Journal of Kyzylorda Scholarly Review

P-ISSN:3006-0265 | E-ISSN:3007-4681. Published by the Open University of Kyzylorda
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https://bulletin.ouk.kz/index.php/bulletin/index



THE IMPACT OF LEADERSHIP SUPPORT ON ENHANCING THE QUALITY OF DIGITAL SERVICES: THE MEDIATING ROLE OF DIGITAL BANKING INNOVATION – (AN APPLIED STUDY ON IRAQI COMMERCIAL BANKS)

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Abstract. The purpose of this study was to determine the effect of leadership support on improving the quality of digital services, through digital banking innovation as a mediating variable used in Iraqi commercial banks. A descriptive-analytical approach was used to realize the goals of the study. The study population included all Iraqi commercial banks' employees of senior and middle ranks. The study sample consisted of (344) male and female employees from the commercial banks in Salah al-Din Governorate, which were randomly selected from the study population. The researcher used an electronic link to distribute the questionnaire. After conducting the appropriate statistical analysis, the results showed a statistically significant impact at a significance level of ($\alpha \leq 0.05$) of leadership support in its dimensions (senior leadership support for adopting digital innovation, provision of The study highlights the need for financial and human resources for digital technologies, clear strategies and policies for innovation and digital transformation, and a unified digital performance monitoring and evaluation system. This system should evaluate the quality of digital services in Iraqi commercial banks in all fields (reliability, accuracy, responsiveness, efficiency). Based on the study results, the researcher suggests the commercial banks in Iraq should draw key performance indicators (KPIs) for every phase of implementing digital skills and publish them regularly to employees.

Keywords: Leadership support, digital service quality, digital banking innovation, Iraqi commercial banks.

Introduction

Technological advances and the increasing shift towards the digital economy have brought transforming changes in the banking sector over the last few years. The role of banking services is no longer limited to traditional branches and direct channels, but is fast being transformed by mobile banking, electronic platforms, digital payments, artificial intelligence, and other technologies that have transformed banks and their customers. This shift has resulted in growing expectations from customers in terms of service speed, access, reliability, security and responsiveness, creating a growing driver of how banks can attract and retain customers and build their competitiveness: digital service quality. Empirical research has shown that digital transformation in the banking sector has been linked to enhancements in customer experience and the quality of services, but there are still challenges regarding the infrastructure, security, Trust and organizational capabilities [1].

Digital transformation at banks is not just about technology but more about leadership support and management's capacity to allocate the resources, direct staff to use the modern technologies, stimulate experimentation and embrace change, and eliminate the barriers to digital transformation. Enabling environments through supportive leadership can foster organizational processes that allow workers to suggest new ideas, improve their work practices and adapt more quickly to new technologies. Empirical studies in banking institutions have shown that leadership practices fostering transformation and change are linked to the improvement of employees' innovative behaviour, while leadership is one of the key factors in taking digital orientations to concrete abilities and practices in the banking organization [2].

As services have become an integral part of a person and organisation's life, and the role of services has become more important, there's been a significant increase in interest in the quality of different services. Quality is one of the top priorities of organisations, in general and service-producing organisations in particular. Service is an activity or a set of intangible activities produced and delivered through the interaction between the service provider and the service recipient, therefore service quality is the main factor of service delivery and implementation process [3]. The quality of service has been one of the most talked about issues since the inception of societies. This is demonstrated by the multitude of research and publications on Digital Service Quality, all aimed at high levels of service quality and for societies and organizations to achieve their desired aspirations and objectives. There has been a growing interest in service quality, which led to the development of measures, indicators and standards to ensure that human resources keep pace with the development of knowledge, acquire modern technologies and have the ability to face challenges from outside the system and make the most of opportunities; in addition to maintaining a certain ability to meet the organization's vision and mission, as well as to achieve its objectives rationally and effectively [4].

Organizational support is related to how concerned an organization is about its members' well-being, how likely they are to listen to their complaints, how willing they are to help them solve their problems, and how fairly they are treated. It can also be said to be the overall attitudes that people form about how much they are valued by organizations and how well they are cared for. Leadership support is a tool which can be used to help rectify employees' negative perceptions and attitudes towards the organization. Research has shown that supervisors' emotional intelligence and attentiveness towards their subordinates brings benefits and productivity, fosters positive work attitudes and behaviors, and mitigates gaps in organizational policies and administrative decisions that do not support employees [5].

The value of leadership support grows when coupled with innovation in digital banking services, which, in turn is the capacity of a bank to create and provide new or enhanced banking products, services, channels, and methods through the application of digital technologies. Innovation in the banking sector is not confined to just the introduction of a new mobile application, but it extends to the creation of payment methods, the enhancement of banking applications and platforms, the use of data and artificial intelligence, streamlining procedures and offering faster, more flexible and more personalized services to customers. Some empirical studies have shown that technological innovation can increase the customers' perceived value of the electronic service and subsequently customer satisfaction [6].

The environment in which Iraqi banks are functioning is highly competitive with high rates of technological development. However, if these banks are not keeping up with developments in this

area, they could be unable to stay in business. Therefore, banks have started to adopt artificial intelligence (AI) technologies in their business operations to cope with the competitive landscape in which they operate.

Based on all the above, this research seeks to identify the effect of support from leadership on improving the quality of digital services, with digital banking innovation being a mediating variable in Iraqi commercial banks.

Research Problem and Its Components

The swift transition towards digital banking services has changed the nature of competition among banks from simply offering financial products and services to providing high quality digital financial products and services that are fast, reliable, secure, user-friendly and fast to meet customer demands and needs. In addition to the quality of service in the banks' branches, customers now judge the quality of banking applications, the swiftness of electronic transactions, service continuity, the security of information, and the ease of accessing online banking and support. Empirical research shows that, in today's digital age, the quality of a digital service has become an essential part of customer satisfaction and the entire banking experience [7].

Digital service quality is not just about technology a bank has available, it requires effective leadership that can drive digital transformation, allocate the resources needed for the bank, motivate staff to embrace new technology, and champion the innovation and implementation of new ideas. Managerial skills, flexibility, and the ability to manage change are shown to be key factors in the success of digital transformation in the banking industry, and without developing organisational and human skills, the potential for digital transformation benefits might be restricted [8].

This is made more complicated because leadership does not directly mean quality of digital service, and its impact could be passed through the bank's capacity to create digital banking innovations. Leadership that offers support, vision and resources can inspire a bank to create new digital products, channels and services. Therefore, digital banking innovation can be a vehicle for the delivery of tangible improvements in the quality of digital banking services through leadership support [7].

Abd Al-Sadah, Al-Mayali, and Khazal [1] studied the relationship between financial innovation and banking service quality and concluded that financial innovation partially mediates the relationship between digital leadership and banking service quality. This suggests that the link between leadership and service quality could be indirect and go through the capacity to convert service directives into tangible innovations in banking. Likewise, from the literature, Yu et al. [9] has revealed that digital banking innovation plays a significant role on service quality, hence the need to investigate innovation as an explanatory mechanism in the digital service quality between managerial practices.

Leaders' role in service quality is gaining importance as commercial banks are expanding their digital services and looking to enhance customer experiences, and digital services are having an impact on service continuity, infrastructure, security and user-friendliness. Al-Freihat [8] conducted a study on commercial banks to identify the importance of speedy response and reliability in digital services, and some factors in the Iraqi context that may negatively impact the customer's experience in using digital services.

