

The Impact of Information Systems on Achieving the Competitive Advantage of Government Banks in the Sultanate of Oman

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Abstract:

The research aims to identify the impact of information systems in achieving the competitive advantage of government banks in the Sultanate of Oman. The importance of the research lies in the fact that banks' use of information systems enables subscribers to obtain the required services, which leads to their feeling of satisfaction and thus reflects positively on the banks to achieve a competitive advantage. The research relied on the descriptive analytical approach, as the opinions of a sample of (40) individuals were surveyed Information technology department in various their levels by distributing a questionnaire consisting of paragraphs distributed in two areas (information systems and competitive advantage). The research reached a set of conclusions, including the availability of the necessary hardware and software required for operation and an integrated database within banks that contribute to decision support processes to solve problems, in addition to the role of information systems in enhancing the competitive advantage of banks. The research also recommended focusing more on providing training programs for working individuals. Banks in line with modern technological developments and activating the two dimensions of cost and creativity more in order to achieve the competitive advantage of the banks investigated.

Keywords: Information Systems, Competitive Advantage, Software, Databases, Networks, Human Resources.

Introduction

With the beginning of the technological information revolution, which was accompanied by the emergence of the Internet and the rapid development of computers, software and banking means, this led to a revolution in the field of information and the consequent rapid changes in the development of information systems, which imposed itself

strongly on business organizations to modernize their systems, communication devices and methods of work in order to be able to survive in a highly competitive environment, and in order for the organization to outperform its competitors, it must create an advantage that outperforms others and seeks to maintain it constantly and present it better than others, which leads to strengthening its position and achieving a competitive advantage for it. The banking sector is one of the sectors most affected by technological development. What is happening in the field of information and banking is what it has from a role in providing a service to a large segment of subscribers, so the research sheds light on the importance of banks' adoption of information systems requirements because of their impact in achieving a competitive advantage for banks in light of a highly competitive business environment, especially in the field of banking. For the methodology and previous studies, the second topic dealt with the theoretical side as it presented the concepts of information systems and competitive advantage, and the third topic was for the practical side as it was devoted to statistical analysis and hypothesis testing, and the fourth topic concluded with conclusions and recommendations.

The first topic: research methodology and previous studies

First: Research Methodology

1-The problem of searching;

The banking sector is one of the sectors most affected by the technological development taking place in the field of information and communications, and the intense competition between banks and banks prompted these banks to provide the best to win the largest segment of subscribers in an effort to grow and survive, and accordingly the research problem was represented by the following main question.

What is the impact of information systems on achieving the competitive advantage of government banks in the Sultanate of Oman?

Sub-questions are derived from the main question and are as follows;

1. What are the requirements for banks to implement information systems ?
2. What is the level of application of information systems in banks ?
3. What is the level of interest in the competitive advantage in banks ?
4. Is there a correlation between information culture and competitive advantage ?
5. What is the impact of information systems on competitive advantage?

Research objectives:

The research seeks to achieve the following objectives:

1. Determining the necessary requirements for banks to implement information systems.
2. Studying the level of application of information systems in banks
3. To reveal the level of interest in the competitive advantage in banks
4. Determining the relationship between information culture and competitive advantage .
5. Recognize the impact of information systems on competitive advantage

The importance of research

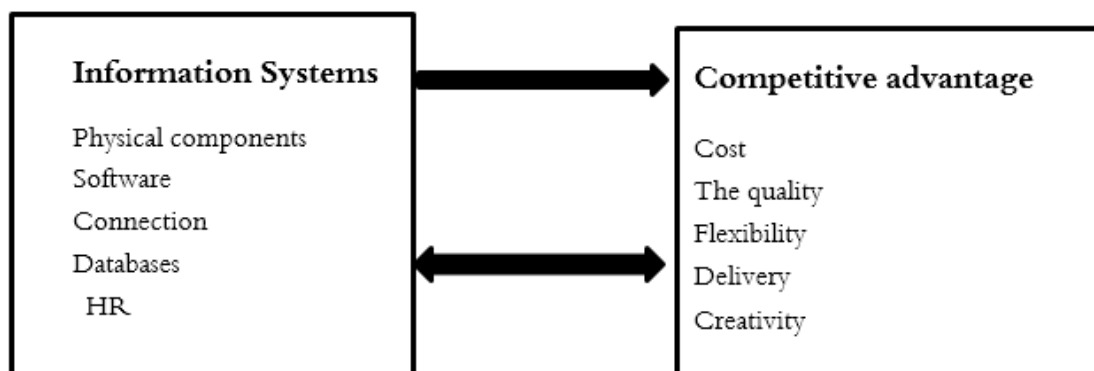
The research derives its importance by highlighting the role of information culture in achieving the competitive advantage of banks, because this service sector has a major role in the development of the national economy in the Sultanate of Oman, as banks provide a

service to a large segment of users, and the use of the required technology enables them to obtain services The required, which leads to their feeling of satisfaction and enhances their dealings with banks and thus reflects positively on the banks and achieves the required competitive advantage.

Research Hypotheses:

- **First hypothesis:** There is a significant correlation between information systems variables (hardware, software, communication, databases, and human resources) and competitive advantage variables (cost, quality, flexibility, delivery, creativity) individually or collectively .
- **The second hypothesis:** There is a significant effect between information systems variables (hardware, software, communication, databases, and human resources) and competitive advantage.

The hypothesis of the research variables



- The independent variable: it represents information systems, and the variables mentioned have been adopted according to (Tuban 2010) by being guided by studies conducted by (Faraj, 2009), (Mirza, 2013), and this variable consists of five dimensions which are (physical components). Software, communication, databases, human resources)
- The dependent variable: It represents the competitive (advantage, and the variables mentioned have been adopted according to Ritzman).

