

# Digital financial inclusion in Iraq: reality, challenges, and investigation requirements

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## Abstract

Societies have witnessed rapid and massive digital growth and development in the production and use of high-speed smart digital devices that increase data processing capacity, accelerate artificial intelligence and bring about unprecedented developments and changes in production processes, and in a way that contributed to changing the face of the global economy towards digital transformation and transformation of vital sectors to work models that rely on highly accurate and sophisticated digital technologies. These changes in digital technologies from collecting, storing, exchanging and using information have achieved wide spread and for all members of modern societies societies of knowledge and digital transformation, which requires their application of tools and a financial system characterized by inclusiveness and equality between segments and groups of society without discrimination and discrimination. This is imposed by financial inclusion and the possibility for everyone to use modern financial tools quickly and easily in order to achieve economic and social integration and achieve comprehensive development goals. And for the purpose of keeping pace with global economic development, including the ways and means to achieve the requirements of financial inclusion, many developing countries, including Iraq, had to enter into the scope of the strenuous pursuit to meet the challenges facing financial inclusion, and in the same direction achieve its implementation requirements. Therefore, the research came in order to clarify the digital transformation in Iraq and the ways to achieve.

**Keywords:** digital transformation, financial inclusion, digital economy, Iraq

## Introduction

Financial inclusion has gained the attention of policy makers and international organizations, and has become a complementary goal to achieve the requirements of sustainable development in most countries of the world, due to its ability to provide solutions to all problems facing the low-income segment, as well as its effective contribution to achieving economic and financial stability .

Ensuring the achievement of financial inclusion by ensuring that high levels of its basic indicators are achieved depends on the success of the requirements of digital transformation, which plays a major role in the field of financial services, through the development and use of smart financial systems, and then the ability to

predict cash flow detecting fraud and forgery, assessing loan eligibility, as well as improving credit score estimates , in addition to personalized banking transactions , and also discovering errors in data based on their expected patterns , all of which opens prospects for improving the level of indicators of financial inclusion, especially on The level of Iraq, which is witnessing slow growth in most areas of information and communications technology, infrastructure, access and use, which constitutes a serious challenge in the way of improving the level of indicators of financial inclusion in the mentioned region .

## research importance :

It focuses on the reality of digital financial inclusion in Iraq by clarifying the

opportunities for its advancement, the reality of its indicators and the challenges it faces .

### **Research problem :**

There are a majority of societies that still suffer from a decline in the percentage of financial inclusion, including Iraq, so the main question for research came in How can financial inclusion reach high levels in its indicators in Iraq in light of the challenges faced by digital transformation in it? .

### **Research hypothesis :**

The research is based on the hypothesis that (the challenges faced by digital transformation negatively affect most indicators of financial inclusion in Iraq, especially since it was and still suffers from unfavorable economic and political problems) .

### **Search objective :**

Explaining the challenges faced by digital financial inclusion in Iraq, for the purpose of avoiding them and dealing with them in a way that reduces their severity.

### **search structure :**

The research is based on the following themes :

The first axis / what is financial inclusion and digital transformation .

The second axis / the reality of digital financial inclusion in Iraq .

The third axis / challenges of digital financial inclusion and investigation requirements in Iraq

The first axis / what is financial inclusion and digital transformation

### **First - Financial Inclusion: Basic Concepts**

#### 1- Origin and introduction

The term financial inclusion appeared independently in 1933 in a study on the effect of closing a bank branch and the lack of actual access to financial services for the residents of the region in southeast Britain. However, the term financial inclusion became popular after 1999 when it was used to describe individuals' access to available financial services

Several definitions of financial inclusion have been presented, most notably the definition of

the World Bank, which states that financial inclusion is: (the ability of individuals and companies to access useful financial products and services at affordable prices that meet their needs, and are provided to them in a responsible and sustainable manner) . According to this definition, financial inclusion includes all individuals and institutions, and includes all types of transactions, payments, savings, credit, insurance, and financial services of all kinds, provided that all these services and transactions are in a sustainable manner and not temporary, and provided that All this is done at a low cost.

### **Objectives**

Financial inclusion aims to achieve a number of goals, foremost of which are

Enabling all societal groups to access financial services

Improving the standard of living of the poor by facilitating access to financial services for them

Develop legal and regulatory frameworks that allow benefiting from digital financial services.