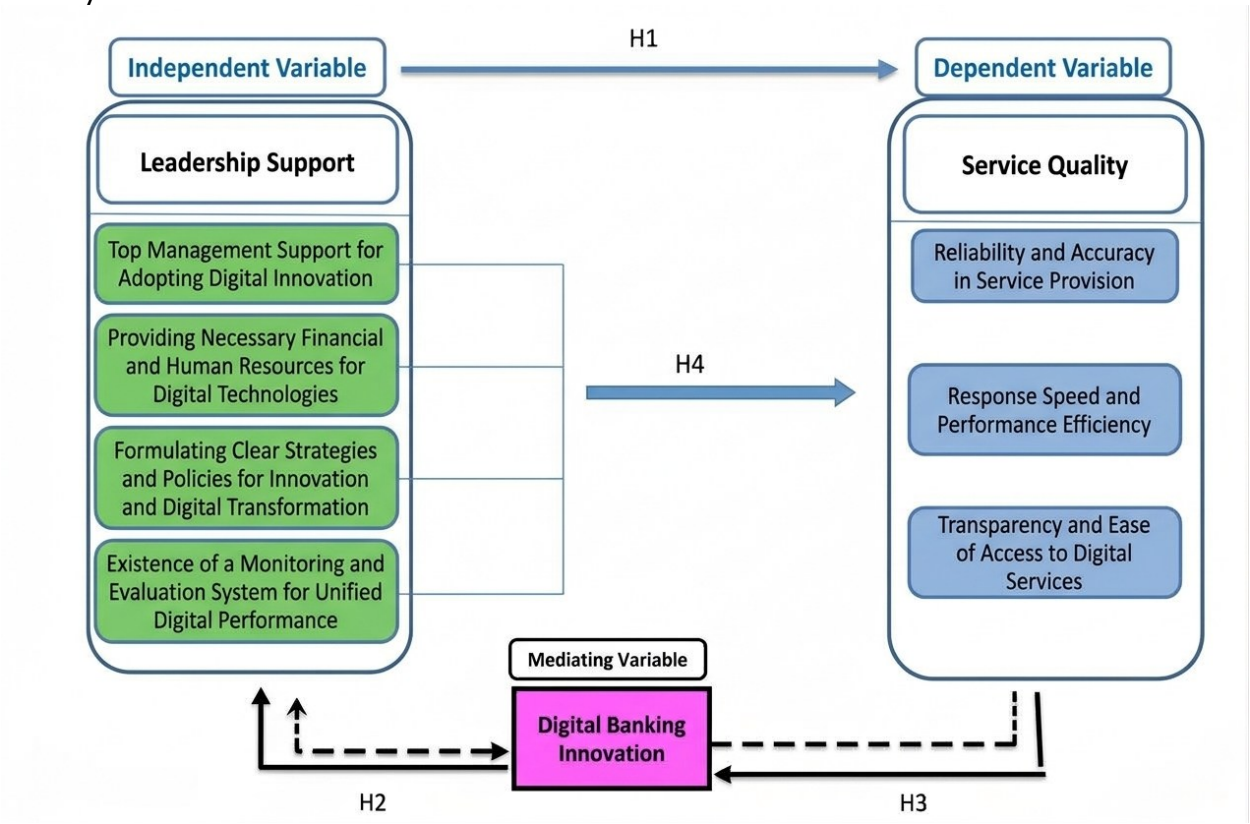
While there are several studies that have looked at the link between leadership and digital services as well as other studies that have examined the relationship between banking innovation and service quality, research is needed on how leadership support can enhance the quality of digital services through digital banking innovation, especially in the context of Iraqi commercial banks. The importance of this research direction is highlighted by a recent Iraqi study that investigated digital leadership, financial innovation, and banking service quality. The current research, however, focuses on the independent variable (Leadership support), the mediating variable (Digital banking innovation) and the dependent variable (Digital service quality).

Significance of the Study

The researcher hopes that this study can be a new contribution in enriching the knowledge about the various effects of leadership support that lead to an improvement in digital service quality with digital banking innovation as a mediating variable in commercial banks. This study could thus contribute to the Arabic literature of leadership support, digital service quality, and digital banking innovation. It is a novel scientific contribution which enriches the scientific literature and opens new vistas for researchers in this field. The study covers topics of relevance, such as leadership support and digital

banking innovation, and their ability to make an impact on how transactions, services and public goods are delivered to employees and customers. It also highlights the positive aspects and advantages of implementing digital banking innovation.

Study Model



Study Limitations

The study limitations are as follows:

1. Spatial Limitations: The study was conducted in Iraqi commercial banks in Salah al-Din Governorate.
2. Temporal Limitations: The study was conducted during the academic year 2025–2026.
3. Human Limitations: The study was limited to a sample of employees working in Iraqi commercial banks.
4. Subject Limitations: The study was limited to examining the effect of leadership support on enhancing banking service quality, with digital banking innovation serving as a mediating variable in Iraqi commercial banks.

Conceptual Definitions of the Study Variables

Independent Variable: Leadership Support: Subordinates' perceptions of the extent of emotional and effective work-related support and assistance provided by their supervisor [5].

It is measured through the following sub-dimensions:

1. Senior Leadership Support for Adopting Digital Innovation: Creating a broad, long-term strategy for the organisation's operations on the matter of digital innovation [10].
2. Ensuring Financial and Human Resources for Digital Technologies: Formulation of policies and systems and provision of all the required financial, human and material resources [5].
3. Set Clear Innovation And Digital Transformation Strategies And Policies: Enacting a collection of strategies and advanced planning to enhance innovation and transformation, and to develop them [10].
4. Unified Digital Performance Monitoring and Evaluation System (4): Developing and implementing of the monitoring plan that was developed in step 3 and the level of progress in the improvement process [5].

Dependent Variable: Digital Service Quality: The freedom of a digital service from any defects during its delivery, based on an assessment of the service recipient's expectations and the actual performance of the service [3].

1. Reliability and Accuracy in Service Delivery: The ability of institutions to provide services in accordance with previously established requirements in terms of punctuality, adherence to procedures, and protection of their files against loss and damage [4].
2. Responsiveness and Performance Efficiency: The willingness and ability of institutions to provide services at the appropriate time and in emergency situations by facilitating procedures and maintaining full readiness to deliver such services [11].
3. Transparency and Ease of Access to Digital Services: The efforts made by institutions to understand and identify service recipients' needs, thereby enhancing the institution's ability to provide individualized attention, recognize its regular service recipients, and offer the necessary advice, consultation, and guidance [3].

Mediating Variable: Digital Banking Innovation: A strategy that uses modern digital technologies to reshape processes, business models, and customer experiences within an organization [12].

Theoretical Framework

Leadership support is the level of support and endorsement that the individual experiences or feels from his/her immediate supervisor. This can be seen in what the supervisor does when he supports, motivates, directs, guides, and treats subordinates fairly and fairly, and appreciates their contributions to the success of the organization. All of these practices have a combined effect of promoting subordinates to perform more behaviors than what is formally expected of them [13]. Leadership support, in the sense of this study, refers to the extent to which the employees are aware of the issues of justice and empowerment, and are encouraged to do some actions that are not part of their job description, by their managers and by the conditions that are created for their professional development, appreciation of their contributions, or recognition of their efforts [14]. However, Sorour [15] suggests that leadership support is dependent on the employees' perception of how much their organization values their contributions and cares about their well-being in general.

Leadership support is a mechanism that allows employees to manifest the support they believe they are getting from their supervisor and organization, which can be an important context to understand about work attitudes and behaviors [16]. The term leadership support also indicates the extent of support, care or attention received by the employee from the organization's existing supervisor [10]. Leadership support is a component of social exchange, which occurs when an organization treats employees fairly, thus generating a commitment for them to respond positively towards the organization. When they receive a high level of support, they have greater intentions to meet the demands of their work and less intention to quit. The importance of leadership support is clearly demonstrated in strengthening employees' sense and commitment to mutual reciprocation by responding to the organization's support through work-related behaviors that help achieve the organizational goals [17].

Institutional development and progress are dependent on the availability of qualified, effective and supportive leadership that helps the subordinates, which is also a reflection of the importance of leadership support. If there are any shortcomings or failures in reaching the desired objectives, it is mainly due to leadership failures. Effective leaders are those who inspire their followers to perform at a higher level than they are capable of on their own, by tapping into a higher order need and motivating them to think beyond themselves towards the organization's benefit [18].