Tools for statistical analysis and processing

- The statistical program (SPSS-V16) was used for the purpose of data analysis and hypothesis testing using the following tools:
- The arithmetic mean and percentages to determine the level of variables and the standard deviation to indicate the extent of concentration or dispersion of the answers of the sample members.
- The spearman correlation coefficient to determine the strength of the relationship between research variables.
- Simple and multiple regression to measure the effect relationships between research variables.

Research Methodology:

The analytical descriptive approach was used in presenting and analyzing data, describing the main study variables, clarifying the nature of the relationship between the

independent variable and the dependent variable, and showing the nature of the influence relationship between them

Research community and sample:

A- Research community: all government banks in the Sultanate of Oman.

B - Research sample: Heads of departments and bank managers were chosen as a sample for research and (40) sample questionnaires with their different specializations were distributed. The stability of the resolution has been calculated, and it means that the resolution measure gives the same results if it is re-applied after a period to the same individuals again. For this, the split-half method was used, which depends on finding the correlation coefficient between the scores of the even and odd questions of the questionnaire. The correlation coefficient was corrected using an equation (Spearman - Brown) If the reliability coefficient is (0.67) or more according to this equation, then it is a sufficient dimension for the research that depends on the performance of the resolution. Adopting it at different times for the same individuals and gives the same results.

Second: Previous studies:

- A study (Mirza, 2013) entitled "The Impact of Information Systems Components in Customer Relationship Management: An exploratory study for a sample of managers in a gas filling company." On the descriptive analytical approach, 50 questionnaires were distributed to a sample of managers, heads of departments and divisions, and were selected by a set of statistical methods. The study concluded that there is a significant role for information systems in managing customer relations within banks. Used culture.
- Al-Maqadimah Study, (2013) under the title "The Role of Human Competencies in Achieving Competitive Advantage." The study aimed to identify the role of human competencies in achieving competitive advantage in the Islamic University as a case study. The actual sample of the study consisted of (130) department directors and department heads. The researcher used the descriptive analytical approach, and the study concluded that there is a strong correlation between the availability of creative human competencies and the achievement of competitive advantage.
- A study (Oghojafor and ET. Al.2011) entitled "Information systems and customer relationship management in some insurance companies in Nigeria", the study aimed to enhance the performance of companies in the field of customer service and the profitability of the organization in the insurance sector in Nigeria. Out of 30 insurance companies, the study concluded that most of these companies have information systems represented by a comprehensive database on their customers. The study recommends that the effective combination of customer relationship management and information technology lead to improving customer service, meeting his needs and increasing the organization's profits.
- Gupta & Mc Daniel.2002 study entitled "Achieving competitive advantage through effective knowledge management in the framework of knowledge management." The study sought to achieve the vital link between knowledge management in contemporary organizations, and the development of competitive advantage through a framework that defines requirements necessary to achieve it. The framework included five basic components that produce optimal knowledge management and lead to competitive advantage, and these components are harvesting, filtering, arranging, benefiting, and promoting.

Benefit from previous studies

Previous studies were concerned with this subject and they were used to cover the theoretical side, as this study is characterized by knowing the reality of the application of information systems to one of the service organizations operating in the Sultanate of Oman, represented by government banks, and their impact in achieving the competitive advantage of banks in the Sultanate of Oman.

The second topic: the theoretical side

First: Information Systems (IS)

1. The concept of information systems:

It is defined as an integrated set of components that collect, store, process data, and provide knowledge, information and digital products. Business companies and other organizations rely on information systems to manage and implement their operations, interact with suppliers and customers, and compete in the market. It is a major component of computer hardware, wireless and wired communications, software, databases and data warehouses, procedures, and human resources (Faraj, 2009, 85).

The concept of information systems includes all matters that include computers and auxiliary devices, networks of all kinds, processing data and information in all its forms, and all functions related to technology and technology services.

Information systems have been defined according to the literature as follows:

(Haag & Commings.2013;13) defines it as the computer tools used by individuals to work with information, support and manipulate it in proportion to the needs of the organization, and Laudon (2012.195) defined it as a set of physical devices and software applications required to operate the entire organization, while (Turban) defined it & et.al, 2008, 56) The technical aspect of the information system, which is represented by physical devices, databases, software and other tools, and (Al-Najjar, 2007, 68) believes that it includes the hardware, software, tools, means, methods and programming systems that the organization needs to achieve its goals and help it in recording, recording and storing and processing, use and retrieval of information that is used by information systems .

It can be said that the concept of information systems is a set of hardware, software, communication networks and human resources required for the operation of the entire organization and data processing to access information that suits the needs of the organization in order to achieve its goals.

2-The Infrastructure of Information Systems:

The information systems infrastructure consists of physical and service facilities and management that support the computer resources shared in the organization. Most writers and researchers have agreed that there are five basic components of information culture (Turban.2010.58).

A- Hardware: Physical devices used in the process of input, processing, and output in information systems and consist of computers of different types and sizes, various input and output devices, storage devices and communication devices to connect computers with each other (Loudon.2012,52).

B- Software: Software in a computer system includes coded code that is created by programmers or users to tell the computer system how it works. Alter.2002, 350).

Alter believes that there are two types of software: the first: application software, which defines the tasks that the computer must perform and express processing from the user or

business, and the second; System software that performs the basic work that makes it possible for software applications to run computer hardware, including operating systems and programming languages.

c- Networks and communication facilities: Networks are a set of devices and communication channels linked to transfer data between devices, where each device in the network is called a (node), and network nodes include many types of devices such as computers, phones, terminals, secondary storage devices (Alter.2002,355).

Accordingly, some of these networks are Local Area Networks (LANS) specialized in one building, while others are wide area networks (WANs) that cover large areas, and the Internet is the largest global computer network, which includes thousands of Organizations, universities and businesses have witnessed huge developments represented by the World Wide Web, and its types (ring, star, carrier, and full mesh networks).

