a process that works on acquiring, storing, and transferring knowledge through mechanisms and means dedicated to that, and then applying it. For this, the organization needs to have a strong information and communication technology infrastructure.

What characterizes the Industrial Revolution is not just the emergence of new technology, because it occurs almost at every moment, and in the deep nature of the market economy to generate new technologies and new products, but what defines the revolution is the change in the spread of technology in the method of production and consumption, or in labor relations, or Spatial planning and urban development, just like energy (steam engine and then electricity), made possible the rise of the factory, then on to the leading giant and the concentration of jobs in cities and suburbs, the Internet, and the digital revolution that is gradually laying the regulatory foundation for a "new economy" Network-based.

On the other hand, to meet the increasingly increasing demand and the ever-increasing competitive pressure as a result of the information revolution, organizations seek to use innovative marketing techniques to adequately meet customer expectations and gain market share. In this context, with the intensification of competition, shifting environment, and uncertainty, the organization has to search for effective ways of differentiation to maintain a competitive advantage. One of these ways is to focus more and more on realizing the quality of services provided to customers, and the quality of service is an essential element to create superior value for customers, to meet their needs and establish long-term relationships with them.

Online shopping has become very popular since the past few years, and in this context, the study of the electronic quality of service in literature and marketing holds the attention of many researchers, as is the case with traditional stores, the service quality of commercial websites and online consumer satisfaction plays a vital role in the success and survival of sites.

1.1 Problematic :

In light of the foregoing, the following problem can be raised: **What is the role of information technology in improving service quality within the framework of what is known as the quality of electronic service?**

1.2 Study questions:

- What are the components of information technology that organizations rely on in order to improve their knowledge bases?
- What are the most important dimensions of service quality that organizations rely on in order to gain customer loyalty?
- What do we mean by quality of electronic service? What are the most important dimensions that contribute to achieving customer satisfaction?

1.3 Hypotheses :

- information technology is one of the modern and sensitive subjects on which today's organizations for improving their knowledge rules and this is through their components of databases and storage rules as well as distribution rules ;
- The quality of the service depends on several criteria that it follows in order to gain the loyalty of its customer. Among these elements, we find providing information related to the service in a simple and clear way that the customer can understand, ensuring that the service performs what is required of it in the manner desired by the customer..etc;

- The quality of the electronic service represents the ability to meet the needs of the customer in the way he wants through the websites, and this is through a number of elements such as ease of electronic payment, ease of access to the site, and the availability of information about the provided service .. etc;

2. Introduction to Information Technology:

Information plays a vital role in the establishment and survival of organizations of any kind, and it is the main resource for them to ensure their continuity, and is the artery through which all their activities move. Currently, we see that today's world is witnessing the phenomenon of information explosion and the emergence of the information revolution in which whoever owns and controls it has the ability to control global economic rules and balances.

2.1 The concept of Information Technology:

We find that technology as a term faces a lot of confusion, so that some use it as a concept synonymous with technology, and others see it as completely different from the latter. Originally, the roots of this word (technology) go back to the Greek origin, as it is divided into two words: Techno, which means industrial operation, and Logos, which means science, and when these two parts are combined, we get the meaning of the word technology, which is: industrial operating science[1]. WEBSTER defines technology as the technical language, applied science, and the technical method to achieve a practical purpose, as well as a set of means used to provide everything necessary for people's livelihood and well-being[2]. From it, it can be said that technology is a set of knowledge, technical and methodological bases that work on the production of all machines and equipment and all the various engineering and technical constructions in order to improve and provide a better standard of living for the community.