ICTs are revolutionizing the world of work by generating new work, making labour markets more innovative, inclusive and global and enhancing stakeholder trust. This is the character of the organizational climate, the quality of work life, professional life and the relationship between the senior management and the employees [19]. With work environment going through constant change and work pressures, workers must also experience a sense of security at their work place besides meeting their positive psychological needs. Innovation is thus necessary for the survival of organizations. These changes mean staff members need to have the mental resources to cope with them. Thus, it is important for organizations to strive to thrive in this turbulent environment and focus on organizational virtue and employee well-being, as both are related to organizational outcomes including organizational commitment, job satisfaction, and job performance [20].

With the use of financial technology, the possibilities are emerging to offer innovative and creative services in addition to the traditional services delivered by the service providers, thus innovating the ways of delivering financial and banking services, creating new business operations, and enhancing

traditional banking products. It also provides banking businesses opportunities to grow geographically, because banking innovation allows them to reach the widest possible customer base, both geographically and otherwise, via websites and mobile banking applications. These technologies enable banks to reach new customer groups and reap the economies of scale without the need for a wide network of physical branches. They also promote the globalization of banking services, make integration with the international markets easier, and enable banks to access a wider market of customers and expand their customer base [8].

Previous Studies and Hypothesis Development

Leadership support is one of the key organizational elements that contribute to the successful implementation of Digital initiatives. The support of senior management is important for providing the resources needed for digital transformation, promoting staff to embrace new technologies, and any barriers that could affect development of services. Research in banking has shown that there is a link between good leadership, better team performance and good service quality [7]. In addition, Surucu et al. [2] determined that the digital leadership is a tool that can be used to manage technological change by developing service innovation capability. The study of Abd Al-Sadah et al. [1] revealed that digital leadership has an impact on the banking service quality in the Iraqi banking sector. Accordingly, leadership support can be assumed to provide an organizational environment that helps Iraqi commercial banks deliver high-quality digital services. So can the first research hypothesis be stated as follows:

First hypothesis (H1): leadership support (dimensions: senior leadership support for the adoption of digital innovation, provision of financial and human resources to digital technologies, establishment of clear strategies and policies for digital innovation, and establishment of a unified digital performance monitoring and evaluation system), has a statistically significant impact at the significance level of ($\alpha \leq 0.05$) on digital service quality, through its dimensions of reliability and accuracy in service delivery, responsiveness and performance efficiency, transparency and ease of access to digital services, in Iraqi commercial banks.

The task of leadership goes beyond everyday operations to helping with innovation initiatives and contributing the financial, human and technological resources needed for the development of services [21]. Research on digital leadership validates that the support of digital leadership is a key component in the formation of innovation capacities, and that leaders who are able to manage technological changes are important in the development of new service innovations [2]. Another study by Abd Al-Sadah et al. [1] also found a correlation between digital leadership and financial innovation in Iraqi banks. Thus, leadership support is expected to facilitate Iraqi commercial banks to create innovative digital banking products, channels and services. From this it can be postulated that the second research hypothesis is:

Second Main Hypothesis (H2): Leadership support has a statistically significant effect at the significance level ($\alpha \leq 0.05$) on digital banking innovation in Iraqi commercial banks according to the dimensions of leadership support for digital banking innovation, provision of financial resources to support digital banking innovation, provision of human resources to support digital banking innovation, and digital banking innovation strategy and policy.

A key tool for innovation in digital services is to be found in the development of services and their sensitivity to customer needs. Modern technologies, digital applications and platforms and electronic payment methods can help deliver services that are faster, more flexible, accessible and secure [12]. According to Tomia [22], there is a correlation between the development of digital banking services and the improvement of service quality and customer experience. Likewise, Tomia [22] discovered that the innovation of digital banking services is positively correlated with service quality and customer satisfaction. Accordingly, the commercial banks in Iraq are expected to enhance the quality of their digital services by increasing their innovations in digital services, in the light of the above. Therefore, the third hypothesis can be stated as:

Third Main Hypothesis (H3): Digital institutional innovation has a statistically significant effect on digital service quality in Iraqi commercial banks at the significance level of ($\alpha \leq 0.05$).

The mediating role of digital banking innovation can be explained by the fact that leadership support does not necessarily uniquely boost a digital service's quality directly, but the effect can also be mediated through the leaders' encouragement of innovative initiatives and provision of resources and

proper context for the development of digital banking services. Digital transformation leadership can focus resources on innovation, which in turn can produce new or innovated digital products, services, and channels, and result in improved quality of digital service.

This pathway is supported specifically in the Iraqi context in the study conducted by Abd Al-Sadah et al. [1] which showed that financial innovativeness acted as a mediator between digital leadership and banking service quality. This finding offers a rational explanation for investigating digital banking innovation from the perspective of the relationship between leadership support and digital service quality in Iraqi commercial banks.

The fourth main hypothesis (H4): Digital banking innovation between leadership support and improvement of digital service quality in commercial banks of Iraq at ($\alpha \leq 0.05$) level of significance.

Methods

Research Methodology

To achieve this, the study used descriptive-analytical approach in its research design because it can provide a clear picture of the phenomenon under study and be able to reveal the nature of relationship and influence among the variables in the study namely leadership support, service quality and digital banking innovation. This was deemed to be the most suitable method for the study.

Study Population and Sample

The number of employees in Iraqi commercial banks in Salah al-Din Governorate is about 3400 male and female employees respectively, the study population. The researcher used a simple random sampling because it was easy to use and the number of employees in the sample was determined by the table provided by Sekaran and Bougie [23] as appropriate. The researcher used an electronic link to distribute the questionnaire. 344 people responded to the link. The distribution from personal and occupational variables is shown in the following table.

Table 1. Distribution of the study sample members according to personal and functional variables

Variable	Level	Frequency	Percentage (%)
Educational Qualification	Bachelor's degree or less	284	82.6
	Master's degree	60	17.4
	Total	**344**	**100.0**
Work Experience	Less than 5 years	40	11.6
	From 5 to less than 10 years	59	17.2
	From 10 to less than 15 years	68	19.8
	15 years and above	177	51.5
	Total	**344**	**100.0**
Job Title	Head of Department	134	39.0
	Deputy Head of Department	53	15.4
	Director of Department / Division	95	27.6
	Deputy Director of Department	62	18.0
	Total	**344**	**100.0**

Sources of Data Collection:

The study relied on two main sources for collecting the information and data required for the study, as follows:

1. Secondary Sources: These sources consisted of a range of books and periodicals related to the research topic, in addition to information available on the subject on reputable websites.
2. Primary Sources: To obtain the data necessary to achieve the desired research results, a questionnaire related to the study topic was developed based on the theoretical framework of the study and the previous studies presented earlier.

Study Instrument:

The researcher designed and made the study tool (questionnaire) based on the theoretical literature and studies conducted. The researcher had referred to the questionnaires used in the previous research work on the similar topics as the present study in developing the items of the questionnaire. The questionnaire aimed to explore how leadership support can influence the digital service quality, mediated by innovation in digital banking. The questionnaire was designed to meet the goals of the present research.

The extent of senior leadership support for digital innovation was assessed with four sub-dimensions (30) items. After perusing a variety of previous studies, items for the independent variable were developed. These factors were: senior leadership support for the adoption of digital innovation; availability of the financial and human resources needed to support the innovation and digital transformation process; clear digital innovation and digital transformation strategies and policies; and a unified digital performance monitoring and evaluation system.

Digital service quality was assessed by (20) items grouped into four sub-dimension of quality: reliability and accuracy in the delivery of digital services, responsiveness and performance efficiency, transparency and accessibility to digital services. It took eight items to measure the level of digital banking innovation.