(Stair & Reynolds) shows that the Intranet is an internal network that allows members of the organization to exchange information and work on projects, while the Extranet is a broader network of the Internet based on web technology and allows external parties such as business partners and customers to enter as authorized persons to the Internet of the organization (Stair & Reynolds, 2003, 17).

d- Database: Refers to a structured set of electronically stored data that is controlled and accessed through computers based on pre-defined relationships between specific types of data associated with a particular job, situation or problem (Alter.2012, 137)

C- Human Resources: Every organization needs human resources to operate and manage information systems. Training and development are inseparable from the modernization-taking place in management information systems, and human resources include (Al-Najjar, 2007, 30)

a. End user: who benefits from the output of the information system, and this requires providing a means of communication, such as managers, accountants, salesmen, employees, consumers and engineers.

B. Specialists of Information system; they are people who spend full time in the development and operation of information systems. They are a group of individuals who specialize in developing, analyzing, designing and operating an information system. It includes:

1-System Analysts, who specialize in studying business problems, information requirements and systems, used in developing and improving information systems.

2-Programmers are information professionals who use documents provided by system analysts to convert them into computer programs.

3-Operations operators, who enter data and information to the computer and operate the system.

3- Services provided by the information systems infrastructure: These services are as follows: (Kandilji and Al-Jamari, 2009, 429-430).

A-Connecting employees, customers and suppliers in a coherent digital/electronic environment.

b- Banking services that provide data, voice, image and video transmission.

c- Data management services, including storing and managing bank data.

d- Software application services, which include organization resource planning, customer relationship management, supply chain management and knowledge management systems.

C- Information technology management services such as infrastructure planning and development.

H- Research and development services.

Second: Competitive Advantage:

1-Concept of Competitive Advantage: Competitive advantage means creating an advantage over others, and this advantage aims to create a system that has the ability or advantage to outperform competitors by creating value for the customer in an efficient and sustainable manner that can be maintained constantly. And offer or present them better than others, and Macmillan & Tampa.2011;88) asserts that companies seek to excel in their original environment by owning and maintaining a competitive advantage, where the competitive advantage is defined as the means by which banks can win their competition over others.

(Al-Salim, 104: 2015) defines it as "The skill, technique, or distinguished resource that allows the institution to produce values and benefits for customers that exceed what competitors offer them, and confirms its distinction and difference from these competitors from the point of view of customers who accept this difference and distinction.

It was defined by **(Hazier & Render.2014;36)** that competitive advantage means finding a single advantage that outperforms banks over competitors, meaning that competitive advantage makes banks unique and distinct from other competitors. Be seen (Stevenson.2009; 4) that competitive advantage aims in practice to meet the needs and desires of the customer in order to acquire the customer's good or service.

(Al-Azzawi, 2005: 54) believes that the competitive advantage is a characteristic of banks that keep pace with competing companies due to their possession of resources and auxiliary factors, which gives them a dynamic internal strength that establishes a strong position for them towards the various beneficiary parties, which is manifested in the goods and services they provide of unique value to their target customers. As defined by (Al-Zoubi, 138:2005) it is a characteristic or a set of relative characteristics that is unique to the institution and that it can maintain for a relatively long period as a result of the difficulty of imitating it, or that achieves during that period the benefit for it and enables it to outperform competitors in the services or goods it provides.

(Evans and Collier.2007;118) see that the competitive advantage in declaring the ability of banks to excel in the areas of marketing and finance is above all their priority, which in turn requires the understanding of banks, and explains (Mohsen and Al-Najjar, 2012: 59) that the competitive advantage aims to build a system that has an advantage Unique or distinctive that outperforms competitors through customer value, an efficient and sustainable method that can be consistently maintained and better presented or better than others.

From the foregoing, it was found that the competitive advantage of banks means their ability to do something better than their competitors and give them a competitive advantage over them in the market, and this means the ability of banks to produce and provide products (goods or services) to customers in a distinct way as offered by competitors.

2. Strategies & Competitive Advantage:

Organizations are based on the application of a specific strategy for competition, the goal of which is to acquire a competitive advantage or advantages, which depends on the degree of achievement of the organization's success or failure in the inclusion of competitive advantage strategies. (Bushnav, 2009: 29)

A- Low-Cost Strategy: This strategy aims to achieve a lower cost in comparison to Al-Mansion. There are several motives or incentives that encourage companies to realize the cost now, namely the availability of economies of scale, expertise, encouraging opportunities to reduce cost and improve efficiency, and finally, a market made up of buyers. This strategy

achieves several advantages, including what is related to violators, what is related to buyers, what is related to suppliers, what is related to alternative goods.

B- Differentiation Strategy: (Idris, Al-Ghaliby 2011: 108)

This option focuses on the organization being able to meet the needs and desires of its customers in a unique way through innovative and high-aware products, and it may be associated with providing special services in order for the buyer to be ready for a higher price. One of the most important features that controls this option is the interest in quality, so that the organization allows preserving itself from competitors without participating with them in price competition.

C- Focus Strategy: (Mohsen, Al-Najjar, 2012: 59).

It is the strategy that the organization or business unit follows in order to direct its efforts to serve customers in this part only. This strategy achieves its competitive advantage either through low cost or by product differentiation, but in a specific part of the market and not the market as a whole, meaning that this strategy is directed to a specific segment Only from customers in a particular market and not others, and thus large markets become more and more fragmented into small, narrow markets in which companies seek to achieve their competitive advantage by meeting the personal needs of customers in each small market either on the basis of low cost or on the basis of differentiation and exclusivity.