Information is also one of the most important resources that organizations rely on. We note that the current time is characterized by the information age, as the latter played a vital role in changing the rules and foundations of organizations. We find that in the daily life of people the term data, information and knowledge is referred to as the same thing, but the scientific and practical reality shows that there is a difference between the previous terms, and what links them to each other is the existence of an integrative dependency relationship that works on the sequence of the content of these meanings, as It begins with the general and the specific and more, in order to lead in the end to an understanding of the phenomenon in which a decision is required [3]. Data is a set of facts, ideas or observations represented in images, numbers, symbols and unclassified vocabulary through which a decision cannot be taken without processing it, as it is considered the raw material on which to produce information. While the latter is a set of meaningful facts on the basis of which a decision can be taken, it is data that has been processed according to specific operational processes to become classified with useful meaning in the process of making and taking decisions. As for knowledge, it is the outcome of what a person possesses of information and knowledge of science at a particular time in order to judge the quality of decisions, and his ability to choose the appropriate alternative from among the alternatives available to solve a particular problem[4]. In Davenport’s study, he defined knowledge as "the meeting of information, experience, interpretation and impression, which makes it a highly valuable form of applicable information", meaning that the writer here deals with the term knowledge as an advanced stage of information[5].

Through the above, we can put some of the definitions related to information technology as follows:

The writer Robbey defined information technology as all kinds of software, hardware and equipment related to computer and communication, whether it is a personal computer, telephone, or through management information systems[6]. It can also be defined as all types of technology used in the operation, transfer and storage of information in electronic form, and it includes computer technology, means of communication, interconnection networks, fax machines and

other equipment that is widely used in communications[7]. Whereas information technology is defined as a set of computers, supporting equipment, software, services, and related resources applied to support business stages that make digital information generated and stored easy to use and share[8]. We find a more comprehensive definition of information technology, as it is considered to be the result of the combination and interaction of three technologies represented in: computer technology, with its high-capacity computers and various equipment that facilitate human interaction with them, and software technology, which includes systems design, implementation and management of databases and systems for using computers in various applications. Systems planning, implementation and testing of computer-aided software, and finally communication technology, with its methods and techniques that help link computers and information systems with each other in the form of integrated systems at all levels[9].

Information technology is characterized by several characteristics, the most important of which are[10]:

- Reducing time: technology has made all places - electronic - bypass;
- Space reduction: This technology provides storage facilities that accommodate a huge amount of information stored and can be easily accessed;
- Sharing intellectual tasks with the machine: as a result of the interaction between the researcher and the system;
- Minimization: In other words, faster, cheaper, etc., and this is the pace of development of information technology products;
- Artificial intelligence: The most important characteristic of information technology is the development of knowledge and the strengthening of opportunities for training users for comprehensiveness and control of the production process;
- Configuration of communication networks: a group of equipment based on information technology unites to form communication networks, and this increases the flow of information between users and manufacturers, as well as machine producers, and allows information exchange with other activities;
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- Non-publicity: means the possibility of directing the communication message to a single individual or a specific group rather than necessarily directing it to huge audiences, and this means the possibility of controlling it as it reaches directly from the producer to the consumer, and it also allows the combination of different types of communication, whether from one person or from a party one-to-group, or one-to-group;
- Prevalence and spread: It is the ability of this network to expand to include more and more unlimited areas of the world so that it gains its strength from this systematic spread of its flexible pattern;

- Global: the environment in which these technologies are active, where information takes different and complex paths that spread across different regions of the world, and it allows capital to flow electronically, especially in view of the ease of commercial transactions driven by information capital, which allows it to overcome the barrier of place and move across international borders ;

2.2 Information technology functions: Information technology helps to provide the required information to the beneficiary in an accurate and timely manner. The most important basic functions of this technology are[11]:

- Obtaining data through storing data for later handling;
- Processing: It is the transformation of data and information forms and their analysis as a result of their association with the computer. The processing includes several operations, including: processing data such as symbols, raw numbers, messages and converting them into useful information. There is also information processing, which is the transformation of any of the information into different forms that are more detailed, varied and accurate, as the final information is clear and purposeful. We also find word processing, which means the formulation of text documents such as reports, newsletters, etc. that helps in entering data, texts and shapes and presenting them in an attractive way. In addition to processing sounds in the sense of processing optical information, as these processors have witnessed a qualitative development, they have found systems that allow individuals to speak directly to the computer system to direct it and implement specific actions. Finally, from the processing systems, we find image processing, i.e. converting visual information, graphics and images into forms that can be managed within the computer or transferred between individuals and other computers;
- Creating and generating information: Information technology is always used to create information through processing. It is intended to process data and organize information in a useful way, whether in the form of numbers, texts, images or sounds, and sometimes the information is re-generated in an original form and at other times it is generated in a new way;
- Data and information storage: through this step, computers or other information technology devices are preserved to use information and data at a later time when needed;
- Retrieval: It means placing and reproducing data and information for future processing or transferring it to another user. Therefore, the computer user must keep the addresses of the media on which the information was stored and make it ready for retrieval and processing;
- Transfer: sending information from one location to another. For example, a telephone or computer connected to the network transmits conversations and information from one location to another, and this is done through the adoption of different media such as satellites, optical fibers, etc;

