

# “THE IMPACT OF BANKING INFORMATION SYSTEMS APPLICATIONS IN IMPROVING THE QUALITY OF PERFORMANCE—AN EXPLORATORY STUDY FOR A SAMPLE OF IRAQI BANKS”

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## Abstract

The research is based on the idea that banking information systems applications have a significant and effective role in improving the quality of performance of (systems, digital specializations, and decisions). In light of the digital world system and the changing and accelerating banking variables and establish a banking system that able to keep up with the global change movement and the actual need for enhancing the increasing requirements of the clients and provide a better banking service by using of the digital world applications in the banking field, as the research problem, indicated that there is an evident carelessness in transfer from the traditional system to the electronic system of the banking service and improving the quality of the banking performance in keeping up with the change movement and actual need.

The research adopted preparing of a questionnaire form and using of five-point Likert scale to get the non-parametric values to solve the problem. The researcher found some conclusions, the most important of which are:

There is a significant effect of statistical significance for the applications of banking compliance systems in improving the quality of performance

**Keywords:** banking information systems applications, improving the quality of performance.

## Introduction

The world today is turning to use a new system in banking transactions in the context of creating banking information systems applications (Digitization of banking services, Electronic archiving, Banking information systems with a strategic dimension) that providing high-quality banking services and for continuity of service with that quality, it is necessary to measure the Performance quality of the systems, applications, individuals working on them, and the organization as a whole. In light of that, the research problem referred to that there is an evident carelessness in promoting this use and aimed to show the impact of these applications on changing the level of banking performance.

So, the problem was that the Iraqi banks don't take into account the modernity in using and applying the applications of banking information systems and advancing the banking system to reach the highest performance and provide unique banking services in internal and external

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transactions in away that guarantee safety and speed to the client and the effectiveness of the new digital system on the banking performance.

### **Research Methodology:**

#### **Research Problem:**

To recognize the research problem, it is necessary to ask the questions that frame the problem that emerges from the evident carelessness in using the applications of banking information systems its dimensions (Digitization of banking services, Electronic archiving, Banking information systems with a strategic dimension) in keeping up with the new global intellectual structure of the changed and accelerated digital trends relating to its modernity and its impact on the performance and measure its effectiveness on the level of (systems,digital specializations, and decisions), in that light, the following questions were asked:

- 1- What is the extent of technical awareness of the importance of using the digitization of banking information systems to improve the quality of performance of banking and financial institutions?
- 2-Is there a possibility to apply the banking information systems and its contributions in reduce the burden of obtaining to banking services?
- 3- Will the use of banking information systems applications make a qualitative leap in improving the flow of banking transactions?
- 4- Is there a relationship between banking information systems applications and improving performance quality?
- 5- Is there an impact of banking information systems applications in improving the quality of performance?

### **The Research Significance:**

To enhance the importance of research in light of the new digital world trends and modern uses of banking information systems applications, and to work on building a banking system capable of keeping pace with change and providing better banking services to customers. . Which has recently resulted in directing the world in general and the research community in particular, which despite its digital banking gap However, efforts to tackle it are progressing slowly And the confrontation with the movement of change does not fit with what is required of it, which must be managed in a scientific and correct administrative manner in light of the performance of contemporary strategic thought that moves the process of progress forward. The research aimed to identify,measure, and test the relationship, correlation and the influence and philosophical analysis of its variables. The researcher used the exploratory study method by adopting a questionnaire and a triple Likert scale for the purpose of testing the sample, statistical analysis and approval of the results.

### **Research objectives:-**

For the purpose of determining the research objectives and the methods that seek to achieve them, they must be consistent with the questions posed by the research problem, which can be summarized as follows:

1. The need to enhance technical awareness of the importance of adopting banking information systems with a strategic dimension to improve the quality of performance of financial and banking institutions.
2. Providing the infrastructure that supports the possibility of applying banking information systems and contributing to reducing the burden of obtaining information to enhance banking services.
3. Explain the role played by banking information systems and the technology used with a strategic dimension in improving the quality of performance
  
1. Measuring and testing the correlations between banking information systems and improving performance quality.
2. Measuring and testing the impact of banking information systems in improving performance quality.