3. The Sources of Competitive Advantage

1. The sources of competitive advantage are determined as follows: (Mahmoud, 2007: 130)
2. Basic factors of production.
3. Building core capabilities in one or more of the organization's activities.
4. Local demand conditions.
5. The organization's pickles and the dominant feed industries
6. The external environment and the. Vertical integration and control of distribution channels

4-Competitive Priorities:

Competitive priorities are important operational dimensions that a particular process must possess and be able to perform to satisfy the internal and external customer, but not all competitive priorities are important and decisive for each process. Therefore, management must choose those that are most important to the intended process to achieve competitive success. Dimensions in terms of cost, quality, flexibility, delivery and creativity, and given the importance of these dimensions in achieving a competitive advantage for banks, they were adopted as dimensions in the research.

A-Cost: According to Slack, et. 2004; 244), lower cost is the main operational objective of firms that compete through cost, and even firms that compete through competitive advantages other than cost seek to achieve lower costs for the products they produce, Krajewski & Ritzman. 2005; 52)) that reducing the price of products contributes to an increase in demand for them, in addition to that it may reduce the profit margin if banks do not produce their products at low costs.

(Al-Lami Al-Bayati, 2008: 21) confirms that there is a part of the market within each industry that buys specifically at low cost, and to compete in those markets, banks must produce at the lowest possible cost, but this does not guarantee permanent profitability and success, as they are presented to the customer in a way other than cost low.

Based on the foregoing, we conclude that the cost dimension is one of the main pillars of banks' success and superiority by enabling them to stand up to competing companies and

help them reach competitive prices that enhance the competitive advantage of banks' products in the market, and that banks' lack of interest in reducing their costs may be the reason behind their deterioration. and its withdrawal from existing products and markets.

2-Quality: (Heizer and Render.2011;36) confirms that banks' obtaining the expected value that is commensurate with their mission requires them to identify customers' expectations and desires for quality and work to achieve them, and Slack, et al. 2012;45) explains that quality is one of the important competitive advantages that It refers to doing things correctly to provide products that fit the needs of customers, and Kralewski and Ritzman.2005;62) indicate that customers want products with quality that meet the characteristics required by them, which are the characteristics they expect or see in advertising, companies that do not provide products With a quality that meets the needs, desires and expectations of customers, it cannot survive and succeed in the behavior of competition, and Hindrikes et.al.2006;18) believes that quality means the ability to provide products that match the needs and desires of customers.

While Evans and Collier.2007;126) emphasize that high-quality products contribute to improving the reputation of banks and achieving customer satisfaction, apart from banks, they can impose higher prices when providing high-quality products to meet customers' requirements. 2008:34) that high quality means in everything, that is, the production system must be developed to reduce the reefs so that the production does not conform to the pre-established specifications and has high reliability, in addition to the absence of room for rework, i.e. re-examination and repair of products.

3-Flexibility: Chase explains. et.al.2011; 20) that the dimension of flexibility is one of the important dimensions and means the ability of banks to provide a variety of products in the required time, as well as the ability of banks to develop existing products and improve their processes to provide new products, shows Slack.et .al.2014; 45) that flexibility means the ability of banks to change operations to other methods, and this may mean changing the performance of operations as well as changing the method and time of performing operations, the customer needs to change operations to provide four requirements:

- Product flexibility: the ability of operations to introduce new or modified products.
- Mix flexibility: It means the ability of operations to produce a mixture of products.
- Flexibility of scale: It means the ability of operations to change in the level of output or in the level of production activity to provide different sizes of products.
- Delivery flexibility: refers to the ability of operations to change product delivery times

(Krajewski and Ritzman.2015;62) indicate that flexibility is related to the operations of banks, which enables them to respond quickly to the needs of customers efficiently, and stresses (Al-Ali, 2006:39) that flexibility has become an effective weapon in competition between companies, as it includes the ability to manufacture a wide variety of products. Products and the continuous introduction of new products, as well as the speed in developing existing products, in addition to responding in general to the needs and desires of the customer. Change, transformation and maintenance of the reliability of the production and delivery of products to customers.

(Slack delivery. ET. al. (2004: 64) Delivery When you want to get the job done quickly, this means reducing the time it takes when customers receive orders for products and finally deliver those products.

(Rzewski and Ritzman.2015; 64) indicated that there are three precedents for post-delivery dealing with time:

a. Faster delivery: This speed is forgotten by the time taken between receiving the customer's request and fulfilling the request, which is called the waiting time, and it is possible to increase the processing speed by reducing the waiting time.

B - Delivery on time: It means the delivery of customers' requests at the time specified for them by the banks.

C- Development speed: It is the speed of introducing a new product. The speed of development is measured by the time between the generation of the idea until the final design of the product and its introduction to the market.

(Evans and Collier.2017;126) show that time in today's society is one of the main sources of competitive advantage for banks, customers want quick response to their requests, as well as short waiting periods, and many companies use time as a competitive weapon by delivering products to customers faster and better.

4-Creativity: (Mohsen, Al-Najjar, 2012: 61-62) The companies that own or are called to possess the leadership feature in product technology, adopt the goal of innovation as a competitive precedence for them, and thus such companies should focus seriously, prominently and exceptionally on research And development at the beginning of its activities, because the important factor for its success in the face of its opponents is its ability to innovate and provide new products, and here the functions of the performance of the product, not its price, will be the characteristic that is reliable in the selling activity, which allows creative companies to achieve high profits, but when competitors enter the market and competition intensifies Profit margins decrease accordingly, and such companies withdraw from the market while continuing to introduce new innovative products.

A - The capabilities of research, design and development of the product are exceptional and prominent, in order for the organization to be able to continuously provide new high-quality products.

B - Operations equipment development capabilities: to enable the organization to modify or develop existing production equipment.

5-Importance of Competitive Advantage: The importance of competitive advantage is that it is a criterion for successful organizations to distinguish them by finding individual and new models that are difficult to imitate or replicate (Macmillan & Tampon.2010;89)) It is also an important criterion for organizations that want to survive and grow and the more their models are difficult to imitate and high standards, the more the organization maintains its competitive advantage From the above, we conclude the importance of competitive advantage through the following:

a. The importance of competitive advantage stems from maintaining it for as long as possible.