The study instrument used the five-point likert scale which is shown in figure (1). Responses corresponding to the lowest degree of agreement were given a score of one and the highest degree of agreement was assigned a response of five [23].

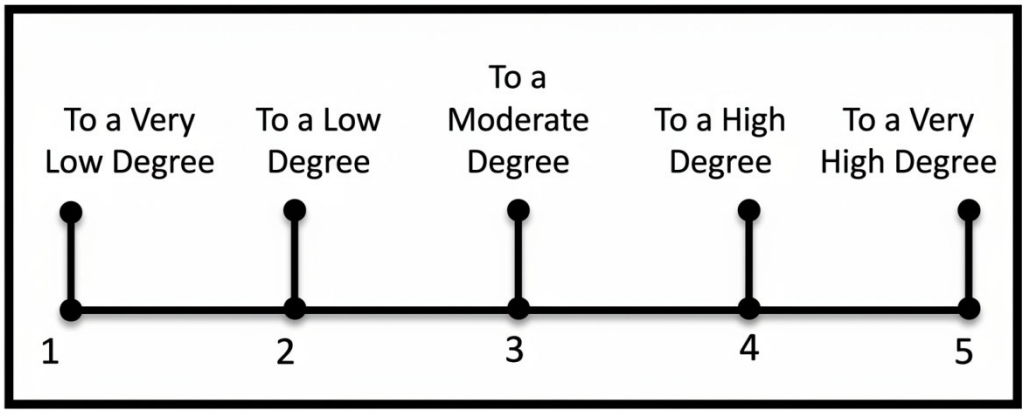


Figure 1. Likert Scale

The Likert scale was processed according to the following equation [23]:

$$\text{Class Interval Length} = \frac{(Highest\ \ Score - Lowest\ Score)}{Number\ of\ Levels}$$

$$\text{Class Interval Length} = 1.33 = \frac{1-5}{3}$$

Based on the above, the arithmetic means of the responses of the study sample regarding the study variables and questionnaire items are classified as follows:

1. An arithmetic mean ranging from (1.00 to less than 2.33) indicates a low level.
2. An arithmetic mean ranging from (2.33 to less than 3.66) indicates a moderate level.
3. An arithmetic mean ranging from (3.66 to 5.00) indicates a high level.

Reliability of the Study Instrument

The reliability of the study instrument was verified using Cronbach's alpha coefficient for internal consistency. The closer the reliability coefficient is to (1), the higher the reliability. The minimum acceptable reliability coefficient is (0.70) [23]. Table (2) presents the Cronbach's alpha reliability coefficients for the study domains and their sub-dimensions.

Table 2. Reliability Coefficients (Cronbach's Alpha) for the Dimensions and Domains of the Study Instrument

Domain	Dimension	Number of Items	Reliability Coefficient
Top Management Support for Adopting Digital Innovation	Top Management Support for Adopting Digital Innovation	7	0.897
	Providing Necessary Financial and Human Resources for Digital Technologies	6	0.913
	Formulating Clear Strategies and Policies for Innovation and Digital Transformation	9	0.957
	Existence of a Monitoring and Evaluation System for Unified Digital Performance	8	0.850
	Overall Top Management Support for Adopting Digital Innovation	**30**	**0.969**
Digital Services Quality	Reliability and Accuracy in Service Provision	7	0.824
	Response Speed and Performance Efficiency	5	0.927
	Transparency and Ease of Access to Digital Services	8	0.774
	Overall Digital Services Quality	**20**	**0.905**
Level of Digital Banking Innovation		8	0.881

From the above table it can be seen that all the domains and sub-domains of the study instrument have statistically acceptable Cronbach's alpha reliability coefficient which is the same as most studies which suggested that the threshold for the acceptable reliability coefficient is (0.70).

Multicollinearity Test

To check that there was no multicollinearity between the study variables, the Variance Inflation Factor (VIF) and tolerance values were analyzed. Multicollinearity arises when one independent variable is statistically related to another independent variable, such that it rises with the rise in the other independent variable and falls with the fall in the other independent variable. The results are given in the tabular form in Table (3).

Table 3. Results of the Multicollinearity Test among the Study Variables

Dimension	Tolerance	Variance Inflation Factor (VIF)
Top Management Support for Adopting Digital Innovation	0.309	3.240
Providing Necessary Financial and Human Resources for Digital Technologies	0.347	2.880
Formulating Clear Strategies and Policies for Innovation and Digital Transformation	0.195	5.127
Existence of a Monitoring and Evaluation System for Unified Digital Performance	0.290	3.452

As shown in Table (3), the model that was developed in this study does not contain multicollinearity between the variables, because the values of the Variance Inflation Factor (VIF) were appropriate,

and less than (10). Tolerances were also found to be within the acceptance limit and values > (0.1) were obtained.

Normality Test

The researcher did a calculation of skewness and kurtosis coefficients to achieve the suitability and validity of the data that the researcher investigated whether the data related to the study variables was normal or not, using the study instrument of study variables as research instruments. The skewness and kurtosis values for each dimension on the questionnaire are given in Table (4).

Table 4. Skewness and Kurtosis Coefficients for the Items of the Study Instrument
Table: Skewness and Kurtosis Coefficients for the Study Variables and Dimensions

Domain	Dimension	Skewness	Kurtosis
Top Management Support for Adopting Digital Innovation	Top Management Support for Adopting Digital Innovation	-0.720	0.583
	Providing Necessary Financial and Human Resources for Digital Technologies	-0.949	1.303
	Formulating Clear Strategies and Policies for Innovation and Digital Transformation	-0.683	0.031
	Existence of a Monitoring and Evaluation System for Unified Digital Performance	-0.548	-0.033
Digital Services Quality	Reliability and Accuracy in Service Provision	-0.236	-0.391
	Response Speed and Performance Efficiency	-0.805	0.688
	Transparency and Ease of Access to Digital Services	-0.583	-0.189
Overall Level of Digital Banking Innovation		-1.018	0.953

Table (4) shows that all skewness and kurtosis coefficients fall within the acceptable lower and upper limits for a normal distribution. Skewness values ranged from (-2 to 2), while kurtosis coefficients ranged from (-7 to 7), indicating that the study data follow a normal distribution. Accordingly, the study data are suitable for conducting subsequent statistical analyses.

Statistical Methods Used in Data Analysis:

The researcher used the Statistical Package for the Social Sciences (SPSS) to enter and analyze the questionnaire data. The package includes AMOS for testing models. The main statistical methods used were:

1. Descriptive statistics (frequencies, percentages, arithmetic means, and standard deviations) to describe the characteristics of the study sample.
2. Cronbach's alpha coefficient to measure the reliability of the study instrument.
3. Multiple regression analysis and path analysis to test the study hypotheses.

Results of Data Analysis and Hypothesis Testing

Results Related to the Level of Digital Services in Iraqi Commercial Banks

Table 5. Descriptive Statistics for the Dimensions of the "Leadership Support" Domain, Ranked in Descending Order by Arithmetic Mean

No.	Dimensions	Mean	Relative Importance (%)	Evaluation Level	Rank
4	Existence of a Monitoring and Evaluation System for Unified Digital Performance	3.84	76.73	High	1

Journal of Kyzylorda Scholarly Review
P-ISSN:3006-0265 | E-ISSN:3007-4681
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No.	Dimensions	Mean	Relative Importance (%)	Evaluation Level	Rank
1	Top Management Support for Adopting Digital Innovation	3.83	76.55	High	2
2	Providing Necessary Financial and Human Resources for Digital Technologies	3.80	76.02	High	3
3	Formulating Clear Strategies and Policies for Innovation and Digital Transformation	3.67	73.37	High	4
Overall Domain: Leadership Support		**3.78**	**75.54**	**High**	

The results of the present study as presented in Table (5) indicated that administrative employees' perceptions of the level of leadership support in the Iraqi commercial banks was high. The overall arithmetic mean of the study sample's responses on the leadership support domain was (3.78) which represents a high level of evaluation. Table (5) further reveals that the study sample gave high ratings for all dimensions of the "Leadership Support" domain with their arithmetic means ranging from (3.67 to 3.84). The dimension "Existence of a Unified Digital Performance Monitoring and Evaluation System" came first with an arithmetic mean of (3.84) and "Senior Leadership Support for Adopting Digital Innovation" in second place with an arithmetic mean of (3.83). The dimension "Provision of the Financial and Human Resources Required for Digital Technologies" ranked 3rd (3.80) and "Establishment of Clear Strategies and Policies for Innovation and Digital Transformation" ranked 4th (3.67).