### 1. Research Sample:

The researcher adopted a questionnaire form that included (20) items and the Five-point Likert scale and used the descriptive and statistical analysis through adopting the response strength matrix, as well as the Spearman's rank correlation coefficient and the Coefficient of Determination ( $R^2$ ) and (F) Test, and selected a sample of managers and employees consisted of (80) member.

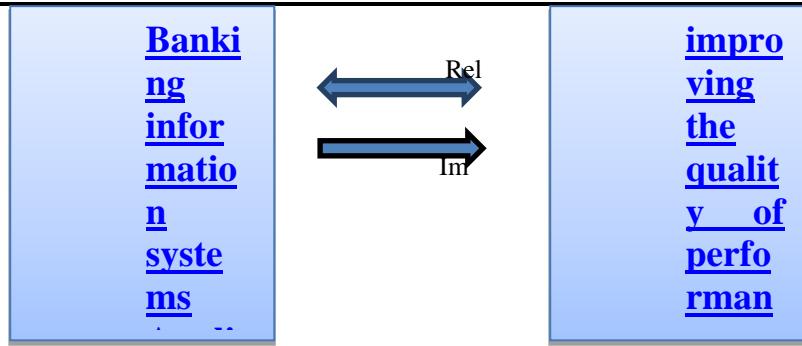
**Response Strength Matrix**

Wilted	Level (direction of response)	Not's
1 – 1.8	Completely disagree	Where I calculated the length of the class, According to the following rate: $4/5 = 0.8$
1.8 – 2.6	Disagree	
2.6 – 3.4	Neutral	
3.4 – 4.2	Agree	
4.2 – 5	Completely agree	

### Research Hypothesis

- The first main hypothesis: There is a statistically significant correlation between banking information systems applications and improving performance quality.
- The second hypothesis: There is a statistically significant effect of banking information systems applications in improving the quality of performance.

### Research Hypothetical plan



**Figure (1)**  
**Research Hypothetical plan**

### **The Concept of Banking information systems and its Applications:**

#### **- Banking information systems:**

Applications, software and techniques that enhance, analyze, and provide access to large amounts of data to help the clients deliver the best business and make the right banking strategic decisions. (constaution, et.al., 2019:53)

#### **- Digitization of banking services:**

Providing banking services through electronic means in a way that enables speed in financial transactions to reduce the effort of clients and employees and reduce costs, including Internet banking, mobile banking, electronic payment systems, electronic check, etc. (Abdulrahman, 2014: 4)

#### **- Electronic archiving:**

Storing data and information on an electronic or digital means for a period that may be long or limited, according to its security importance and, to retrieve it on demand and need. Also, it's the systems that depend on computer technology, which produces processes and procedures to manage and control the document storage and retrieval processes. (Alhoush, 2018: 193)

#### **- Banking information systems with a strategic dimension:**

Computerized banking systems serve the various administrative and functional levels in banking institutions, which bring about fundamental changes in their objectives, operations, products, services, and external relationships, including their relationships with customers and competitors, which have effects that contribute to changing trends. For the business of banks to enable them to obtain a distinguished position and make a difference in their ability to achieve a sustainable strategic and competitive advantage. (Abdulrahman, 2019: 137)

### **The Significance of Banking Information Systems Applications:**

Banking Information Systems represents a sophisticated system of high importance that derives its strength from the digital world in formulating its vocabulary, variables, and applications to keep up with the change movement in banking transactions and procedures by adopting technological, organizational, and creative capabilities to give them value and high quality in performance with reliability and internal and external sources that enhance their decisions, and develop modern work methods through which achieve sustainable competition and survival of the fittest. The importance of Banking Information Systems applications can be summarized as follows: (Al Hamami, 2007: 2)