B. The difference in the nature of the service provided and the high and demanding standards make it difficult to imitate and reproduce.

c. It must be emanating from within the organization and provide harmony with the requirements of customers, and have a positive impact on the performance of the organization and maximize the profits of the facility by responding to the desires of customers.

6-Characteristics of Competitive Advantage:

These characteristics can be embodied as follows: (Idris, Al-Galba, 2011: 114).

- A.To be continuous and sustainable in the sense that the organization achieves the lead in the long term.

- B. Competitive advantages are relative compared to competitors or compared in different time periods, and this characteristic distances the organization from understanding the advantages in an absolute framework that is difficult to achieve.
- c. To be renewable according to the external environment data on the one hand and the capabilities and resources of the internal organization on the other hand.
- D. To be flexible in the sense that competitive advantages can be easily replaced by others according to considerations of changes in the external environment or the development of the organization's resources, capabilities and competencies on the other hand.
- e. The use of competitive advantages is commensurate with the goals and results that the organization sees achieving in the short and long term.

The third topic: the practical side

First: Describe the search variables

1-The level of importance of the information systems variable: this variable includes five sub-dimensions (hardware, software, communication networks, databases, human resources).

a. Analysis of the level of importance of the hardware components: This dimension is represented by five paragraphs (1-5), and the highest value of the average was (4.500) and with a standard deviation of (0.555), a value that preceded the hypothetical mean (3) and this indicates the availability of computers in banks sufficiently and was The lowest value (3.925), which is slightly higher than the hypothetical mean, and this indicates a small amount of fast and accurate processing of the required data, and the value of the standard deviation was (0.971)

Table (1) analysis of the level of importance after the physical components

T	questions	Mean	standard deviation	relative significance
1	There are enough computers in the banks.	4.500	0.001	90
2	Banks use high-tech devices to benefit from information and work in the most accurate ways	4.032	0.6985	80.6
3	Banks are constantly developing and updating information technology devices.	3.975	0.947	79.5
4	The devices in banks provide fast and accurate processing of the required data	3.925	0.971	78.5
5	It adopts the information technology used to provide new services to subscribers	4.075	0.859	81.5
	Overall rate of hardware	4.10	0.663	82

Source: Prepared by the researcher based on the computer output of the SPSS program

B- The level of software importance: This dimension is represented by five paragraphs (1-5), and the highest value of the average was (4.025) and with a standard deviation of (0.733). It advanced on the hypothetical mean (2) and it was the lowest value (3.80), which is slightly higher than the hypothetical mean, and this indicates that the information technology used includes a degree of safety to some extent through special programs for banks, and the value of the standard deviation was (0.912). Table (2) analysis of the level of importance of the software dimension.

T	questions	Mean	standard deviation	relative significance
1	Banks use modern computer programs in their work..	3.875	0,822	77.5
2	Bank management constantly adopts advanced programs to keep pace with developments in banks.	3.900	0.672	78
3	The information technology used includes a high degree of security through programs specific to banks.	3.80	0.991	76
4	Banks will benefit from the information provided by the software in dealing with problems and following up on customers.	4.025	0.733	80.5
5	Software contributes to supporting decision-making and problem-solving processes by providing the necessary information.	3.950	0.749	79
	Software overall rate	3.910	0.636	78.2

Source: Prepared by the researcher based on the computer output of the SPSS program

C- The level of importance of communication networks: This dimension is represented by five paragraphs (1-5), and the highest value of the average was (4.30) and with a standard deviation of (0.758), a value that preceded the hypothetical mean (3) and this indicates the connection of bank branches to one network Contribute to monitoring and controlling the flow of operations, and the lowest value was (4.075), which is higher than the hypothetical mean. This indicates the keenness of banks to provide network security for the purpose of protecting information and data to maintain their confidentiality, and the value of the standard deviation reached (0.829). Table (3) Analysis of the level of importance of communication networks.

T	questions	Mean	standard deviation	relative significance
1	There is a modern and effective communication network to serve the system in the banks.	4.150	0.736	83

2	Bank branches are linked to a single network that contributes to monitoring and controlling the progress of operations.	4.30	0.758	86
3	Banks rely on modern methods in the field of banking, networks that may suit their needs..	4.150	0.770	83
4	Banks have a website for electronic exchange with customers.	4.100	0.872	82
5	Banks are keen to provide network security for the purpose of protecting information and data and maintaining their confidentiality.	4.075	0.829	81.5
	overall network rate	4.155	0.546	83.1

Source: Prepared by the researcher based on SPSS computer output

D- The level of importance of databases: This dimension is represented by five paragraphs (1-5), and the highest value of the average was (4.200) and with a standard deviation of (0.687), a value that preceded the hypothetical mean (3) and this indicates the availability of an integrated database within The different units, branches and sections in the banks had the lowest value (3.775), which is slightly higher than the hypothetical mean. This indicates that the database in the banks is characterized by accuracy, efficiency, flexibility and ease of use and the value of the standard deviation is (0.947). Table (4) Analysis of the level of importance of databases

T	questions	Mean	standard deviation	relative significance
1	An integrated database is available within the banks and is available for the different units, branches and departments	4.200	0.0687	84
2	Enables timely access to data by bank employees	3.950	0.714	79
3	The database in banks is accurate, efficient, flexible and easy to use.	3.775	0.947	75.5
4	The database in banks helps to provide the necessary decision-makers in banks and reduce time wasters	3.825	0.747	76.5
5	All bank branches are connected to computers with a single database that	4.075	0.859	78.5

	saves the time needed to provide the service to subscribers.			
	General rate for databases	3.935	0,655	78.7

Source: Prepared by the researcher based on SPSS computer output

E - The level of importance of human resources: This dimension is represented by five paragraphs (1-5), and the highest value of the average was (4.100) and with a standard deviation of (0.810), a value that advanced over the hypothetical mean (3) and this indicates that banks have specialized employees In the field of information technology, the lowest value was (3.075), which is slightly higher than the hypothetical mean. This indicates that the banks did not give concessions to people with creative and creative ideas sufficiently, and the value of the standard deviation was (1.366). Table (5) Analysis of the level of importance of human resources.