Helping micro-enterprises to invest and expand.

Investing in the basic elements necessary for the development of digital financial services

· Expand the scope of digital identification, including electronic fingerprint systems

Providing a large database for banks to benefit from in the areas of analysis and contribution to the innovation of new banking products

### **Dimensions of financial inclusion**

The dimensions of financial inclusion are

First - Access : It is represented in the possibility of using financial services from the official financial system, and this dimension requires limiting and addressing restrictions to achieve it represented by costs and proximity to points of sale and banking services. This dimension is measured by the number of accounts opened through financial institutions and by estimating the proportions of the population that have adult accounts. This dimension includes :

1- Number of access points per 100,000 adults by type of administrative unit

- 2- The number of ATMs per 1000 square kilometres
- 3- The number of sales points per 1000 square kilometers
- 4- Electronic influence accounts
- 5- The extent of cohesion between service delivery points
- 6- Percentage of population in administrative units by access points

Second - Quality : It is embodied through the relationship between the financial service and the needs of the consumer's lifestyle. The quality scale is used to measure the nature and depth of the relationship between the financial service provider and the consumer, in addition to the available options and consumers' levels of understanding of these options and their effects. The indicators adopted to measure quality include: affordability and transparency, convenience and ease, financial education, indebtedness, and credit obstacles .

Third , the use Usage : It is represented by the clients' use of financial services provided by the banking sector institutions, and it is measured through a set of indicators represented by

- 1- Percentage of adults who own at least one type of regular deposit account
- 2- Percentage of adults with at least one type of regular credit account
- 3- The number of individuals they have per 1000 adults
- 4- The number of non-cash transactions per person
- 5- The number of transactions to complete payments by mobile phone
- 6- Percentage of adults who use a bank account on a permanent basis
- 7- Percentage of people who keep, according to a banker, during the past year
- 8- Percentage of adults who receive domestic and international remittances
- 9- Percentage of medium or small enterprises that have official financial accounts
- 10- Number of small and medium enterprises that have deposit accounts

- 11- The number of medium and small enterprises that have existing loans in their accounts

Fourth: the effect Impact It includes measuring the changes in consumers' lives that can be attributed to the use of a financial device or service. Information can be obtained either from the demand side, ie at the level of the individual, family or company, or from the supply side, ie at the level of a financial institution, or from a combination of the two

### **Second: Digital Transformation: Basic Concepts**

- 1- The concept of digital transformation:

Digital Transformation includes all the updates in the field of information technology that result in digital improvement in the use of digital technology for the purposes of physical development or the creation of new business processes. At the institutional level, which is represented by the process of analyzing customer needs and making the most of the available technology to improve the service obtained by the end user, then digital transformation can be defined as a process of transitioning the business model of government sectors or companies to a new business model characterized by dependence. On modern digital technologies to innovate products and services, and provide new channels of revenue that increase the value of its products. It is worth noting, that many international companies allocate a large amount of investments and resources to achieve their goals related to digital technological transformation, despite the continuity of the difficulties and great challenges they face in the success of this process

The digital transformation results in many benefits, foremost of which are : updating business models to keep pace with technological developments at the global level, enhancing the efficiency of operations, reducing the size of errors, enhancing employee and customer satisfaction alike, enhancing revenues from investments, enhancing innovation in companies and departments.

Digital transformation can begin by building digital strategies and making improvements to the current situation, and this is achieved by measuring the available digital capabilities to

determine the best work structure for digital marketing activities in the facility. After that, the requirements for investment plans are determined, with the identification of obstacles to digital integration, to make a comprehensive plan for all circumstances and to push the wheel of transformation to the desired path. The basic requirement for the success of this and reaching the strategic goals is the presence of a real will and efficient management of change for digital transformation

From the foregoing it is clear that the requirements of the rapid development witnessed by the developed world in particular, and the necessities of confronting the cases of economic stagnation that it was exposed to at different times, especially when economic crises occurred, generated the need for speed of treatment, response and achievement, and this could only be Through the digital interconnection provided by the World Wide Web, the basic basis for moving towards what is known as Digital Transformation was formed. , whose pillars have been integrated to reach what we have reached now and we are in the third decade of the twenty-first century

2 - Dimensions of digital transformation

In order to get closer to the content of the research, it is necessary to identify the dimensions of digital transformation, which are briefly included