This outcome can be attributed to the recognition of Iraqi commercial banks of the importance of digital transformation as a strategic option. Commercial banks are more concerned about digital governance and the effective and transparent use of technology in administrative processes. Iraqi commercial banks are also interested in the development of decision-making processes. This is explained by the researcher due to the increase of the interest of Iraqi commercial banks in improving the electronic services to speed the process, and ease communication with the customers.

Results Related to the Level of Digital Service Quality in Iraqi Commercial Banks

Table 6. Descriptive Statistics for the Dimensions of the "Digital Service Quality" Domain, Ranked in Descending Order by Arithmetic Mean

Rank	No.	Dimensions	Mean	Relative Importance (%)	Evaluation Level
1	**3**	Transparency and Ease of Access to Digital Services	4.20	84.03	High
2	**1**	Reliability and Accuracy in Service Provision	3.88	77.67	High
3	**2**	Response Speed and Performance Efficiency	3.84	76.84	High
Overall Domain: Digital Services Quality			**3.97**	**81.14**	**High**

Table (6) reveals that Iraqi commercial banks' digital service quality is at high level from the employees' point of view. The overall mean of the study sample's responses to the digital service quality domain was (3.97), which indicates a high level of evaluation. As seen in Table (6) the average values of the study sample assessments of the dimensions of the "Digital Service Quality" domain ranged from (3.84 to 4.20), and each dimension was rated highly. The dimension "Transparency and Ease of Access to Digital Services" was ranked first with an arithmetic mean of (4.20) and "Reliability and Accuracy in Service Delivery" second with an arithmetic mean of (3.88). Third, the dimension "Responsiveness and Performance Efficiency" was ranked third with an arithmetic mean (3.84).

This outcome can be attributed to the attention that Iraqi commercial banks pay to service quality and improving it, which is one of the most significant factors affecting the success and continuity of the commercial banks in Iraq. In addition to this, Iraqi banks have special programs for employees'

empowerment and training, which enable the employees to get a high level of the skills and capabilities necessary to enhance and improve the performance and effectiveness of the employees, and to learn new skills and knowledge to reach the planned goals, and develop the nature and quality of the services provided.

Results Related to the Level of Digital Banking Innovation in Iraqi Commercial Banks

Table 7. Descriptive Statistics of Respondents' Responses Regarding the "Digital Banking Innovation" Domain, Ranked in Descending Order by Arithmetic Mean

Rank	Item No.	Item	Mean	Standard Deviation	Relative Importance (%)	Evaluation Level
1	**8**	The bank provides new ideas to improve digital banking operations.	4.42	0.84	88.31	High
2	**1**	Smart systems exist in the bank that operate independently to execute tasks.	4.31	0.94	86.10	High
3	**4**	Smart technologies support the automation of certain banking procedures.	4.30	0.92	86.05	High
4	**2**	The bank searches for new ways to execute business operations more effectively.	4.29	0.90	85.76	High
4	**3**	Advanced analytical models are used to identify financial patterns.	4.29	0.92	85.76	High
6	**5**	Smart analytical techniques based on learning from data are utilized.	4.28	0.86	85.64	High
7	**6**	The bank works on transforming new ideas into practical applications within the bank.	4.16	0.97	83.14	High
8	**7**	The bank relies on neural network technologies and applications for planning future events (forecasting).	4.14	0.94	82.73	High
Overall Domain: Digital Banking Innovation				**4.27**	**85.44**	**High**

All the items in the domain of "Digital Banking Innovation" received high ratings, as can be seen in Table (7), where the arithmetic means for the items for the study sample range from (4.14 to 4.42). The arithmetic mean of (4.42) for (8) "The bank introduces new ideas to improve digital banking operations" was the highest. The arithmetic mean of the answers to item (7) "The bank uses neural network technologies and applications when making plans for future events (forecasting)" was (4.14) which was the last position. The overall domain mean was (4.27) which represents a high level of evaluation.

This finding is in accordance with the rapid shift in the Iraqi banking sector to digitalization and using modern technologies to run banking services and activities. The rise of digital banking innovation is largely due to banks' understanding of the significance of digital technologies for better operation efficiency, competitiveness and quickness in meeting evolving customer needs in the digital world. In addition, banks have seen high competitive pressure and high customer expectations for the speed and accuracy of the services, which have encouraged banks to invest more in digital banking innovations.

Results and Discussion

Results Related to Testing the Study Hypotheses

The results show that leadership support in its dimensions (senior leadership support for adopting digital innovation, provision of the financial and human resources needed for digital technologies, clear strategies and policies for innovation and digital transformation, and unified digital performance monitoring and evaluation system), has a statistically significant effect at the level of significance (α ≤ 0.05) on digital service quality in its dimensions (reliability and accuracy in service delivery, responsiveness and performance efficiency, transparency and ease of access to digital services) in Iraqi commercial banks.

To test the first hypothesis, multiple regression analysis was conducted to investigate the impact of the factors determining dimensions of leadership support on digital service quality in commercial banks in Iraq. The results are presented below:

Table 8. Results of Applying Multiple Regression Analysis to Examine the Effect of Leadership Support Dimensions on Digital Service Quality in Iraqi Commercial Banks

Variable	Unstandardized Coefficients		Standardized Coefficients			R	R^2	Adjusted R^2	F	Statistical Significance
	B	**Standard Error**	**ß**	**T**	**Statistical Significance**					
Constant	1.456	0.063		23.022	0.000					
Senior Leadership Support	0.079	0.024	0.122	3.366	0.001					
Provision of Resources	0.227	0.022	0.355	10.387	0.000	0.929	.863	0.861	533.195 *	0.000
Establishment of Strategies	0.076	0.025	0.138	3.037	0.003					
Existence of a Monitoring System	0.288	0.026	0.408	10.907	0.000					

(*) The effect is statistically significant at the significance level of $(\alpha \leq 0.05)$

The results of Table (8) indicate that there was a statistically significant effect on the dimensions of leadership support on digital service quality. The correlation coefficient (R) was (0.292), reflecting the level of correlation between leadership support and quality of digital services. The coefficient of determination (R-square) was (0.863), which showed that the dimensions of leadership support could affect the digital service quality. That is, the leadership support dimensions together account for 86.3% of the variance in digital service quality. The F-test value was (533.195) and the statistical significance was (0.00). This is a statistically significant value and suggests that the ability of the leadership support dimensions to impact digital service quality varies.

Journal of Kyzylorda Scholarly Review
P-ISSN:3006-0265 | E-ISSN:3007-4681
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The researcher was able to generate a causal model in the form of Figure (2) which shows the direct effect of the leadership support dimensions on service quality, through the statistical method of path analysis and by analyzing the data using AMOS statistical software.
Looking at the data displayed in Figure (2), the value for the explained variance of the leadership support dimensions is (0.95), which means the value for the explained variance of the leadership support dimensions is (95%) direct variation of digital service quality.