T	questions	Mean	standard deviation	relative significance
1	Banks are working to attract specialists in the field of information technology.	3.750	1.056	75
2	Banks have employees specialized in the field of information technology	4.100	0.810	82
3	Banks have programmers and experts who can develop and adapt software according to what banks need.	3.550	1.061	71
4	Banks are working to provide training programs to develop the capabilities of their personnel in line with the current technical developments.	3.250	1.256	65
5	Banks grant privileges to those with creative and innovative ideas.	3.075	1.366	61.5
	General average of human resources	3.545	0.939	70.9

Source: Prepared by the researcher based on SPSS computer output

2-The level of importance of the competitive priority variable: this variable includes five sub-dimensions (cost, quality, flexibility, delivery, creativity).

A- Analysis of the importance level of cost: This dimension is represented by five paragraphs (1-5), and the highest value of the average was for three variables, as it reached (3.575), and with a standard deviation of (0.844), (0.813) and (1.035), respectively, which is a value that advanced On the hypothetical medium a little (3) and this indicates that the organization is working to control its service operations in order to control cost reduction, and the organization uses various self-measures of the service process for the purpose of reducing service costs in addition to its control over services and reduce internal failures to some extent

while recorded The lowest value (3.500), which is slightly higher than the hypothetical mean, and this indicates the availability of a somewhat clear policy regarding the costs of the organization's services, and the value of the standard deviation was (0.987). Table (6) Analysis of the level of importance after the cost

T	questions	Mean	standard deviation	relative significance
1	Low cost of service is one of the main priorities of the organization's policy	3.500	0.934	70
2	The organization tries to control its service operations in order to control cost reduction	3.575	0.844	71.5
3	There is a clear policy regarding the costs of the organization's services, and there is periodic control over that..	3.50	0.987	70
4	The organization will operate various self-service processes for the purpose of reducing service costs.	3.575	1.035	71.5
5	The organization controls the services and keeps internal failures low.	3.575	1.035	71.5
	The overall average cost.	3.545	0.821	70.9

Source: Prepared by the researcher based on the computer output of the SPSS program

B- Analysis of the level of importance of quality: This dimension is represented by five paragraphs (1-5), and the highest average value for paragraphs (1) and (3) was (3.675), with a standard deviation of (0.917) and (0.797), respectively, which is a value that advanced On the hypothetical mean (3) and this indicates the organization's use in an average way of advanced standards to adopt quality, and that banks use multiple tools to control quality in an average way, and the lowest value was (3.375), which is slightly higher than the hypothetical mean. This indicates that banks spread the concepts of quality among employees in its various sections, it was averaged, and the standard deviation value was (1.079). Table (7) Analysis of the level of importance of the quality dimension.

T	questions	Mean	standard deviation	relative significance
1	The organization uses advanced standards in embracing quality	3.675	0.917	73.5
2	The organization has developed its quality services through training courses and skills acquisition	3.450	1.108	69

3	The organization uses multiple tools to control quality	3.675	0.797	73.5
4	The organization disseminates the concepts of quality among the employees in its various departments	3.375	1.079	67.5
5	There is a quality department in the organization that develops solutions and treatments for quality	3.50	1.0086	70
	Overall average quality	3.535	0.870	70.7

Source: Prepared by the researcher based on the computer output of the SPSS program

C- The level of importance of flexibility: This dimension is represented by five paragraphs (1-5), and the highest value of the average was (3.775) and with a standard deviation of (0.832), a value that preceded the hypothetical mean (3) and this indicates the possibility of changing the work of the devices according to the change In service specifications, the lowest value was (3.425), which is slightly higher than the hypothetical mean, and this indicates the banks' response to changes in consumers' tastes and the change in service specifications according to their desires to some extent, and the value of the standard deviation reached (0.931). Table (8) analysis of the importance level after flexibility.

T	questions	Mean	standard deviation	relative significance
1	The organization responds to changes in subscribers' requirements and changes service specifications according to their desires.	3.425	0.931	68.5
2	The organization has the ability to respond to changes in the external environment.	3.675	0,0917	73.5
3	The organization has the ability to change the quantity of services provided when the demand for the service changes.	3.750	0.742	75
4	There is the possibility of changing the work of the devices according to the change in the service specifications.	3.775	0.832	75.5
5	The organization moves from one service to another easily and has the ability and competence to do so	3.550	0.904	71

	The overall rate of elasticity	3.635	0.750	72.7
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Source: Prepared by the researcher based on the computer output of the SPSS program.

D. Analysis of the level of importance after delivery: This dimension is represented by five paragraphs (1-5), and the highest value of the average was (3.825) and with a standard deviation of (0.903), a value that preceded the hypothetical mean (3) and this indicates the use of certain strategies by banks in the operations of Delivery in order to keep its promises to its customers, while the value is less (3.725), which is slightly higher than the hypothetical mean, and this indicates that banks seek to provide their services at the appropriate time for the customer in order to maintain it, and the value of the standard deviation is (0.960). Table (9) analysis of the level of importance after delivery.

T	questions	Mean	standard deviation	relative significance
1	The organization seeks to provide its services in a timely manner to the customer in order to maintain it..	3.725	0.960	74.5
2	The organization uses certain delivery strategies to keep its promises to its customers.	3.825	0.903	76.5
3	The organization tries to reduce the waiting time for its customers. When they receive their services.	3.750	1.032	75
4	The organization is trying to find modern ways of the delivery process and according to what the external customer wants.	3.750	0.809	75
5	Delivery has an important role in achieving competitive precedence with the availability of the principles of total quality	3.800	0.883	76
	Overall rate of delivery	3.77	0.838	75.4

Source: Prepared by the researcher based on the computer output of the SPSS program.