- 1- The effort of Banking organizations to continuity and raising the level of their competitiveness by providing good quality and innovative services made it necessary to have a rapid response to the global changes in a volatile environment.
- 2- Banking information systems provide decision makers and decision makers with information of high reliability and relevance through appropriate analytical tools for decision-making.
- 3- The adoption of banking information systems on hardware, equipment and software that contribute to the promotion and creation of digital archiving to classify, analyze, store and retrieve data when needed..
- 4- It helps banks to grasp the prevailing situation in the surrounding environment, which is characterized by competition, complexity, and rapidity by continuous immediate monitoring, anticipating future trends, and identifying investment opportunities and risks.
- 5- Helping banks to rebuild their thinking strategies through new highly streamlined working methods to be able to achieve a sustainable competitive advantage.
- 6- Its importance lies in identifying the possible financial sources and their costs, knowing the most profitable clients, the most requested loans, services that can be marketed to a specific category, risk management, combating money laundering, detecting suspicious operations, and managing clients relations.
- 7- Contribute to the Age analysis to develop future strategies and key performance indicators and ensure compliance with laws and regulations.

### **Improving the quality of performance**

- Improving the quality of performance is the practical dimension of all the financial activities carried out by these institutions to make their decisions. Quality will be measured (the quality performance of banking applications, the quality performance of digital specializations, and the performance of banking decisions). To express how economic units with a financial dimension use their resources and assets and how to use and measure them according to specific standards with the environment efficiently and effectively, which reflects their ability to adopt options by adopting the digitization of the banking service.

#### **- The concept of quality performance and its dimensions:**

A comprehensive concept that reflects the trends of financial and banking institutions in investing their assets and developing their performance according to basics related to their objectives amid a set of internal and external environmental variables that the institution interacts with in a way that creates results within the accepted standards and specifications International. (Abed, 2018: 524)

#### **-- Quality of performance of financial and banking applications:**

The performance measure of financial and banking applications depends on a direct relationship between the level of use of applications and the quality, degree of use and frequency of use, and they use the function for this high effectiveness when it achieves an increasing level of use and frequency of use before. (Al-Tai, 2009: 76)

**- Quality of performance of digital specializations:**

The degree of accomplishment or completion of the tasks that make up an individual's job, which reflects how the individual achieves or satisfies the job requirements, which is measured on international foundations and standards, the results he achieved and the level of efficiency and effectiveness of performance. (Okasha, 2008: 33)

**- Quality of performance of banking decisions:**

Measuring the effectiveness of the performance of choosing the best alternative among many banking situations, which results in an increase in the market value of the banking institution within a fixed period, as the financial analyst and the manager analyze the financial statements and reports and search for their data to analyze and modify them to help in making banking decisions. (Hanafi, 1999:207)

**Objectives of improving performance quality:-**

The quality of performance and methods for measuring it aim to distinguish between the investments provided by banks and provide better service to customers by achieving the efficiency of the performance of banking institutions through developing a system that can reduce the job burden on employees, and finding service methods and control systems that enable rearranging the performance of digital specializations by achieving balance. Between banking information systems, banking technology and artificial intelligence digitization to achieve high performance in financial decisions. The objectives for measuring the quality of banking performance are defined as follow: (Al Zubaidi, 2000: 81)

- 1- Measuring and improving the efficiency and effectiveness and redesigning the banking activities that were evaluated according to comprehensive quality standards and metrics.
- 2- Detecting and evaluating deviations in banking activity, conducting a comprehensive analysis of them, and stating their causes and proposals for correcting them.
- 3- It aims to create a new mental image that enhances the continuous improvement spots towards sustainable competitiveness
- 4 -The measurement enables setting strategic plans for its services in the market banking .
- 5- Determine the efficiency of using the available resources rationally to achieve a greater return at the lowest costs and good quality of service.
- 6- Correcting banking performance paths of the systems used, employees, and the level of financial decisions by adopting Banking Information Systems Applications.
- 7- Work on creating an electronic system through which it re-designs its business in line with the digital change of business.