2.3 IT Infrastructure: Represented in[12]:

First: processing techniques : It means the various means and machines that allow the processing of data and information, including the following: Computer, software Among these programs we find the basic applications that include the programs that operate the machine and general applications that represent all the programs that a person uses to accomplish a specific work by means of the computer, or writing texts or Creating programs or preparing a schedule...etc. There are also useful applications, which are all scientific applications, represented in applications intended for educational purposes.

Secondly: Storage and retrieval techniques: These are: Hard disk: which is the main storage unit in the computer. Digital disks: are disks that allow storing information much larger and faster than the compact disk; CDs: characterized by their ability to store audio, video and multimedia motion; and floppy disks: a magnetic storage medium and covered with a plastic box used to

transfer files from one computer to another; In addition to optical discs: a compact disc that uses laser beams to read information, it is used to store multimedia programs for audio, image, text, motion and video, and optical discs are of two types: optical discs that can be recorded once and cannot be recorded again, called CD-R, and discs that can be recorded. Erased and rewritten to CD-RW; A smart card: It has the same size and shape as a credit card. It contains a computer circuit that contains a memory, a processor, and a permanent storage location. When it is inserted into a special reader or player, it retrieves the data stored in it where it is displayed or modified, and it can be refilled again;

There are many storage methods, including USB flash drives, Jaz and Zip disks... etc.

Thirdly: Communication Techniques: Communication is usually defined as that process by which information is transferred and exchanged between two or more parties, in a geographic location or a specific place. As for remote communications, as a result of the connection of computers to communications, the concept has expanded to include the transmission and exchange of information over long distances, regardless of the place or location. Geographical location, and based on the communication technology represented by wired and wireless electronic means, networks of various types, and the most prominent communication technologies, we find wired and wireless means of communication

3. Introduction to service quality

Service quality is one of the most important and researched topics in the field of service marketing, as it is one of the most important entrances that service institutions rely on to achieve excellence and the ability to survive in the environment in which they are active.

3.1 The concept of service quality:

Quality is a primary concern of an economic enterprise; it means marketing its products and achieving efficiency and effectiveness of its operations and activities. In some organizations, it is a philosophy of management and behavior at all levels. Quality is also a holistic concept that concerns the economic analyst, and a societal affair that governments nurture in the vital services they provide and in their function as a protector of the environment and public health for their citizens. For a long time, product quality assurance derives from the name of the craftsman, who is the one who controls the quality of his products. In the thirteenth century AD, the craftsmen's associations in Europe were setting for them specific methods and procedures for work that they would abide by, so the high-quality units were stamped with a stamp showing their source; With the advent of the Industrial Revolution at the end of the nineteenth century, the craftsman turned into a factory worker, and thus the quality control process began to separate from the production process with the growing separation of ownership from the direct production process. Twentieth century [13]; During this century, the focus on the concept of quality began in Japan and then spread to America and European countries, touching the rest of the world. The concept of quality evolved from a simple examination system to the stage of quality control in which it was relied on statistical methods in order to ensure the maintenance of meeting the specifications of the commodity, and then the stage of confirmation or quality assurance and relied on a system based on preventing errors from the beginning, to reach what is known today as quality management The concept includes the quality of operations as well as the quality of the product, and focuses on teamwork, encouraging employee participation and integration, in addition to focusing on customers and the participation of suppliers[14].