- electronic clearing Automated Clearing : This dimension is based on what was approved by the Financial Settlement Network, which is based in the United States of America, where it was established in 1974, and according to which the tapes and magnetic disks system was adopted with the circulation of paper instruments. And usually this system accomplishes a huge volume of financial transactions (credit and debit) on a continuous and daily basis. As a result of the great development of payment systems, new systems appeared that complement the total financial settlement system, as the electronic instrument clearing system appeared, according to which remittances are paid in one or two days

- Real-time gross settlement system Real Time Gross Settlement : It is a payment settlement system that includes the actual settlement of balances on the principle of First in First Out cash movement , and the programs

of this system are installed through the participants' sites, and it works on the basis of reducing the manual execution of operations, and it is a system that avoids risks Resulting from the comprehensive settlement procedures for payments within the banking system, it contains security features

- electronic payment Online Payment : It relies on electronic procedures to complete payment requirements instead of coins and paper, and it is fast and reliable, as it uses the world of communication and information technology. It includes the approved transfer mechanism for transferring electronic money from one account to another, regardless of the location of the owner's branch or the holder of each account

From the above it is clear that the requirements of the environment supporting digital transformation are based on: high-speed and widespread Internet, a computing system based on creativity and technical awareness, and carefully interwoven digital content, and this can be clarified through the following figure

Figure1 Requirements for the supporting environment for digital transformation

<b>High speed</b>	<b>Internet</b>
<b>Wide distribution</b>	
<b>Technical awareness</b>	<b>Cloud Computing</b>
<b>Creativity and modernization</b>	
<b>Develop tools available</b>	<b>Digital content</b>
<b>Fine interlocking</b>	

**Third: Digital transformation and financial inclusion**

Digital transformation plays a significant role in the contemporary global economy in light of what is known as the digital economy, starting with the latter's reliance on technological infrastructure, and its use of devices, software, and networks, in addition to the digital mechanisms through which various commercial and economic businesses are conducted, including trade. Electronic transactions, which are entirely electronic, relying on a network

One of the most prominent features of digital transformation at the economic level is to monitor the development in the information and communications technology sector, especially the Internet in terms of coverage, speed and price competitiveness, and to measure the extent of investment in these networks, as well as the extent to which the sixth Internet Protocol is used, because the Internet and networks Broadband, mobile applications, and other ICT services and devices form the cornerstone of the digital economy

Digitization has become a basic requirement for all sectors with their various activities and importance, given the rapid and profound transformations that the world is witnessing based on virtualization and interdependence. And when it comes to the banking industry, the latter has witnessed changes very quickly as a result of the successive developments in the field of digital technology, including the massive expansion using modern technologies such as smart mobile phones, artificial intelligence, smart robots, computers, the Internet and big data analytics.. ... etc. On this basis, digital transformation has become an inevitable goal for the banking sector and all financial institutions, as it is linked to growth, continuity, and interaction with the financial transformations taking place, especially within countries where a large part of the population does not have current bank accounts, and they do not use credit cards. And this goal can only be achieved through many of the requirements for change within the banking institution, whether in the technological infrastructure, transactions, products, services and marketing, and in a manner consistent with the final objectives. On this basis, the uses of digitization in banks resulted in the adoption of complex, dynamic systems related to growth and innovation. The process of transition towards digital banking includes the following gradation

Banking institutions have adopted modern technologies a long time ago, extending to the global financial crisis in 2008, during which financial products and services were offered directly to companies and individuals alike, as digital technology, mobile phones and artificial intelligence were used. ..etc., for the purpose of creating high-efficiency and fast financial and banking services at a lower cost

The impact of financial digital transformation or what we can call financial digitization is shown through the following

- Financial inclusion, or what is known as enabling access to financial services.
- The extent to which consumers interact with financial services.
- The nature of the means used by consumers to pay when making transactions.
- The extent of the development of financial services relationships carried out by service providers and institutions to consumers.
- Enable consumers to make payment using cryptocurrency as an alternative.