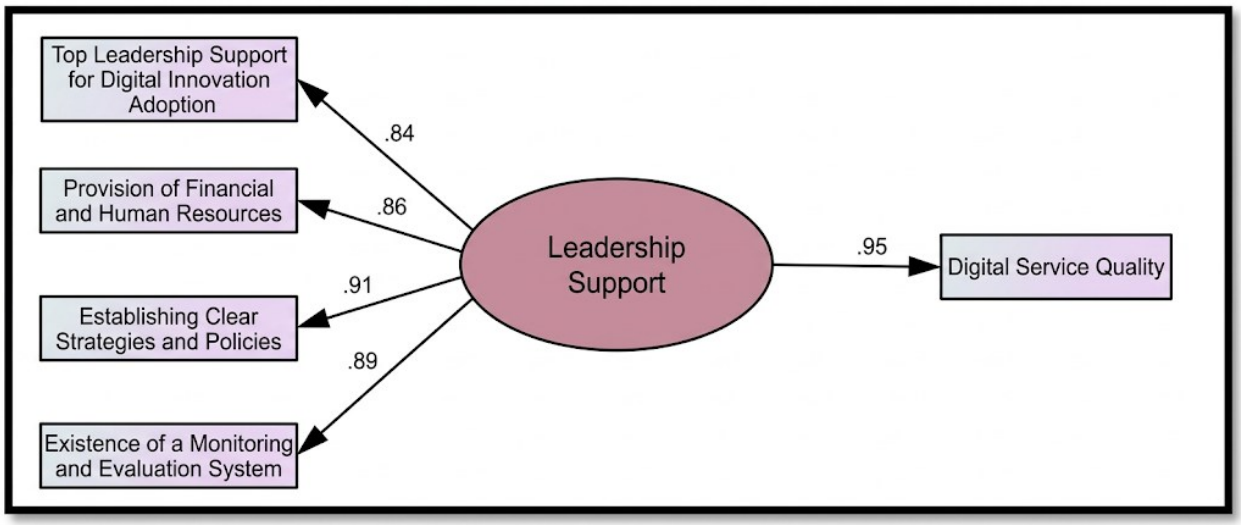


Figure 2. Model of the Relationships between Leadership Support and Digital Service Quality

The first hypothesis is accepted in this form, that is, Leadership support, in its dimensions (senior leadership support for adopting digital innovation, availability of financial and human resources for the digital technologies, digital innovation and digital transformation strategy and policy, and the existence of a unified digital performance monitoring and evaluation system), has a statistically significant effect at the significance level ($\alpha \leq 0.05$) on digital service quality in Iraqi commercial banks.
Results Related to Testing the Second Hypothesis (H2): Leadership support, in its dimensions (senior leadership support for adopting digital innovation, provision of the financial and human resources required for digital technologies, establishment of clear strategies and policies for innovation and digital transformation, and the existence of a unified digital performance monitoring and evaluation system), has a statistically significant effect at the significance level of ($\alpha \leq 0.05$) on digital banking innovation in Iraqi commercial banks.
In order to test the second hypothesis, multiple regression analysis was carried out to analyze the impact of the dimensions of leadership support on digital banking innovation in Iraqi commercial banks. The results are presented below:

Table 9. Results of Applying Multiple Regression Analysis to Examine the Effect of Leadership Support Dimensions on Digital Banking Innovation in Iraqi Commercial Banks

Variable	Unstandardized Coefficients		Standardized Coefficients			R	R^2	Adjusted R^2	F	Statistical Significance
	B	Standard Error	ß	T	Statistical Significance					
Regression Constant	3.055	0.207		14.774	0.000	0.330	0.109	0.098	10.355	0.000
Senior Leadership Support	0.101	0.077	0.121	1.312	0.190					

Variable	Unstandardized Coefficients		Standardized Coefficients			R	R^2	Adjusted R^2	F	Statistical Significance
	B	Standard Error	ß	T	Statistical Significance					
Provision of Resources	0.101	0.072	0.123	1.414	0.158					
Formulation of Strategies	0.311	0.082	0.441	3.799	0.000					
Existence of a Monitoring System	0.418	0.086	0.462	4.847	0.000					

*The effect is statistically significant at a significance level of. $(\alpha \leq 0.05)$

As per Table (9), the dimensions of leadership support are significant statistically in regard to the innovation in the field of digital banking in Iraqi commercial banks. The correlation coefficient (R) was (0.330), which shows how well leaders' support relates to digital banking innovation. The coefficient of determination (R-square) was (0.109), and this indicates that the dimensions of leadership support are able to explain the digital banking innovation. Put another way, the dimensions of leadership support together account for 10.9% of the variance in digital banking innovation. The F-test value was (10.355) and a statistical significance of (0.00) showed that the leadership support dimensions have a statistically significant difference in influencing digital banking innovation.
The researcher used statistical method of path analysis and statistical software (AMOS) and was able to draw the causal model in the form of Figure (3) which shows the direct effect of the dimensions of leadership support towards digital banking innovation as follows:
The data in Figure (3) show that the explained variance of the leadership support dimensions is (0.20) which implies that the leadership support dimensions account for (20%) of the direct variation in digital banking innovation.

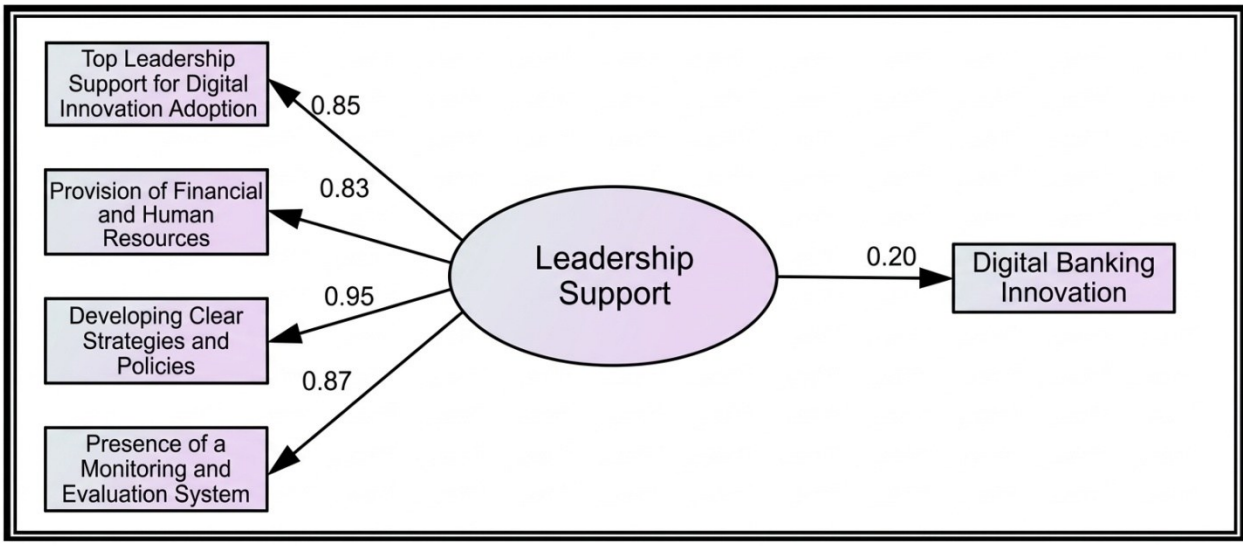


Figure 3. Model of the Relationships between Leadership Support and Digital Banking Innovation

Based on the above, the second hypothesis is accepted in its current form: Leadership support, in its dimensions (senior leadership support for adopting digital innovation, provision of the financial and human resources required for digital technologies, establishment of clear strategies and policies for innovation and digital transformation, and the existence of a unified digital performance monitoring and evaluation system), has a statistically significant effect at a significance level of ($\alpha \leq 0.05$) on digital banking innovation in Iraqi commercial banks.

Results Related to Testing the Third Hypothesis (H3): Digital banking innovation has a statistically significant effect at a significance level of ($\alpha \leq 0.05$) on digital service quality in Iraqi commercial banks.