**The relationship between banking information systems applications and improving performance quality:**

Applications of banking information systems and banking technology represent the effective and dynamic tool in the banking sector and digital banks through the adoption of modern and advanced devices and equipment, software and updated banking systems that move electronic affiliation towards new services and high-performance work methods and enhance them with network communications systems capable of digitally linking parts of banking institutions. Internally and externally, adopting scientific minds with digital specializations in managing the institution for peak performance, arranging its data using modern digital archiving and

then restoring this data with new systems, which achieves an economic reduction in cost, financial flexibility and quality in the services provided to customers at the personal, commercial or investment level, and rebuilding parts in order to Generalizing the value of overall performance and creating a society capable of interpreting these applications. It is necessary to know the performance of financial and banking applications and estimate the effectiveness of their use to reflect the extent of benefit achieved from their transactions, whether at the level of digitizing the banking service, electronic payment systems, creating electronic archives, or using banking information systems. With a strategic dimension. In addition, measuring the quality of applications is reflected in the extent of effective use of specialized human resources in their management, and work to develop the intellectual and digital system to restore the logical connection between human minds and electronic minds with artificial intelligence, which has led to the trend of financial and banking institutions to use applications to rebuild and arrange their financial and banking decisions in a way that keeps pace with the global change movement and the actual need for service.

### Results: Descriptive and statistical analysis of the questionnaire:

#### - Descriptive analysis..( Banking Information Systems Applications)

Table (1)

NO.	Questions	Arith metic mean	Standard deviation	Relative importance %	response level
Q1	The bank focuses on the social and technical awareness about the importance of using the Banking Information Systems Applications and to work on developing them	4.150	0.922	%83	High
Q2	The bank has an advanced infrastructure (hardware, software, digital banking archiving, communications systems, and specialized digital human resources) capable of digital transformation..	3.431	1.129	%78.62	High
Q3	The bank uses Banking Information Systems applications that achieve rapid response to the beneficiary's requirements with lower costs and high flexibility	3.981	0.972	%79.62	High
Q4	The bank monitors the applications' outputs to re-evaluate the quality of their performance	3.764	1.13	%75.28	High
Q5	The bank believes in the importance of using electronic archiving applications to store files, documents and decisions.	4.181	1.072	%83.62	High
Q6	The bank has advanced and updated programs and systems for electronic archiving and data protection..	4.05	1.052	%81	High
Q7	The bank relies on databases, warehouses and cloud computing for data storage and backup	4.082	0.996	%81.64	High
Q8	The bank has the capacity to build and operate a direct-to-use (BIS ) department.	3.87	0.997	%77.4	High
Q9	Banking Information Systems applications helps in establishing a set of procedures to be followed in order to obtain a sustainable competitive advantage.	4.133	1.01	%82.66	High
Q10	The bank owns the specialized human cadre for the usage of (Banking Information Systems applications) and to work on its outputs	3.882	1.043	%77.64	High
	<b>Total</b>	<b>3.973</b>	<b>1.035</b>	<b>79.471%</b>	<b>High</b>

Table (1) confirms that the total arithmetic mean value of the (Banking Information Systems applications) variable reached (3.973) and falls within an agreed category in the matrix of response strength of the sample members, which indicates that the responses are within a high level indicating the use of the surveyed banks and their future directions towards

digital transformation and the adoption of Banking Information Systems applications enhancing the service provided and developing work methods with a standard deviation of (1.035) indicating a relatively high dispersion in the answers with a relative importance of (79.471%).

-Descriptive analysis... (improving the quality of performance)

Table(2).

NO.	Questions	Arithmetic mean	Standard deviation	Relative importance %	response level
Q1	The Bank consider building social awareness towards adopting international and local standards and criteria to measure enhancing the effectiveness of performance	3.866	1.12	%77.32	High
Q2	The Bank monitors the professional, technical and supervisory developments in the international standards and criteria	3.987	0.905	%79.74	High
Q3	The bank has specialized human cadres to work on evaluating the performance of applications and systems, achieving their goals, and measuring the quality of their performance	3.865	0.945	%77.3	High
Q4	The bank focuses on evaluating the quality of application performance to raise the level of future innovation in use.	3.945	1.077	%78.9	High
Q5	The Bank adopts long-term strategic plans to develop skills and capabilities within the updated digital training programs.	3.879	0.933	%77.47	High
Q6	The bank reconstructs the behaviors and attitudes of the personal, digital and professional worlds to strengthen the relationship with existing and potential customers..	3.847	0.976	%76.94	High
Q7	The bank believes that the development of the quality of individuals' performance reflects the performance of the banking institution.	4.043	0.876	%80.86	High
Q8	The bank relies on digital applications in building its banking decisions as (GAIS)and(NNIS) system.	3.744	0.898	%74.88	High
Q9	The bank enhances the performance of its banking decisions to increase the market value during a certain period of time.	3.731	0.999	%74.62	High
Q10	The bank depends on the type of decision and financial analysis in estimating its decisions' efficiency.	3.829	0.976	%76.58	High
Total		3.862	0.939	%77.24	High