There are difficulties that impede the rapid spread of financial inclusion experienced by some countries, especially developing ones, that are related to the nature of the target environment, and these difficulties include: The inability to expand access to financial services and deliver them to the hard-to-reach population, including women and the rural poor. . Also among the difficulties is a decline in the cultural awareness of some citizens to improve their financial capabilities and to enable them to understand various financial services and products, and among the difficulties also: the inability to ensure that everyone has proper identity documents, and that the means of verification are low-cost and easy And the difficulty of creating useful and relevant financial products, tailored to consumer needs

The shift towards digital or electronic banks is caused by changes in banking services, as it is based on the response to digital means using multiple and different approaches to transition to a digital bank that applies digital banking services of all kinds

From the above, it is clear that digital financial inclusion is closely related to financial technology, and works to provide financial services in a digital form, and it aims to reach the financially excluded population, through a set of official financial services that suit the needs of this population, provided that the two elements of cost are available Security for customers, and sustainability for financial service providers

According to the Organization for Economic Cooperation and Development, digital financial inclusion represents the process by which access to a wide range of formal and regulated financial products and services is enhanced in a reasonable and sufficient time and price, and the use of these services and products by segments of society is expanded. Different, through the application of innovative approaches that include financial awareness and education, in order to enhance financial well-being and social and economic integration

According to the Global Alliance for Financial Inclusion, digital financial inclusion includes reaching financially excluded populations through digital means. Thus, it becomes clear that digital transformation supports financial inclusion. It includes guiding principles, including the following

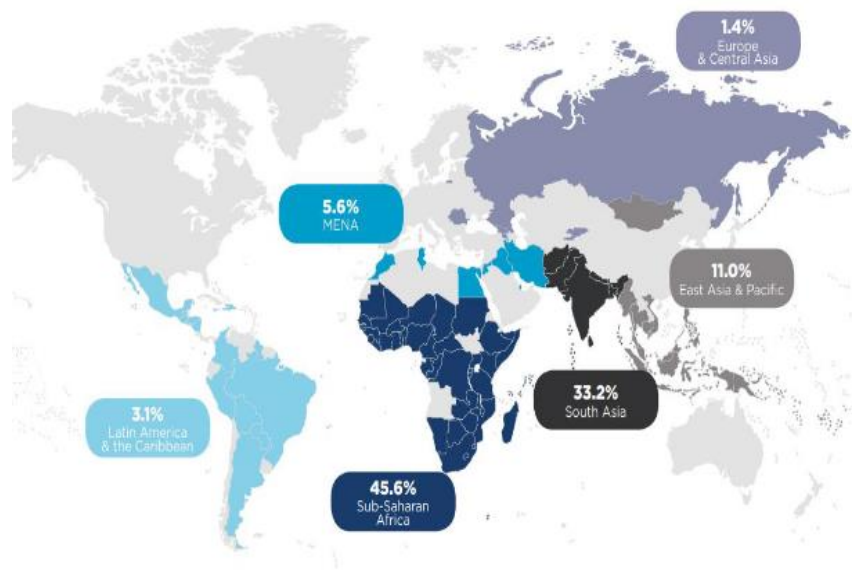
- 1- Supporting and developing a secure and responsible digital infrastructure that allows access to it
- 2- Encouraging the provision of digital financial products suitable for different needs and at reasonable costs
- 3- Improving the availability and accuracy of data regarding access to and uses of digital financial products and services
- 4- Failure to adopt policies and initiatives aimed at increasing levels of digital financial inclusion in national strategies
- 5- Supporting regulatory and legal reforms that reduce inequality in access to digital financial services
- 6- Develop a regulatory framework that supports digital innovation in the public and private sectors
- 7- Enhancing the financial, commercial and digital culture
- 8- Supporting customer financial protection procedures

The second axis / the reality of digital financial inclusion in Iraq

Among the indicators that measure the level of infrastructure penetration in the banking sector is the total number of bank branches, and their distribution inside and outside the capital, as well as the extent of ATMs and points of sale. Statistics indicate that the number of ATMs for the year 2019 was for every 100,000 people of the adult population in the Arab countries up to about 31.5 machines, which is a very modest number, being below the global average of 43.5 machines. Also, the number of bank branches per 100,000 population in the Arab region reached 11.6 in the said year, which is lower than the world average of 12%. As for the proportion of the adult population that owns accounts in financial institutions to the total adult population, it reaches 37.5%, which is the lowest percentage at the level of geographic regions compared to the global level in which this proportion of the adult population with accounts in financial institutions approaches 70%, on the part of Finally, about 5% of adults in the Arab region use credit cards, and this percentage is also low when compared to the global level in which it reaches nearly 20%, and the percentage of users of financial services via mobile phone and electronic network reaches to Approximately 5.7%, in which the share of males reaches 8.3% and females 2.9%, which indicates the persistence of a large gender gap in this indicator, bearing in mind that the mentioned percentages are much lower than they are globally, as the ratios of recent indicators at the global level are about : 24.9%, 27%, 23%, respectively, and the Internet penetration rate is 65%, and the latter is much lower than it is at the global level, although some Arab countries have achieved a rapid rate of Internet penetration, such as the mother Rat and Qatar

