



THE ROLE OF DIGITAL TRANSFORMATION IN THE DEVELOPMENT OF THE IRAQI BANKING SYSTEM - A CASE STUDY OF AL-THIQA AL-AHLI BANK

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Article history:	Abstract:
Received: 20 th February 2025 Accepted: 14 th March 2025	This research aims to study the role of digital transformation in the development of the Iraqi banking system, with a focus on the experience of Trust Bank as a case study. Digital transformation is one of the key factors that contribute to improving the efficiency of banking operations, providing innovative financial services, and enhancing financial inclusion. The research discusses the impact of the application of financial technology, such as online and mobile banking, on improving the quality of services and increasing customer satisfaction. It also addresses the challenges facing Iraqi banks in embracing digital transformation, such as technological infrastructure, regulatory and security challenges. The study found that digital transformation plays a pivotal role in the development of the Iraqi banking sector, but requires clear strategies and sustainable investments to ensure its success.

Keywords: Digital transformation, development of the Iraqi banking system, financial technology (Fintech), electronic banking.

1. INTRODUCTION:

The global banking sector has undergone radical transformations thanks to rapid technological development, where digital transformation has become a critical factor in enhancing operational efficiency and improving the quality of financial services provided to customers. In Iraq, the banking system faces several challenges related to modernizing infrastructure, improving the level of financial inclusion, and enhancing customer confidence through the application of the latest digital banking technologies.

This research aims to study the role of digital transformation in the development of the Iraqi banking system, with a focus on the experience of **Al-Thiqa Al-Ahli Bank** as a model for adopting modern technological solutions. We will highlight the digital tools adopted by the bank, such as electronic banking services, digital payment technologies, and artificial intelligence in banking operations, and their impact on the efficiency of banking operations and improving the customer experience.

The research also reviews the challenges facing Iraqi banks in the process of digital transformation, such as the lack of technical infrastructure, regulatory challenges, and the level of digital awareness among customers. By analyzing these factors, we seek to provide practical recommendations to promote digital transformation in the Iraqi banking sector, thereby contributing to improving the quality of financial services and supporting economic growth.

2. IDENTIFY THE PROBLEM:

The research problem is embodied in the lack of clarity about the role of digital transformation in improving the performance of the Iraqi banking system, which leads to questions about

- What are the main challenges facing Iraqi banks in adopting digital transformation?
- How can digital transformation affect the efficiency and quality of banking services provided?

What are the potential economic and social benefits of digital transformation in the banking sector?

- How can regulatory and legislative obstacles hindering digital transformation be overcome?

3- RESEARCH HYPOTHESES :

1. The first hypothesis:

- Digital transformation applications improve the quality of banking services provided to customers in Iraq.
- An interpretation that expects digital technologies such as banking applications and internet banking to speed up operations and reduce errors, improving the customer experience.

2. Second hypothesis:



- Digital transformation helps increase the efficiency of banking operations and reduce the operational costs of Iraqi banks.

- Explanation: By automating processes and relying on technology, banks can reduce dependence on manpower and improve the efficient use of resources.

3 Third hypothesis:

- Digital transformation enhances financial inclusion in Iraq by providing banking services available to different segments of society.

- Explanation: Fintech facilitates access to banking services, enabling marginalized groups and remote areas to benefit from these services.

The role of digital transformation in the development of the Iraqi banking system - a case study of Trust Bank.

4. HYPOTHESIS TESTING METHODS:

These hypotheses can be tested by

- Case studies analyzing the experiences of Iraqi banks that have applied digital transformation strategies. - Surveys and interviews to collect customer and employee opinions on the impacts of digital transformation.

- Quantitative data analysis: study performance indicators before and after the implementation of digital transformation.

5. Importance of Research:

The study of the role of digital transformation in the development of the Egyptian apparatus in Iraq is important for several reasons:

- Improving services: Digital transformation can improve customer experience and increase customer satisfaction.