With regard to the concept of service quality, Lovelock defined it as "a long-term cognitive evaluation of the service provided by the institution" and that it is "the degree from which it is possible to satisfy the customer by constantly meeting his needs, desires and expectations"[15]. We find the AFNOR definition of service quality, which is the intrinsic quality of the services provided and thus their ability to meet expressed or implied needs[16]. There is also a general

definition of service quality, derived from the definition of quality, which is the quality of service that the user looks at, depending on the quality of the service provided and the psychological factors that affect the user's perception. It is essential to understand the quality of service in order to improve the revenue and the service provider[17].

3.2 Dimensions of service quality :

Like most authors (Brady et Cronin, 2001; Grönroos, 1984; Parasuraman, Zeithaml et Berry, 1985; Rust et Oliver, 1994); they believe that quality is a multidimensional concept. As for Ruben Chumpitaz C and ValérieSwaen, they assume that there are at least two dimensions of quality: product quality and service quality. By product quality, it means the perceived quality of product performance. As for service quality, its dimensions, as well as its activation, are still topics of debate in the literature today[18].

Exploratory research by Parasuraman, Zeithamlet Berry in 1985 revealed that the criteria consumers use in evaluating service quality fit ten overlapping dimensions: touch, reliability, responsiveness, communication, credibility, security, efficiency, courtesy, understanding/knowledge of the customer, and access. . These ten dimensions and their descriptions serve as the basic structure of the QoS domain from which the items were derived for SERVQUAL which has only five distinct dimensions that took over the ten faces of the previous dimensions, and can be explained as follows[19]:

- tangible: physical facilities, equipment, appearance of a person, etc.;
- Reliability: the ability to perform the promised service reliably and accurately;
- Responsiveness: willingness to help customers and provide prompt service;
- Assurance (insurance): i.e. the knowledge and courtesy of employees and their ability to inspire confidence;
- Empathy: means the individual care and attention that the company provides to its customers;

Other authors have worked on the dimensions of quality, such as Grönroos in 1984. According to him, the quality that the consumer wants will be based on two dimensions: technical quality (which indicates the outcome of the service) and functional quality (or the way the service is delivered, for example with courtesy, promptness and professionalism). . In 1994, Rust and Oliver also added a third dimension to Grönroos' proposal, which is the environment in which the service is provided[20].

3.3 Measuring the quality of service:

First: Measuring the quality of services from the perspective of customer expectations: The concept of service quality is complex and difficult to measure through customary means. Therefore, most research and studies have been based on measuring customers' expectations and perceptions of service quality, as intangibles are not measurable compared to tangible elements. Therefore, customers are the ones who judge quality by deciding what they expect from the service. In this sense, Parasuraman, Zeithaml and Berry tried to develop a tool for measuring customer perceptions of service quality called SERVQUAL, which calculates the difference between expectations and perceptions (service quality = expectations - perceptions), This is suitable for measuring theoretical phenomena, as the customer's expectations can be measured after the performance of the service, but the problem of how to measure them before the performance of the service is raised, so Zeithaml in 2006 identified three levels of expectations with which to compare the quality represented in the desired level of service, the adequate level of service, and the expected level of service. Hence, the quality of service is measured as follows [21]:

- If the expected service quality is greater than the perceived service quality, then satisfaction with it will be low and unacceptable to customers;
- If the expected service quality is equal to the service quality perceived here, the quality of service will be satisfied by customers;

- If the expected service quality is less than the perceived service quality, then you will obtain a high degree of customer satisfaction;

Secondly: Measuring the quality of service from the customer's perspective: Among the important common methods in this perspective, we find the number of complaints measure, which represents the number of complaints submitted by customers during a certain period of time, and represents an important measure that expresses that the services provided are substandard or the services provided to them are not It is proportional to their perception of it and the level they would like to reach. And the satisfaction scale, which is the most widely used scale to measure customers' attitudes towards the quality of services provided, especially after they have obtained these services by asking questions that reveal to service organizations the nature of customers' feelings about the service provided to them and its strengths and weaknesses. Also, there is the actual performance measure, which represents the most important scientific and practical measure for measuring service quality and enjoys a high degree of confidence, credibility and applicability. Gronin and Taylor came up with this measure, which focuses on the actual performance of the service provided, considering that the quality of this service can be judged directly through Customers' trends, and this can be expressed by the following equation: Quality of service = actual performance. Measuring the aspects of service quality related to tangible aspects, reliability, responsiveness, guarantee, and empathy, as the owners of this scale see it, is distinguished from its predecessor by simplicity and ease of use, as well as by increasing the degree of its credibility and realism, but it is unable to help the administration to reveal areas of strength and weakness in the service provided. Which relate to multiple aspects, not just customer perceptions of the service. Finally, we find the value measure, where the basic idea of this measure is that the value that the service organization provides to customers depends on the benefit of the services perceived by the customer and the cost of obtaining these services. The relationship between benefit and price is what determines the value, the higher the levels of benefit related to the perceived services, the more and the higher the value provided to customers and the higher their demand for these services, and vice versa[22].