E - Analysis of the level of importance of the creativity dimension: This dimension is represented by five paragraphs (1-5), and the highest value of the average was (3.750) and with a standard deviation of (0.954), a value that advanced over the hypothetical mean (3) and this indicates that banks are keen on creativity. In pricing, distribution and promotion, as well as their creativity in service according to pre-established plans, and it was less valuable (3.50), which is slightly higher than the hypothetical mean, as it shows the extent to which banks care about customers' ideas and creativity and take their opinions and suggestions that would develop the service and the value of the standard deviation (1.038). *Table (10) Analysis of the level of importance after creativity.*

T	questions	Mean	standard deviation	relative significance
1	The organization's services are characterized by continuous innovation and innovation.	3.60	0.871	72
2	The organization's services are among the distinguished services in terms of specifications and characteristics in the market..	3.675	0.997	73.5
3	The organization cares about customers' ideas and creativity and takes their opinions and suggestions that would develop the service..	3.50	1.038	70
4	The organization focuses on more than one strategy for creativity, including intermittent and continuous, and creativity resulting from management, working individuals or customers..	3.625	0.868	72.5
5	The organization is keen on creativity in pricing, distribution and promotion as well as its creativity in service according to pre-established plans	3.750	0.954	75
	Overall creativity rate	3.630	0.849	72.6

Source: Prepared by the researcher based on the computer output of the SPSS program.

Second: Test the first main hypothesis

Table (11) shows the correlation coefficients according to the Saber man test between the variables of information systems and the dimensions of competitive advantage, individually and collectively.

approved	Cost	the quality	Flexibility	Delivery	creativity	Competitive advantage
physical components	0.234	0.115	0.111	0.201	0.098	0.178
software	0.750	0.545	0.632	0.643	0.665	0.698
Networks	0.415	0.564	0.545	0.552	0.553	0.603
Databases	0.605	0.595	0.647	0.668	0.737	0.754
HR	0.749	0.854	0.822	0.737	0.806	0.888
Information Systems	0.668	0.696	0.731	0.721	0.747	0.816

1-The results indicate between the information culture variable and the competitive advantage variable in the presence of a correlation coefficient whose value is (0.816), which is a positive and strong relationship with significant significance at the level of (0.01), as well as a reciprocal dependency correlation that reflects that information systems are a key factor in the competitive advantage of banks.

2-The results indicate that there is no correlation between the physical components and the competitive advantage.

3-There is a strong correlation between software and competitive advantage, its value is (0.698), which is a strong positive relationship with significant significance at the level (0.01), which indicates the importance of software in competitive advantage.

4-There is a strong correlation between communication networks and competitive advantage, the value of which is (0.603), which is a strong positive relationship with significant significance at the level (0.01) and indicates the importance of applying communication networks in achieving competitive advantage.

5-There is a strong correlation between databases and competitive advantage, its value is (0.754), which is a strong positive relationship with significant significance at the level (0.01), which indicates the importance of databases in competitive advantage.

6-There is a strong correlation between human resources and competitive advantage, whose value is (0.888), which is a strong positive relationship with significant significance at the level (0.01), which indicates the importance of human resources in competitive advantage

7-The table indicates that there are no correlations between the physical components and the dimensions of competitive advantage.

8-The table indicates that there are correlations between software and the dimensions of competitive advantage, and the highest value with the innovation dimension was (0.665).

9-The table indicates that there are correlations between communication networks and the dimensions of competitive advantage, and the highest value with the quality dimension was (0.568).

10-The table indicates that there are correlations between databases and the dimensions of competitive advantage, and the highest value with the creativity dimension was (0.737).

11-The table indicates that there are correlations between human resources and the dimensions of competitive advantage, and the highest value with the quality dimension was (0.854).

Third: Testing the second hypothesis:

For the purpose of determining the effect of each independent variable of information systems x on the dependent variable competitive advantage and measuring the level of significance of its impact, simple and multiple linear regression was used to achieve this, testing the effect hypothesis (there is a significant effect of information systems variables on competitive advantage) using simple linear regression. *Table (12) the effect of information systems variables on competitive advantage Competitive advantage.*

Competitive advantage						R2	Variables
Value .T		regression coefficient	fixed limit	F. value			
Sig	calculated			Sig	calculated		
..117	1.710	..203	3.434	..117	2.093	0.064	physical components
.....	0.740	..770	1.07	.....	31.877	0.456	software
.....	4.003	..094	..422	.....	2.734	0.353	Networks
.....	7.240	..711	..977	.....	38.937	0.506	Databases
.....	1.723	..777	0.201	.....	114.984	0.702	human resources

Source: Prepared by the researcher based on the computer output of the SPSS program

A- The effect of physical components as an independent variable on competitive advantage

We note from Table (12) that the relationship between the independent variable German components x1 and the dependent variable competitive advantage is a relationship with a non-significant effect because the calculated F value (2.593) is smaller than the tabular value (7.3141) at the level of significance (0.01) and the value of the coefficient of determination was R2 (0.064), which has a weak effect, and the calculated t-value (1.610), which is less than the tabular (1) value of (2.423), is not significant at the level (0.01).

B - The impact of software as an independent variable on competitive advantage.