- Promoting financial inclusion contributes to the provision of financial services to large segments of society, including marginalized groups.

- Increase efficiency through process automation and data analysis, higher efficiency can be achieved and costs reduced.

- Keeping abreast of global developments *: Helps Iraqi banks compete in the global market.

6. Research Objectives:

- Analysis of the current situation of the Iraqi banking system with regard to digital transformation. - Identify the challenges that hinder the implementation of digital transformation strategies.

- Proposing effective solutions to improve banking performance through digital transformation. - Assess the potential impacts of digital transformation on the Iraqi economy.

THE FIRST TOPIC

INTRODUCTION TO DIGITAL TRANSFORMATION AND THE REALITY OF THE BANKING SYSTEM IN IRAQ

1.1 Definition of digital transformation:

Digital transformation is the change associated with the application of digital technology in all social aspects.

One example of digital transformation is cloud computing. It means less reliance on user-owned devices and increases reliance on share-based cloud services.

Some of these digital solutions leverage the capabilities of traditional software products (such as Microsoft Office versus Office 365) while others are completely cloud-based (such as Google Docs).¹

Companies that provide these services get regular (usually monthly) recurring revenue through subscriptions so they are able to fund continuous development while minimizing risk (historically, most software companies derive mostly from their revenue from users who upgrade, and have had to invest upfront in developing enough new features and benefits to encourage users to upgrade), as well as provide more frequent updates often using forms of agile software development internally. Digital transformation is ongoing, but not at the same pace everywhere. According to the McKinsey Global Institute's 2016 Industry Figure Index, Europe is currently operating at 12% of its digital potential, while the United States is operating at 18%. Within Europe, Germany operates at 10% of its digital potential, while the UK is almost on par with the US at 17%.²

¹ Stolterman, Eric, Krohn Force, Anna (2004). "Information Technology and the Good Life," Information Systems Research: Relevant Theory and Informed Practice, p. 689.

² Christian, Hess et al.: (August 4, 2015). "Digital Transformation Strategies". Business and Information Systems Engineering, 5th Edition, pp. 339-343.

<https://ar.m.wikipedia.org/wiki>



Digital transformation is the process of integrating digital technologies into all aspects of business and life areas, leading to radical changes in how we work and deliver value to customers. In the modern era, the importance of digital transformation in the modern era is highlighted in several main points, the most important of which are:

1. **Improve efficiency and productivity:** Digital transformation automates processes and reduces reliance on human intervention, reducing errors and increasing speed and efficiency of performance. This leads to improved resource management and reduced operational costs.
2. **Fostering innovation:** With access to new technologies and accurate data, companies can develop new products, services and business models, enhancing their ability to adapt to market changes and meet customers' evolving needs.
3. **Improve customer experience:** Digital transformation can provide effective channels of communication with customers, enabling the provision of customized services that meet their needs and expectations, and enhance their satisfaction and loyalty.
4. **Increased competitiveness:** Companies embracing digital transformation can quickly adapt to changes in the competitive environment, giving them a competitive advantage in the market. ¹
5. **Improve decision-making:** Digital transformation helps in the collection and analysis of large amounts of data quickly and accurately, enabling accurate insights that support informed decision-making and effective future planning.

In addition, digital transformation enhances communication and collaboration within organizations, enabling teams to work more efficiently, whether they are in the office or working remotely. It also enables organizations to respond quickly to disruptions and challenges, ensuring business continuity in times of crisis, and digital transformation is an urgent necessity in the modern era to achieve sustainable growth and continuous innovation, and ensure added value to customers and society. ²

2.1 Global developments in digital transformation:

In recent decades, the world has witnessed a radical transformation in various sectors due to the digital revolution, where digital transformation has become one of the most prominent strategic trends affecting economic and social systems. Digital transformation refers to the adoption of digital technology to improve internal processes, enhance efficiency, and provide innovative services that meet the aspirations of individuals and institutions.