4. The concept of the quality of electronic service:

For more than twenty years, research attention has been focused on traditional service quality. On the other hand, the study of service quality provided by websites is an emerging field in the field of marketing research, so the quality of electronic service represents the degree of website facilitation, efficiency and effectiveness of shopping, purchasing and delivery Products, they represent the quality of transactions, and include elements of experience evaluation before and after service. A distinction can be made between traditional service quality and electronic service quality by replacing human-machine interaction with human-machine interaction, as well as the absence of human contact[23]. The electronic service is related to a service offered to the consumer in the presence of an intermediary that is an electronic network, and supports the decision of his electronic purchase, given that the electronic service is a form of self-service that requires the customer to serve himself, instead of submitting the request to the employee behind the office or talking to a person over the phone A request for information or inquiries The service is obtained through automatic and mutual interaction between the service requester and the machine. Therefore, the design of the electronic service must be based on the needs, desires, aspirations, expectations and experience of the customer. An example of this is electronic publishing. At the beginning of the emergence of this service, publications appeared in a format that was not flexible at all, especially in terms of the difficulty of downloading the newspaper or magazine. However, over time, software techniques appeared that allowed the content to be displayed easily and with great flexibility that improved the quality of electronic publishing[24].

4.1 E-Service Quality Dimensions: The meeting between the customer and the company can be seen as a dynamic and interactive relationship in its technology center. Where the

dimensions of service evaluation quality are modified by the technical nature of the interaction and legitimize the interrogation of the classical dimensions of perceived quality. For example, how is the "empathy" dimension (a SERVQUAL dimension) evaluated when interaction occurs with a machine rather than a human? In addition, additional factors such as usability or ergonomics of the site must be taken into account.

The unique characteristics of online commerce mean that direct application of QoS dimensions developed in non-e-commerce environments is not appropriate or at least does not contain all the finer details of QA assessments. Even if the products or services purchased online are the same, online buying environments represent different shopping experiences. Online sales are more personal; more automated, and provide instant gratification. In addition, it has more legal uncertainties and opportunities for fraud or abuse. Therefore, specific dimensions to assess the perceived quality of service interactions with technology must exist because of the many differences between Internet sales and traditional distribution channels. The five most classic dimensions of traditional QoS are those mentioned by Parasuraman et al. 1988 and previously mentioned. However, although there is no consensus on the dimensions of electronic service quality, some of them are rather systemic such as security/privacy, site design, ease of use, reliability/respect of obligations, and information provided on the site [25]. The dimensions of e-service quality are represented in [26]:

- Quality and Quantity of Information Presented on the Site: These items are often cited as important reasons to purchase online but have not been directly examined in traditional quality of service evaluations. The lack of physical contact with the service provider while purchasing online reinforces the need for clarity and accuracy of information. This dimension measures user perceptions regarding the quality and quantity of commercial or technical information relating to products, services, service provider, or sales contract.
- Ease of use of the site: Online transactions are complex and can intimidate many consumers. Therefore, ease of use of the website is an important component of the quality of electronic service. Its usability (the service) has been described for a long time in the context of the Internet. Ease of use refers in the physical world to storage, layout, design and ease of movement in the store. Hence, the website should be translated as the user sees and interacts with it by asking the following question: Is it easy to navigate the site?
- Website design or graphic style: Website design refers to the rich representation of the nested environment, which results from its formal characteristics, in other words, graphics, colors, use of images, icons, animations, videos, windows embedded in the screen, etc.
- Reliability and Commitment: Reliability is the dominant dimension in traditional service quality assessments. It is also a seemingly important component of electronic quality evaluation of services. In the traditional context, reliability is defined as "the ability of the service provider to accurately deliver the promised service", and this is reflected on the Internet through respect for delivery deadlines, accuracy of order, accuracy in presentation of products...etc. Reliability is related to the seller's ability to keep his promises and fulfill the exchange conditions (delivery of the product, rendering the requested service, respecting delivery times ...).
- Security and Privacy: Security involves protecting the User from the risk of fraud and financial loss through the use of their credit card on the Site. Respecting privacy involves protecting personal data and not sharing or reselling information collected about consumers during a service experience with other sites. This means protection from anonymity to consumers and seeking their consent before any transfer of personal data (free or paid). This dimension appears to be unique in the context of e-commerce.
- Interaction and customization: One of the peculiarities of an online merchant's website in comparison to a store is the interaction and interaction with the company, with tools but also with other consumers. Interaction enables customers to define the display model that

best suits their needs, and to have a special relationship with the brand, to modify the content and appearance of the media environment in real time. Online interaction allows tailored responses and increases the possibilities for personalized service. Personalization represents the ability for the seller to adapt the content and design of the site according to the expectations and features of the customers.

- Suggested offer on the site: It is the ability of the site to provide various, unique and regularly updated services, consumers expect to find more services available for sale on commercial sites.

These dimensions of the electronic quality of service have a significant impact on consumer satisfaction in online shopping through [27]:

- Satisfaction is the subsequent evaluation of a consumer's experience with a service, which results in a positive, neutral or negative feeling. Satisfaction is a phenomenon that cannot be directly observed, stemming from an overall evaluative judgment relating to a particular consumption experience;
- Sincerity and Loyalty Intentions: The survival, growth, and profitability of a seller's website depends in part on its ability to attract new consumers. Indeed, it is cheaper to retain a consumer than to attract a new one. Moreover, loyal customers are sometimes more profitable than vulnerable customers, they are a guarantee of stability and a source of profit;
- The good design of the dimensions of the electronic service, ease of use (reading and structuring of pages, site layout) and information (quantity and quality of information) have an impact on converting the visiting consumer into a buying consumer;
- the more comfortable a consumer is when visiting a seller's site, the more likely they are to feel motivated to buy on that site;

4.2 Electronic Service Quality Metrics: The marketing literature in general and e-marketing in particular lacks clear concepts about the quality of electronic service, as the concept is rather recent unlike the concept presented by Parasuraman and his friends in 2002, where they defined the quality of electronic service as the degree to which a website facilitates storage, purchase and delivery of products or Services, this concept, as noted, contains two dimensions, the utilitarian dimension, represented in the degree of facilitation, and the emotional dimension represented in the total emotions and feelings that the Internet user feels when visiting the sites. The service marketing literature also talked about important and significant works in measuring the quality of electronic service, some of which are in the Anglo-Saxon domain, and some are in the Francophone domain. Among the measures, we mention[28]:

- Sitequal scale developed by researchers Yoo and Donthu;
- The IRSQ scale developed by Swinder et al.;
- The EtaiQ scale developed by thinkers Wolfinbarger and Gilly;
- Webqual scale developed by Barnes and Vidgen;

As for the Francophone side, Brussels has identified the Netqual electronic service quality scale, which is a scale that includes five dimensions of ease of use (exploration and search for information), vendor feasibility (respect for commitments), website design (the ability to be creative and interactive), security and confidentiality (trust and respect). Personal life), and the quality of information (accuracy, feasibility, detail).