To verify the validity of the third hypothesis, simple regression analysis was used to examine the effect of digital banking innovation on digital service quality in Iraqi commercial banks. The results are presented below:

Table 10. Results of Applying Simple Regression Analysis to Examine the Effect of Digital Banking Innovation on Digital Service Quality in Iraqi Commercial Banks

Variable	Unstandardized Coefficients		Standardized Coefficients			R	R^2	Adjusted R^2	F	Statistical Significance
	B	Standard Error	ß	T	Statistical Significance					
Regression Constant	2.825	0.169		16.679	0.000					
Digital Banking Innovation	0.288	0.039	0.370	7.365	0.000	0.370	0.137	0.134	54.245	0.000

*The effect is statistically significant at a significance level of **.($\alpha \leq 0.05$)**

In terms of employees' perspective, the study found that digital banking innovation significantly affects digital service quality in Iraqi commercial banks as indicated in Table (10). The correlation coefficient (R) was (0.370) that showed the importance of correlation between the variables of digital banking innovation and service quality. The coefficient of determination (R-square) was (0.1370), it showed the power digital banking innovation has in shaping digital service quality. Put another way, 13.7% of the variability in digital service quality can be explained by digital banking innovation. The obtained F-test (54.245) with the statistical significance (0.00) showed that the effect of digital banking innovation on service quality was statistically significant.The results of the obtained F-test (54.245) with a statistical significance (0.00) showed that the effect of digital banking innovation on service quality was statistically significant.

The researcher was able to present the direct effect of digital banking innovation on digital service quality by using the statistical method of path analysis and statistical software (AMOS) as shown in the following figure:

The results in figure (4) suggest that the explained variance of digital banking innovation was (0.36), and thus, digital banking innovation explains (36%) of the direct variation in digital service quality.

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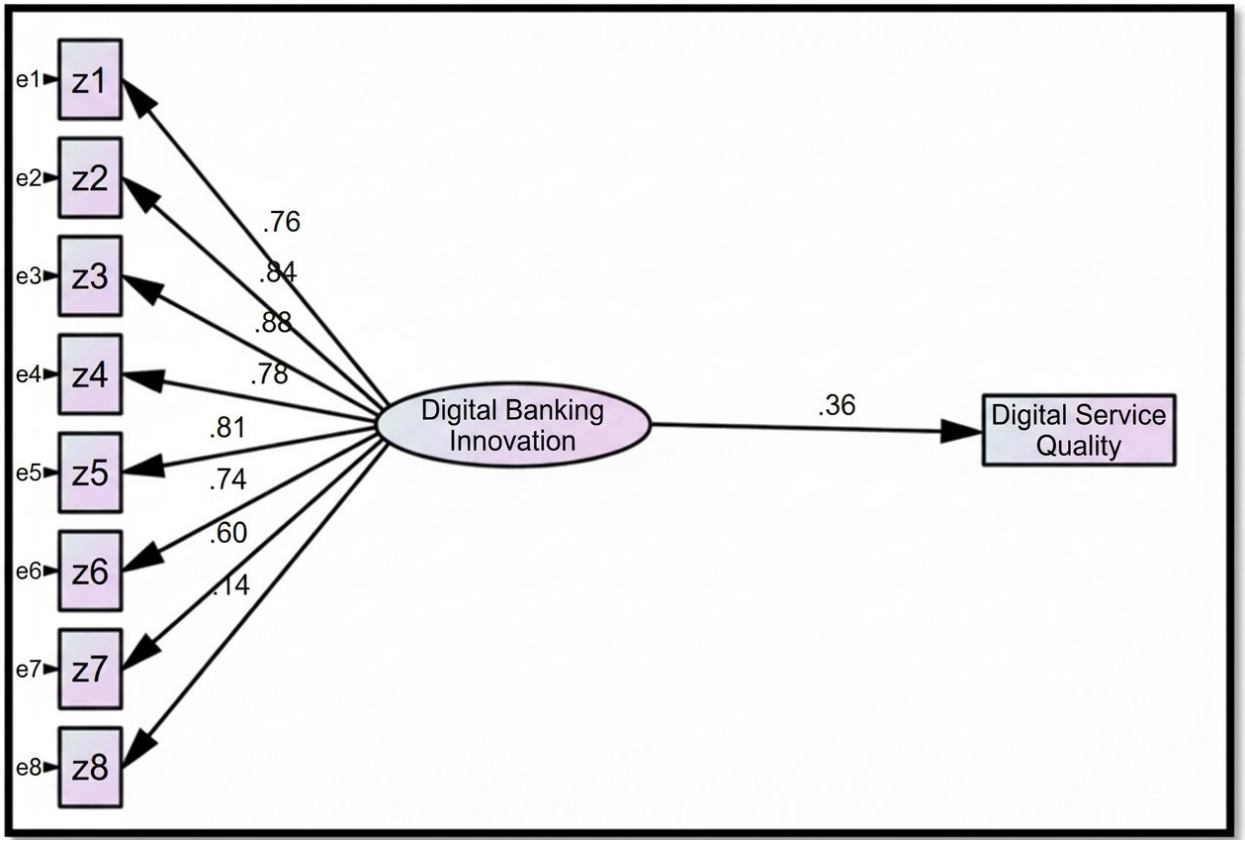


Figure 4. Model of the Relationship between Digital Banking Innovation and Digital Service Quality

Based on the above, the third hypothesis is accepted in its current form: Digital banking innovation has a statistically significant effect at a significance level of (α ≤ 0.05) on digital service quality in Iraqi commercial banks.

Results Related to Testing the Fourth Hypothesis (H4): Digital banking innovation mediates the relationship between leadership support and the enhancement of digital service quality in Iraqi commercial banks at a significance level of (α ≤ 0.05).

To test this hypothesis, path analysis was used to determine the significance of the indirect effect measured through the mediating variable. Table (11) presents the results of this analysis.

Table 11. Results of Applying Path Analysis to Examine the Effect of Digital Banking Innovation as a Mediating Variable in the Relationship between Leadership Support and Digital Service Quality

Path Direction	Direct Effect	C.R.	Sig.	Indirect Effect
Independent on Dependent	0.879	45.075	0.00	
Independent on Mediator	0.210	3.969	0.00	0.04
Mediator on Dependent	0.186	9.531	0.00	

The values of direct and indirect effects of the mediation variable (digital banking innovation) on the relationship between leadership support and digital service quality are presented in Table (11). The direct effect values in the table indicate that the direct effect of the independent variable on the dependent variable was (0.879), and the direct effect of the independent variable on the mediator was (0.210), and the direct effect of mediator variable on the dependent variable was (0.186). Standardized coefficients were used to present these effects. All effect values (coefficients) were observed to be different and statistically significant as all the values were < 0.05. All the significance levels were statistically significant, suggesting an indirect effect via the mediating variable. This is an indicator that digital banking innovation partially moderates the leadership support and digital service quality. Thus, the fourth hypothesis is accepted as is.

Figure (5) illustrates the effect of digital banking innovation as a mediating variable in the relationship between leadership support and digital service quality.