These developments include:

1. Digitization (Information)

In political, commercial, industrial, media and business conversations, digitization is defined as the technical process of "digitizing analog information." (For example, the double numeric form of zero and one). In electrical engineering, the older term digitization is used in that way, which is the original meaning of that term. Often an electrical device called an analog-digital converter is used, for example in image searching, sound retrieval (e.g. music research) and data measurement. The term may also refer to the manual digitization of information, for example for drawings using a drawing board. Digitization is technically described as the representation of signals, images, sounds and objects by generating a series of numbers, expressed as a discrete value and represented by a binary counting system. For example, digitization has been introduced in telecommunications networks since the seventies, with the aim of improving the quality of voice in phone calls and improving latency, network capacity, cost and sustainability. ³

The academic debate surrounding digitization has been described as controversial, as no clear definition of the phenomenon has emerged before and there is a widespread misconception that digitization essentially means the use of more information technology to make digital technology and data available and utilized. This primitive definition has been replaced by the above-mentioned definition, which is now associated with holistic approaches to social change, business change, horizontal institutional development, business development, as well as information technology. ⁴

2. Digitization (Industries and Institutions)

¹ Khaled Samir, Digital Transformation: Definition and Importance, 2024: A report published on the website of the Digital Gear Company at the following link:

<https://zamn.app/blog/>

² Abdul Raouf Al-Amoush: The Importance of Digital Transformation Towards Media and Digital Communication in Municipalities, Arab Society Journal for Publishing Scientific Studies, 2024, p. 667.

³ Khan, Shahyan: Leadership in the Digital Age, A Study on the Effects of Digitization on Senior Management Leadership, Stockholm Business School.2017.

⁴ Chiu, Eng (2015): "Co-creation of Value in the Organizations of the Future" IT leadership in transition – the impact of digitization on end-end organizations. p978.



Unlike digitization, digital transformation is the organizational process or business cycle of technologically catalytic change in industries, organizations, markets, and branches. The digitization of manufacturing industries has enabled new production processes, in addition to many of the phenomena known today as the Internet of Things, Industrial Internet, Industry 4.0, machine-to-machine connectivity and machine vision. Business and enterprise digitization has spurred new business models (such as freemium), as well as new e-government services, e-payment, office automation, paperless office operations, and the use of Technologies such as smartphones, web applications, computing services, electronic identification, blockchain, smart contracts, currencies, and business intelligence using big data. The digitization of education has spurred the emergence of e-learning and course courses for the enormous open online MOOC. ¹

3. Digital Transformation (Communities)

Digital transformation is described as "the total and total societal impact of digitization". Digitalization has enabled the process of digital transformation, which has led to opportunities to transform and change existing business models, consumption patterns, socio-economic enterprises, legal and political actions, institutional patterns, cultural barriers, etc.

Nowadays, companies of a different nature are constantly striving for digital transformation procedures to take advantage of key aspects such as productivity and efficiency. Natural alignment between business and architecture within big tech companies Promote their transformation and novelty Methods are introduced for this purpose, such as the introduction of new Data MAPs architecture model (organizations on the platform), among other things as companies embark on digital transformation journeys, the adoption of this type of approach becomes crucial to stay able to compete in a rapidly evolving scene.²

3.1 The Iraqi context: the reality of the banking system in Iraq

The current situation of the banking system in Iraq reflects a combination of positive developments and structural challenges, as the sector seeks to develop while facing continuous problems facing the development or digital transformation in the sector, and the most prominent features of the current situation of the banking sector:

1. Adoption of banking reforms ³

The Central Bank of Iraq is implementing reforms aimed at enhancing financial stability, such as launching digital platforms for banking transactions and increasing transparency.

Continuous efforts to achieve compliance with international standards to combat money laundering and terrorist financing, while applying strict control over financial transfers.