Table (2) confirms that the value of the weighted arithmetic mean for the performance quality variable reached (3,862). This value falls within the category of agreement and has a high response level in the response strength matrix of the member sample, which indicates that measuring the performance quality of digital applications, specializations, and financial decisions requires an important scope for re-evaluating their performance. According to global and local standards that are compatible with global change in the banking sector, with a standard deviation of (0.939), which indicates a relatively moderate dispersion in the answers of the sample members, with a relative importance of (77.24).

- Statistical analysis:

• Testing the hypothesis of correlation between research variables:

Table (3)

Independent Variable	Dependent variable	Spearman's rank correlation coefficient(3)	Z test		Explanation
			Z Calculated value	Total value	
Banking Information Systems applications	improving the quality of performance	0.866	7.697**	0.00	There is a strong direct correlation between Banking Information Systems applications and improving the quality of performance, which means accepting the first main hypothesis

Source: Prepared by the researcher according to the results of hypotheses tested by the (SPSS v25) program.

It is remarkable from Table (3) that the first main hypothesis is accepted, which states that “there is a statistically significant correlation between the Banking Information Systems applications and improving the quality of performance” with a confidence percentage of (95%), where the calculated value of (Z) reached (7.697) within the level of Significant (0.01), which indicates the significance of the relationship, and the value of the correlation coefficient (0.866) indicates a strong direct correlation.

• Testing the hypothesis of influence between the research variables:

Table(4).

Independent Variable	Dependent variable	The coefficient of determination (R2)%	F test		Explanation
			F Calculated value	Total value	
Banking Information Systems applications	improving the quality of performance	0.75	234.00**	0.00	Acceptance of the second main hypothesis

Source: Prepared by the researcher according to the results of hypotheses tested by the (SPSS v25) program

Table (4) indicates the acceptance of the second main hypothesis, which states that ((there is a statistically significant effect of Banking Information Systems applications on improving the quality of performance)) through:

- The value of the coefficient of determination (R2) reached (0.75), and this indicates that (75%) of the effectiveness is due to the independent variable and the percentage of its interpretation, while the rest of the percentage is due to other factors that the research did not address to.
- The calculated value of the (F) test was (234.00), which is greater than the tabular value which is (3.920) within a significant level (0.05), and this indicates a relatively strong impact

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of Banking Information Systems applications on improving the quality of performance, therefore the second main hypothesis was accepted.

**Conclusions:**

- 1- 1- Increasing social awareness about the importance of using banking information systems applications and the quality of performance in banks and working to develop them.
- 2- Banks own the digital infrastructure that qualifies them to adopt electronic systems in the methods of banking work and the services provided to the customer.
- 3- Banks possess the human capabilities and capabilities specialized in the field of banking digitization, but they need continuous monitoring and training to keep up with the digital modernity.
- 4- The use of strategic and supportive Banking information systems helps in building the competitive advantage and sustainable strategy for banks.
- 5- Electronic archiving and the effectiveness of its high performance help in constructing the intellectual stock of data within digital bases, repositories and cloud computing.
- 6- Enhance the banking work through a digital system with a quick and safe response in transactions leads to raising the morale of the relationship between the customer and the bank employees.
- 7- The Banking Information Systems applications and international standards and criteria have helped to build strategic plans that work on developing the banking business and evaluating its performance in the future.
- 8- Applications and measures have contributed to improving the quality of financial and banking decisions at the personal, commercial and investment levels.

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