Table (12) shows that there is a significant effect relationship between software as an independent variable and competitive advantage as a dependent variable, as the calculated (F) value (31.867) is greater than the tabular value (7.3141) at a level of significance (0.01) and degrees of freedom (38,1). The value of the coefficient of determination (R) is (0.456), and this means that the software as an independent variable explains (45%) of the changes that occur in the dependent variable, meaning that (55%) of the variables belong to other variables that are not visible in the model. The results also showed that the value of (1) Calculated (5.645), which is significant at the level (0.01) because it is greater than the tabular t value (2.423).

c. The effect of communication networks as an independent variable on the competitive advantage:

Table (12) shows that there is a significant effect relationship between communication networks as an independent variable and competitive biography as a dependent variable, as the corrected (F) value (20.734) is greater than the tabular value (7.3141) at a significant level (0.01) and with degrees of freedom (38,1). The value of the coefficient of determination (R) is (0.353), and this means that the software as an independent variable explains (35%) of the changes that occur in the dependent variable, meaning that (65%) of the variables belong to other variables that are not visible in the model, and the results also showed that the value of (1) corrected (4.553), which is significant at the level (0.01) because it is greater than the tabular value (2.423).

D. The impact of databases as an independent variable on competitive advantage:

Table (12) shows that there is a significant effect relationship between databases as an independent variable and competitive advantage as a dependent variable, as the calculated (F) value (38.936) is greater than the tabular value (7.3141) at a significant level (0.01) and degrees of freedom (38,1). The value of the coefficient of determination (R) is (0.506), which means that the software as an independent variable explains (51%) of the changes that occur in the dependent variable, meaning that (19%) of the variables return to other variables that are not visible in the model, and the results also showed that the value of (1) calculated (6.240), which is significant at the level (0.01) because it is the largest of the tabular value (2.423).

W. the impact of human resources as an independent variable in the competitive advantage:

Table (12) shows that there is a significant effect relationship between databases as an independent variable and competitive advantage as a dependent variable, as the calculated (F) value (114.984) is greater than the tabular value (7.3141) at a significant level (0.01) and degrees of freedom (381), and the value of the coefficient of freedom The determination (R) is (0.752), which means that the software as an independent variable excludes (75%) of the changes occurring in the dependent variable, because (25%) of the variables are due to other variables that are not visible in the model. The results also showed that the calculated value (1) (10.723) is significant at the level (0.01) because it is the largest of the tabular t value (2.423).

2 Testing the effect hypothesis (there is a significant effect of information systems variables on competitive advantage) using multiple regression.

Value. T		regression coefficient β	fixed limit α	F. value		R2 The coefficient of determination	Variables
tabular	calculated			tabular	calculated		
2.423	1,561	0.143	0.167	3.990	30.125	0.816	physical components X1
	1,706	0.211					software 2X
	0.386	0.045					Networks X3
	0.738	0.098					Databases X4
	60370	·.V·λ					HR 5X

**Significance at the level 0.01)

Source: Table prepared by the researcher according to SPSS program
Competitive Advantage 167 0 (0.143 - Hardware (0.211) Software (0.045 Networks 0.0981)
Databases + (0.708) Human Resources.

Y-a-B1 x1-B2 x2+83 x3+ 34 x4 -85 x5

It is clear from Table (13) that the corrected value (1) (125-30) is greater than the tabular value of (3.6990) and the degree of freedom (5,34), and this indicates that the regression curve is good for describing the relationship of the two regressions, human resources and competitive advantage, and this is confirmed by The significance of this dimension according to the choice (1), as its calculated value amounted to (6.370), which is greater than the tabular value (2.423) with an informational level of (0.01). The value of (5) was (0.708), meaning that a change of (1) will increase the competitive advantage by (0.708).

The value of the constant ((0.167), i.e. the value of the constant affects by (0.167) in the event that all the variables of information systems are equal to zero, and the coefficient of determination is an amount of (0.816), meaning that (81.6%) of the changes in the competitive advantage are explained by the five factors that were Analyze them, meaning that the percentage (18.4%) are other factors that were not included in the multiple regression equation.

The regression equation did not show any effect for the rest of the information systems variables on the competitive advantage (hardware, software, communication networks, databases). It rejects the hypothesis that: there is a significant effect between hardware components, software and communication networks, according to the previous indicators.

The third topic: conclusions and recommendations

First: the conclusions

1-It was found that banks provide the necessary hardware and software required for operation by using modern computer programs that are used to support decision-making processes to solve problems, and they need a higher degree of security to maintain them.

2-Banks have modern communication networks that secure the transmission of data and information easily, as well as an integrated database within banks that links units, branches and departments with each other, enabling timely data access.

3-I have specialized employees in training courses to develop their skills.

4-It turns out to take into account this sofa

5-Quality in an adequate atmosphere in the cooperation of workers and individuals working in this field.

6-It was found that they need to get a greater response in their requests and requirements, take their opinions and suggestions and change them later in the provision of the service.

7-It was found that there is a correlation between the variables of information systems (communication software, databases, human resources) and the competitive advantage, except for the variable of the hardware components according to the correlation relations due to the inaccuracy in determining the use of hardware components by banks and the weakness of studying this variable due to the underestimation of the opinions of the sample for this variable.

8-It was found that there was an effect of information systems variables (communication software, databases, human resources) on competitive advantage, except for the hardware variable, according to simple multiple regression analysis.

9-It was found that there was no effect of the components of information systems (hardware, communication software, databases) on competitive advantage, except for the human resources variable, according to multiple regression analysis.

Second: Recommendations

1-Focus more on providing effective training programs for individuals working in banks in line with the current technical developments to develop their abilities and skills, and pay attention to spreading the culture of quality in various banking departments, with the need for banks to grant privileges to those with creative and creative ideas to encourage them to innovate and be creative.

2-Paying more attention to reducing the costs of the service provided to subscribers in order to activate the cost dimension as one of the dimensions of competitive advantage.

3-Work to respond quickly to changes in the external environment, especially the intense competition between telecom companies, through the service provided to the segment of users to achieve flexibility as a competitive advantage.

4-The need to focus on developing the service provided to subscribers and continuous creativity in providing this service in line with the continuous requirements of subscribers in order to excel in the field of creativity as a competitive advantage for banks.

5-Paying attention to the variables of information systems, especially the physical components, because of their great role in achieving the competitive advantage of banks.

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