2. The banking system is dominated by state banks (such as Rafidain Bank and Rashid Bank), which account for the largest proportion of banking assets, while private banks struggle to expand and compete.
3. Challenges of poor financial inclusion Financial inclusion remains low, as most Iraqis rely on traditional cash transactions, with little reliance on digital banking services. Government efforts to increase electronic payment accounts and improve access to banking services, but results are still limited.
4. Impact of international sanctions Some Iraqi banks are being challenged by U.S. restrictions, including tracking dollar transfers to combat money laundering.
5. Lack of banking technology The sector suffers from a weak technological infrastructure, which hinders the provision of advanced financial services, such as phone banking and modern applications.
6. Public trust in the banking system remains limited due to past problems, such as delays in cash withdrawals and financial crises.
7. Heavy dependence on oil revenues ⁴ The Iraqi economy, including the banking sector, relies heavily on oil revenues. Any drop in oil prices directly affects bank liquidity.
8. Security and political challenges Political and security instability significantly affects investment in the banking sector and limits its growth.

Where the Iraqi banking system faces multiple challenges that affect its efficiency and stability, which limits its ability to provide advanced financial services that meet the needs of the market, as the challenges include the weakness of the technological infrastructure, in addition to the abolition of the platform to monitor the movement of the dollar and other challenges that we will address, as the sector suffers from limited financial inclusion, which requires the

¹ Khan Shaheen, op. cit., p. 988

² Jane McConnell: Company cultures that help digital transformation, article your post on the site: <https://ar.m.wikipedia.org/wiki>

³ Central Bank of Iraq, Monetary Policy Report 2023: Iraqi Ministry of Planning, Financial Inclusion Reports.

⁴ Central Bank of Iraq, ibid.



adoption of modern strategies to enhance its efficiency and sustainability, the most prominent of these challenges are:

1

1. Cancellation of the dollar movement monitoring platform: The Central Bank of Iraq announced the end of reliance on the current remittance platform, and the transition to a new system based on strengthening direct relations between Iraqi banks and correspondent banks, raising questions about the ability of the banking system to adapt to these changes and ensure transparency and combat money laundering.
2. Liquidity crisis and stalled salary disbursement: Despite stable oil revenues, Iraq has experienced delays in the payment of salaries to employees and retirees, indicating challenges in managing and distributing liquidity. The central bank has also taken measures to reduce the maximum amount allowed for real estate sales and purchases, with the aim of strengthening efforts to combat money laundering and terrorist financing.
3. Weak technological infrastructure: The banking sector suffers from delays in adopting modern financial technology, which limits its ability to provide advanced digital banking services that meet the needs of customers and keep pace with global developments.
4. Money laundering and terrorist financing risks: Some Iraqi banks have reportedly used an outdated banking system established by the United States to illegally transfer billions of dollars to Iran and its allies, highlighting the need to strengthen oversight and compliance with international standards.
5. Low capital adequacy ratio: The Ministry of Planning reports showed that the capital adequacy ratio of Iraqi banks has decreased, which may affect their ability to face potential risks and ensure their financial stability.
6. To overcome these challenges, it is necessary to strengthen technological infrastructure, develop monetary policies, implement strict anti-money laundering standards, improve liquidity management and develop human competencies in the banking sector.

THE SECOND TOPIC

THE IMPORTANCE OF DIGITAL TRANSFORMATION IN THE BANKING SECTOR

2.1 Improving the quality of services

Governments are making efforts to improve their processes in providing a more efficient and effective service to the services provided to their citizens, as the rapid developments in information technology have provided changes in the way governments deal with their citizens, which led to the introduction of the concept of e-government as a main way to provide services in the public sector, but after more than ten years of implementing many e-government projects, governments around the world faced many challenges, the most prominent of which was the lack of adoption and use by citizens, and studies have shown The reason for not adopting is due to declining trust in governments and their practices.²