First: Measuring the Quality of Website Service: In an ambitious attempt to assess the quality of websites, the E-qual or Web-qual entry was developed by Barnes and Vidgen. This entry uses a 23-item survey to obtain the subjective perceptions of users, and is tested in many areas, including Internet fair sites, auction sites, knowledge sharing and e-government. Analysis of the survey data for this portal revealed three main components that have a significant impact:

usability, information quality, and service interaction quality. This measure is considered a comprehensive and tested framework for evaluating the user's perceptions of the quality of the website, and there are other criteria that must be taken into account when designing the web page, which can be measured according to the degree of popularity of use, the overlap in operations and the continuous updating of data...etc. It is necessary to think about the quality of any design through the basic objectives achieved from this design. There are some criteria adopted that confirm the quality of effective design of e-business, which are [29]:

- Design based on traditional matters;
- Design for open-ended applications;
- Design that takes into account the diversity of consumer requirements;
- Design oriented to continuous operations; high-level, continuously available applications;
- Business process design;
- The design that varies in the components of the applications that are intertwined with the system;
- Design that supports components;
- Design that takes into account the required form of confidentiality and electronic security;

Secondly: Software quality measurement: It is determined by the following dimensions: maintainability, flexibility, changeability, correctness, ease and usability, portability, ease and operability, reusability and environmental operability [30].

5. Study results

Through what was discussed in this article, we reached several results, the most important of which are:

- It is not possible to study measuring the quality of electronic service away from studying the behavior of the customer for this website on the one hand, and on the other hand, many researchers have tried to adapt the traditional SERVQUAL measure of service quality with websites, but the difference in the environment and its virtual and interactive dimensions and confidentiality of information prevents this;
- There is a positive relationship between the dimensions of electronic service quality and satisfaction, as these dimensions contribute to user satisfaction while using the site;
- Only three dimensions of e-service quality have been studied, which are ease of use, security and privacy, and website design and how they affect customer satisfaction and loyalty.
- improving the interactive functions of the website, for example through recommendations, alerts, e-mail, etc., leads to the enthusiasm and loyalty of customers to this website;
- If the consumer is satisfied with his experience by browsing the website on the Internet, he will make more purchase payments;
- the consumer is satisfied with the overall quality of the site, whether through “utilitarian” dimensions such as ease of use and security/privacy, or through the temptations of design;

6. Conclusion:

Today's world is witnessing rapid changes, multiple and intertwined elements, and very complex, as they have become, in their entirety, pressures and challenges on organizations and threaten their survival, which prompted the latter to rethink the way they perform their work and how to add value to stakeholders. The fact that this era is characterized as the era of knowledge and information technology, where creativity, innovation, knowledge and information are the most important means to achieve the goals and visions of organizations. Where information technology constitutes a strong point that enables business organizations to anticipate changes,

develop their internal environment, adapt to the external environment, and achieve their strategic goals efficiently and effectively.

The issue of service quality is also one of the topics that attracted the attention of many researchers in the field of marketing services. In the past, the focus was on the concept of quality in physical products. This prompted researchers to produce many methods and procedures through which organizations can improve the quality of their products, but The growing role of the service sector in global economies and the awareness of organizations of the need to go to the customer, attention to the issue of service quality has become an urgent necessity and an important requirement that organizations cannot ignore.

In the context of an attempt to exploit information technology within the concept of service quality, what is known as the quality of electronic service appeared, using one of the information technology applications represented in the Internet. This concept is based on how to gain customer satisfaction and loyalty to the organization. Several studies have shown that all dimensions of e-service quality have a positive impact on customer satisfaction. Through the contributors of these dimensions of the greatest satisfaction represented in the design and ease of use, and consumers via the Internet tend to evaluate the interface of the site to form judgments of their satisfaction, especially reliability, design that is characterized by ease of navigation, the aesthetic dimension of the site..etc.

The study of the quality of services on the Internet is a relatively recent phenomenon in the marketing literature. It is essential that the consumer be satisfied with the overall quality of the site, whether through "utilitarian" dimensions such as ease of use, security/privacy, and more design. However, the vast potential of a seller's website is often limited compared to traditional niches (detailed designs and ease of navigation), and to make online visits more enjoyable and put visitors in a rush mood, focus on the two dimensions of security and clarity of information that can affect a seller's website. Emotional behaviors, either directly or indirectly through satisfaction.

7. Recommendations:

- Suggest an analysis of the process that leads the consumer to feel the purchase impulse. Analyzing the effect of the purchasing situation on purchases, whether this effect is direct or through the emotional state of the consumer;
- Future research should study and reveal the effects of other dimensions of electronic service quality, such as reliability, commitment, and presentation on the site, etc., on increasing the purchase payments of consumers;

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