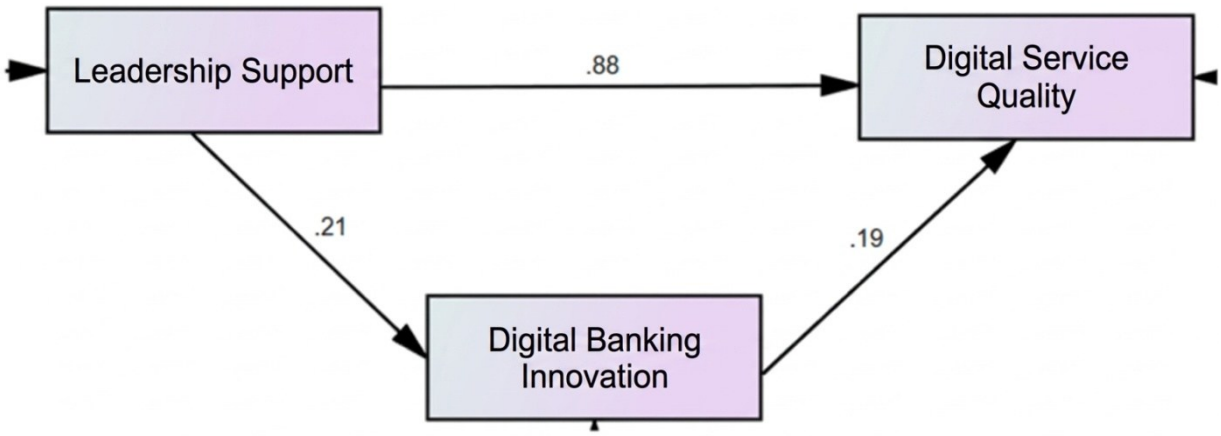


Figure 5. The Effect Size (R^2) of Digital Banking Innovation as a Mediating Variable in the Relationship between Leadership Support and Digital Service Quality

Conclusions and Recommendations

Based on the foregoing results, the researcher concludes the following:

1. Iraqi commercial banks are worried about setting up metrics to assess results at every phase of use of digital skills and constantly disseminating these metrics to employees.
2. Commercial banks in Iraq have proactive leadership to facilitate the digital transformation process and motivate employees to learn digital skills and apply it in their work environment.
3. Iraqi commercial banks are eager to invest in training their employees on the use of modern digital technologies.
4. Iraqi commercial banks facilitate the development of digital strategies meeting the needs of the digital service recipients.
5. Senior leaderships at Iraqi commercial banks are worried about periodically revisiting their digital policies, including personal data protection of employees to keep up with technological advancements.

Recommendations

In light of the findings of the study, the following recommendations are proposed:

1. The elements of leadership support should continue to be promoted by Iraqi commercial banks, as they have a positive impact on improving the quality of digital services.
2. Process for adoption and evaluation of initiatives should be in place to encourage staff to suggest innovative ideas in the workplace.
3. Courses on the innovation and digital transformation strategies and policies should be reinforced.
4. Human resources qualifications and capabilities need to be improved so that they can assist in the innovation of digital banking.
5. The Iraqi commercial banks should be encouraged to enhance and in harmony with digital banking innovation their electronic infrastructure in providing the digital services.
6. Management in commercial banks should strengthen the contribution and value of digital organizational innovation, clearly define its value in improving the quality of digital services, and leverage the existing situation of having a relatively high level of digital banking innovation.
7. Researchers are encouraged to carry out more research into the effect of support for the leader on service quality in other industries.

References

[1] N. T. Abdul-Sadah, A. A. A. Al-Miyali, and A. J. Khazal, "The role of digital leadership in enhancing financial innovation and banking service quality: A field study of a sample of Iraqi banks," Iraqi Journal of Administrative Sciences, vol. 22, no. 88, pp. 37–61, 2026.
[2] L. Surucu, A. Maslakçi, and H. Sesen, "Transformational leadership, job performance, self-efficacy, and leader support: Testing a moderated mediation model," Baltic Journal of Management, vol. 17, no. 4, pp. 467–483, 2022.
[3] M. A. Shuwaiyat, "Evaluating employee performance in municipalities and its impact on the quality of services provided by municipalities in the Hashemite Kingdom of Jordan," Peer-Reviewed Scientific Journal, vol. 4, no. 3, pp. 724–734, 2023.
[4] S. M. Al-Manaseer, "The role of electronic management in improving municipal services in Jordan," Ramah Journal of Research and Studies, vol. 7, no. 4, pp. 171–184, 2022.
[5] D. A. Fayez, "A proposed model for the role of perceived leadership support in the relationship between perceived organizational politicization and organizational cynicism among employees: A field study of nursing staff at Assiut University Hospitals," Journal of the Faculty of Commerce for Scientific Research, vol. 3, no. 8, pp. 55–94, 2025.
[6] P. K. C. Lee, T. C. E. Cheng, A. C. L. Yeung, and K. Lai, "An empirical study of transformational leadership, team performance and service quality in retail banks," Omega, vol. 39, no. 6, pp. 690–701, 2011.
[7] G. Zouari and M. Abdelhedi, "Customer satisfaction in the digital era: Evidence from Islamic banking," Journal of Innovation and Entrepreneurship, vol. 10, Art. no. 9, 2021.
[8] J. M. Al-Freihat, "The impact of financial technology on the financial performance of Jordanian Islamic banks," M.S. thesis, Ajloun National University, Ajloun, Jordan, 2023.
[9] S. Yu, X. Zheng, and M. J. Liu, "Board digital expertise and digital innovation: Evidence from commercial banks in China," Research in International Business and Finance, 2025.
[10] R. A. Talha, H. M. Al-Najjar, and M. S. Mohammed, "The moderating effect of leadership support on the relationship between job crafting and work engagement: An application to nursing staff in government hospitals in Kafr El-Sheikh Governorate," Scientific Journal of Financial and Commercial Studies and Research, vol. 4, no. 2, pp. 151–189, 2023.
[11] N. J. Akroush, "Implementing e-government technologies in municipalities and their impact on improving the quality of projects and services: A case study of Al-Fuheis Municipality," Arab Journal for Scientific Publishing, no. 42, pp. 422–437, 2022.
[12] A. M. Noureddine and H. A. Chegrani, "The role of digital innovation in improving the quality of institutional services: A case study of the application of two stations of the Sogral company," Journal of Business Administration and Economic Studies, vol. 10, no. 1, pp. 165–180, 2024.
[13] S. B. Saad, "Leadership support and its relationship with extra-role behavior from the perspective of faculty members at the Faculties of Education at Alexandria University and King Khalid University: A proposed model," Beni Suef University Journal of the Faculty of Education, pp. 233–329, Oct. 2016.
[14] S. A. Khenoush, "The impact of leadership competencies and institutional support on promoting green entrepreneurship: A field study in Bouira Province," Journal of Money and Business Economics, vol. 10, no. 2, pp. 341–356, 2025.
[15] R. B. Sorour, "Leadership support and emotional intelligence as motivating factors for employee performance in crisis contexts: A conceptual framework from the healthcare sector in Lebanon," Journal of Arts and Humanities, vol. 7, no. 4, pp. 354–368, 2025.
[16] J. de Vries, E. Knies, and P. Leisink, "Shared perceptions of supervisor support: What processes make supervisors and employees see eye to eye," Public Personnel Management, vol. 42, no. 1, pp. 88–112, 2022.
[17] M. Shokrollahi, "Presenting a model of digital transformation based on artificial intelligence in municipal services and improving customer satisfaction through the development of electronic business strategies: Case study of Tehran Municipality," Propulsion Tech Journal, vol. 45, no. 3, 2024.
[18] M. A. Hussein, "The impact of organizational support on job satisfaction: A field study of the Egyptian Telecommunications Company," Ph.D. dissertation, Zagazig University, 2025.
[19] L. Susilawaty and N. Nicola, "Pengaruh layanan perbankan digital pada kepuasan nasabah perbankan," Jurnal Manajemen Maranatha, vol. 19, no. 2, pp. 179–190, 2020.



[20] A. A. Gouda and A. M. Raafat, "The effect of psychological safety climate on organizational outcomes through the mediation of organizational virtue," Mansoura University, 2023.
[21] M. Berawi, N. Suwartha, M. Asvial, R. Harwahyu, M. Suryanegara, E. Setiawan, and I. Maknun, "Digital innovation: Creating competitive advantages," International Journal of Technology, vol. 11, no. 6, pp. 1076–1080, 2020.
[22] M. M. Tomia, "Ways to benefit from digital innovation in the Egyptian-Algerian sector: A case study," M.S. thesis, Mohamed El Bachir El Ibrahimi University, 2022.
[23] U. Sekaran and R. Bougie, Research Methods for Business: A Skill-Building Approach, 8th ed. Hoboken, NJ, USA: Wiley, 2020.