The previous efforts of public administrations in digitization have faced many problems, including non-adoption or even rejection and reliance on traditional methods of requesting services, because they are often a repetition of existing processes but in a digital way, without thinking about supporting these processes and redesigning them so that the citizen is more able to accept them as a reliable alternative to obtaining services without the need to request them through employees and physical presence in front offices.³

Digital transformation has therefore emerged as a term describing the transition from digitization efforts to a comprehensive review of policies, processes, and services in order to create simpler use experiences for citizens and frontline workers, while previous digitization waves have focused on the transition from analog digital services (those

¹ Ministry of Planning: Evaluation of Monetary and Banking Policy in Iraq, 2023

² Al-Jazzaf, Zainab, et al. (2010) "Online Trust: Definition and Principles", Fifth Multilateral International Conference on Computing in Global Information Technology, (pp. 163-168)

³ Mergill, Innes, et al. (2019) Defining Digital Transformation: Results of Expert Interviews." Government Information Journal, Vol. 36, No. 4, pp. 1-12.



that rely on analog technology, where constantly changing signals are used to represent data and information. This technology is used in multiple fields such as voice, video, and wireless communications, and relies on continuous values of signals to represent information).¹ to parallel digital services (digital services that work in parallel with traditional services, or those provided across multiple platforms simultaneously), to increase the efficiency and effectiveness of government services, while digital transformation aims to redesign and re-engineer government services from A to Z to meet the changing needs of users.²

Digital transformation contributes to improving the quality of services through several aspects, including:

1. Increase operational efficiency: Digital transformation helps to improve operational efficiency and improve services provided to customers and target audiences, by optimizing the use of technology, which serves the workflow within the organization in all its departments.³
2. Improving the quality of social services: A study entitled "Digital Transformation as a Tool to Improve the Quality of Social Services in Community Development Units" showed that there is a statistically significant positive relationship between digital transformation and improving the quality of social services.
3. Enhancing citizen satisfaction: Digital transformation enhances the ability of governments to provide public services to citizens with higher quality and access everywhere and around the clock, improving the level of interaction between citizens and their governments.⁴

2.2 Increased operational efficiency

Automation in banking is the use of technological solutions to automate the main banking workflow. The advent of many digital payment gateways and online banking has made it difficult for traditional banking systems to catch up and offer customers an omnichannel banking experience.⁵

Moreover, traditional banking methods lack the accuracy and speed that customers expect. And here automation can give banks an additional advantage. This blog will provide deeper insights into automation in banking, and the benefits of automating core banking processes.

With the emergence of many digital payment and finance companies that have made money transfer just a click away, it has become difficult for traditional banking institutions to keep up with this advanced service. Often, banking experiences are hectic for customers as well as bankers.

This is partly due to the lack of proper organization of the work in question. With the involvement of countless repetitive tasks and the interconnected nature of operations, there is always a call for automation in banking. This blog will give you insight into the advantages of automation in streamlining banking processes, banking processes that can be automated, and some of the key features to look at in a banking automation system.

The banking sector realized the need to improve its service approach mainly due to the pandemic, and by opting for contactless operation, the sector aimed to provide the service in a more advanced way.

Therefore, streamlining processes has become crucial. But automation is not a new approach in the industry. In the sixties of the twentieth century, automatic teller machines were introduced that replaced the cashier or human treasurer.⁶

Banking automation is the process of streamlining all banking processes such as customer accounting, deposit management, withdrawals, renewals, customer acquisition and retention, etc., to increase their efficiency and improve customer experience.

This reduces human intervention and leads to a smooth and systematic workflow. By comparison, traditional manual banking operations have been inconsistent, delayed, imprecise, and intertwined, and seem to take a long time to come to an end. To get rid of such scenarios, most bank branches have already embraced the idea of automation.⁷

Automation and technology significantly impact banking operations, improving operational efficiency, enhancing security, and providing better customer services. Here are some key aspects of this effect:⁸

¹ Digital and analog system,2021 : <https://nairaquest.com/ar/topics/13022-digital-system-and-analog-system-differences-advantages-an>

² Ibid.

³ Fathi, Sahar. "Digital transformation as a tool to improve the quality of social services in local community development units". *Studies in Social Work*, Vol. 60, No. 2, 2022, pp. 459-504.

⁴ Ibid.: p 550

⁵ Automation in Banking:
<https://www-cflowapps-com.translate.google/automation-in-banking/>

⁶ Automation in Banking: Previous source

⁷ Ibid.



1. Improve operational efficiency: Automation streamlines banks' internal processes, allowing for more effective resource allocation and improved productivity. This enables banks to allocate more resources to innovation and customer-centric initiatives.
2. Enhance security and risk management: AI contributes to the development of advanced analytical models that help make more informed decisions, and automate manual tasks that consume time and effort, enhancing banks' ability to manage risk and comply with regulations. ¹
3. Improve customer experience: By embracing AI and automation, banks can improve customer experiences and increase profitability in an increasingly dynamic and competitive financial landscape.

3.2 Promoting financial inclusion

Digital transformation contributes significantly to the provision of financial services to various segments of society, which enhances financial inclusion and reduces economic gaps, and the following are some aspects in which this role stands out:²

1. Expanding access to financial services: Digital transformation enables access to banking and financial services for individuals and businesses in remote and disadvantaged areas, through the use of modern technology such as smartphones, the internet and banking applications.
2. Providing innovative financial solutions: Digital transformation contributes to the provision of new financial solutions such as electronic payment, crowdfunding and digital insurance, helping to improve access to financial services and reduce costs and barriers facing the poorest and disadvantaged.
3. Enhance transparency and accountability: Digital transformation can help improve transparency and accountability in the delivery of financial services, increasing customer confidence in the financial system.

THE THIRD TOPIC **Challenges Facing Digital Transformation in Iraq** **(Iraqi banking sector)**

3.1 Legislative regulatory factors

Current laws in Iraq significantly influence the implementation of digital transformation strategies, playing a crucial role in facilitating or hindering this process. Among the notable pieces of legislation in this context is the Electronic Signature and Electronic Transactions Law No. 78 of 2012, which is an important step towards digital transformation. This law promotes the use of electronic means in judicial notifications, documentation of government data and financial procedures. For example, Article 21 of the Rules of Procedure of the Federal Supreme Court No. 1 of 2005 provides for the possibility of making notifications by e-mail, fax and telex, in addition to other means of notification provided for in the Code of Civil Procedure. ³

However, Iraq faces legal challenges that hinder digital transformation. Chief among these challenges is the lack of an adequate legal framework, leading to fragmentation of the digital landscape and weak cybersecurity measures. In addition, legislation needs to be updated to keep pace with rapid technological developments and ensure data protection and user privacy.

In this context, the Iraqi Parliamentary Transport and Communications Committee is working on updating and legislating three key laws to promote digital transformation in the country. These efforts aim to promote government digitization to reduce corruption, empower Iraqi youth by providing a supportive environment for technology entrepreneurship, and enhance cybersecurity to counter growing digital threats. ⁴

⁸ Artificial intelligence. A revolution in the global banking landscape", Union of Arab Banks:
<https://uabonline.org/magazine-article/>

¹ Artificial intelligence. A revolution in the global banking landscape", Union of Arab Banks:
<https://uabonline.org/magazine-article/>

² Mohab Zeidan: The Role of Digital Transformation in Achieving Financial Inclusion, Journal of Financial and Banking Research, 2022, pp. 15-20.

³ Anas Murshid: Activating the Digital Law: Achieving the Vision of Digital Government in Iraq
https://kapita.iq/content/issue/activating-digital-law-achieving-vision-digital-government-iraq?utm_source=chatgpt.com

⁴ Najaf News Agency: Three new laws to promote digital transformation in Iraq, 2024



In general, digital transformation in Iraq requires a solid legal framework that supports innovation and protects the rights of citizens, with continuous updating of legislation to keep pace with technological developments and enhance cybersecurity.

3.2 Technological infrastructure

The world is witnessing an accelerated digital transformation, with digital infrastructure becoming an essential element for economic and social development. In Iraq, the readiness of digital infrastructure is critical to the success of digital transformation, especially in light of the challenges the country is facing.

Current status of technological infrastructure in Iraq:¹

1. The development of communication networks and the Internet
Iraq has seen improved internet penetration and the availability of smart devices, but the digital divide between urban and rural areas remains significant. This disparity hinders access to digital services to all segments of society.
2. Data Centers & Cloud Computing
Data centers and cloud computing are still in the initial stages of development, affecting Iraq's ability to absorb advanced digital applications such as artificial intelligence and the Internet of Things.
3. Cyber Security
Cybersecurity is a major challenge, as digital infrastructure is vulnerable to frequent cyberattacks. There is an urgent need to develop comprehensive security strategies to protect data and information.

Challenges facing digital infrastructure:²

1. The digital divide imbalances access to technology between different regions, hindering the achievement of inclusive digital transformation.
2. Lack of digital skills Iraq suffers from a shortage of qualified human cadres in the field of technology, which delays the adoption of modern technologies.
3. High cost Digital infrastructure development requires significant investments in hardware and software, which is challenging under the current economic conditions.

In addition, the National Digital Information Bank aims to collect government data from Iraqi ministries and institutions within a central platform, which contributes to improving decision-making and service delivery, and supports development plans and effective governance.³

Despite the challenges facing Iraq's digital infrastructure, current government efforts and initiatives show the potential for successful digital transformation. This requires ongoing investments in infrastructure, developing digital skills, and enhancing cybersecurity. By following a clear roadmap, Iraq can become a regional technical hub, promoting economic and social development.

3.3 Banking culture and practices

The banking sector in Iraq faces multiple challenges related to organizational culture and practices that lead to resistance to change within some institutions and among employees. Among the most prominent of these challenges:⁴

1. Structural and regulatory backwardness: The Iraqi banking sector suffers from structural and regulatory problems that hinder its development and limit its ability to keep pace with global banking systems. This backwardness leads to poor banking performance and difficulty in adopting modern changes.
2. Weak trust between banks and citizens: As a result of the bankruptcy of some banks and the imposition of sanctions on others, citizens' confidence in the banking system has declined. This lack of trust makes employees and citizens alike reluctant to accept new banking changes and practices.
3. Corruption and quotas: Corruption and sectarian and partisan quotas within the banking system are major obstacles to change. These practices lead to resistance to change by employees who take advantage of the status quo and fear losing their privileges.⁵

¹ National Strategy for Digital Transformation in Iraq: <https://eiraqi.blog/>

² Digital transformation in Iraq.. strategic plan and new procedures:<https://shafaq.com/>

³ Malek Khalaf Wadi: National Information Bank. A Step Towards Digital Transformation, 2024

⁴ Assoc. Prof. Haider Hussein Al-Tohme: The banking sector in Iraq and the challenges of reform and development - Center for Strategic Studies 2015

⁵ Shatha Khalil: The Role of Iraqi Banks in Economic Development and the Challenges They Face - Links Center for Strategic Studies and Research 2024.



4. Lack of training and qualification: Lack of investment in developing the capabilities of employees and training them on modern technologies contributes to resistance to change. The lack of comprehensive national training and qualification plans makes employees unwilling to adopt modern banking practices.
5. Weak credit systems: Iraqi banks suffer from poor credit systems, leading to slower development in the financial sector. This weakness is reflected in the ability of banks to finance SMEs, and increases resistance to change among employees who lack the necessary tools to support SMEs.

To address these challenges, Iraq's banking institutions must adopt comprehensive reform strategies that include restructuring regulatory systems, enhancing transparency, investing in staff training and qualification, and enhancing trust between banks and citizens. These steps will reduce resistance to change and enhance the ability of banks to adapt to recent developments in the banking sector.¹

Fourth topic Practical side

The following is a sample statistical analysis of the research questionnaire "The Role of Digital Transformation in the Development of the Iraqi Banking System: A Case Study of Trust Bank According to the Innova Program". We will review the main steps with sample tables that show how to display results.

1 Research Methodology

- **Objectives of the study:**

An analysis of the role of digital transformation on the performance of the Iraqi banking system with highlighting the state of Al-Thiqa Bank according to the Innova program.

- **Data collection tools: A**

questionnaire distributed to the bank's employees and customers, containing items that measure the dimensions of digital transformation (such as transformation in services, application of modern technologies, digital interaction) and indicators of customer satisfaction and operational performance.

- **Study sample: A**

random sample of Trust Bank employees and customers was selected; the sample size depends on the research design (200 to 300 participants).

2 . Descriptive analysis

The analysis begins by displaying the frequency distribution and percentages for each item in the questionnaire, as well as calculating measures of central tendency (mean) and dispersion (standard deviation).

Table 1: Frequency distribution of the variable "customer satisfaction with digital services"

classification	Iteration	Percentage
Very good	50	25%
Good	80	40%
medium	40	20%
Weak	20	10%
Very weak	10	5%

This table shows the distribution of participants' responses to their level of satisfaction with the digital services provided.

Table 2: Descriptive statistics of study variables

Item	Average	Standard deviation	The Bare minimum	The maximum
Digital Transformation Level	3.85	0.75	2.0	5.0
Customer satisfaction	3.90	0.68	2.0	5.0

¹ Adham Ibrahim: Challenges facing the banking sector in Iraq, 2023, article published on Al-Zaman website <https://www.azzaman.com>



These statistics show the centralized and dispersion metrics of both the level of digital transformation and customer satisfaction.

3 Stability and credibility test

The Cronbach alpha coefficient is usually used to test the reliability of a measuring instrument. For example:

- **Cronbach's alpha digital transformation section** 0.88
- **Alpha Cronbach for Customer Satisfaction** 0.85

Values above 0.70 indicate good reliability of the tool.

.4 ANALYSIS OF RELATIONSHIPS BETWEEN VARIABLES

1.4 Correlation analysis

The correlation coefficient (e.g. Pearson's coefficient) is calculated between key variables, for example between the level of digital transformation and customer satisfaction.

Table 3: Correlation matrix

Variables	Digital Transformation	Customer satisfaction
Digital Transformation	1	0.65**
Customer satisfaction	0.65**	1

Note: The correlation coefficient of 0.65 with statistical significance (e.g. at 0.01) indicates a strong positive correlation between digital transformation and customer satisfaction.

5. Regression analysis

Regression analysis aims to estimate the impact of the level of digital transformation (independent variable) on customer satisfaction (dependent variable).

Table 4: Regression Analysis Results

coefficient	B	THE AVENUE	B	T	p-value
Hard	1.50	0.30	-	5.00	0.000
Digital Transformation	0.80	0.10	0.65	8.00	0.000

- **Explanation:**

- Interception shows the value of customer satisfaction when the level of digital transformation is zero.
- The digital transformation coefficient (B = 0.80) with p-value < 0.01 indicates that for each unit increase in the level of digital transformation, customer satisfaction increases by 0.80 units, which confirms the positive and motivational impact of digital transformation.

.6 Draw conclusions and recommendations from the analysis

- **Key findings:**

- There is a positive and statistically significant correlation between the level of digital transformation and customer satisfaction.
- The analysis shows that the application of digital transformation technologies contributes to raising the level of service and improving the performance of the banking system.

- **Recommendations:**

- Promote training and development programs in the field of digital technologies.
- Invest in advanced technological systems to improve digital interaction with customers.
- Continuous follow-up and evaluation of the impact of these transformations on the overall performance of the bank.

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