It can be inferred from the above, and knowledge of the spread of payment systems through the mobile phone through the figure below when making comparisons at the global level. Thus, it becomes clear how modest the elements of financial inclusion at the global level in the Arab region in general

Figure 2 Mobile payment systems at the global level until 2019

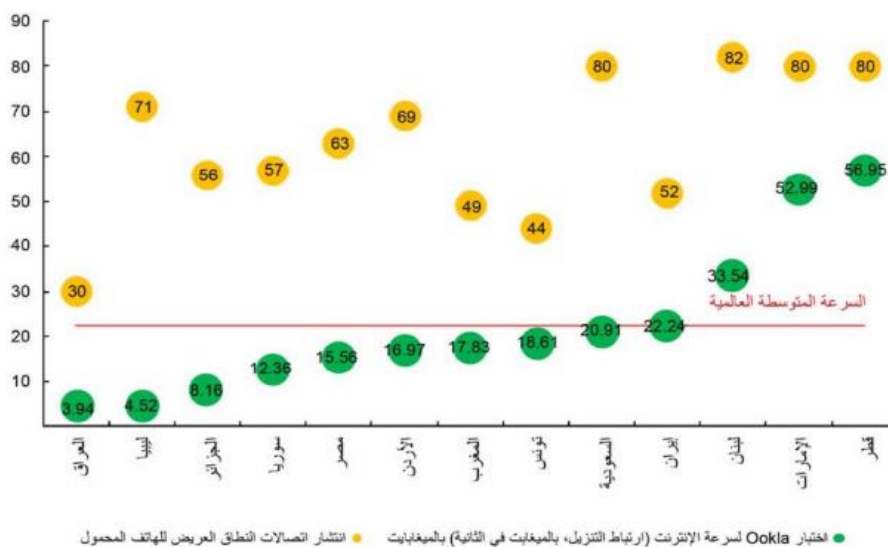


Source : GSMA State of the Industry Report 2019

In addition to the above, the modest spread of the Internet in Iraq can be inferred through the following figure, which shows that it is less or less than the average speed compared to some Arab countries such as the UAE, Saudi Arabia, Qatar, Bahrain, Egypt, Jordan, Lebanon, Morocco and Libya And Algeria, and to be more precise, Iraq is in the lowest rank for this indicator compared to the mentioned countries, and in a way that is remarkable. Which indicates

a negative situation whose seriousness is not underestimated, and perhaps among the reasons behind this dangerous decline: administrative and financial corruption, weakness of service-providing companies, continued reliance on traditional specifications in the supply and lack of integration of Internet infrastructures, and subjection Service for continuous interruptions for various reasons

Figure 3 The level of high-speed internet in Iraq and some countries in 2019



Source: World Bank Report - A New Economy for the Middle East 2020

It is clear from the table below that there is a large disparity between Iraq and other Arab countries in the ownership of financial accounts in official financial institutions, given that the indicator of ownership of financial accounts is among the indicators of digital transformation of financial inclusion, as the percentage of adults who have an account Financial institutions in Iraq, according to the latest statistic at the global level, is 20%, which is the lowest percentage if compared to the countries of the Arab Gulf and the rest of the Arab region, as this percentage reached in the Emirates, Bahrain, Kuwait, Saudi Arabia, Libya, Lebanon, Algeria and Tunisia

And Egypt, Morocco and Palestine: 87%, 83%, 80%, 72%, 66%, 45%, 43%, 37%, 32%, 28% and 25%, respectively. In addition, this percentage decreases in Iraq for females, reaching 8%, while for males it reaches 15% , which reflects the existence of a large gender gap in this indicator. Among the reasons behind the decline in the percentage of adults who have a financial account in financial institutions in Iraq is that many segments of Iraqi society, especially those with low incomes, do not find that there is a need for an account with a banking or financial institution

Table 1 *Percentage of adults who have a financial account in financial institutions in Iraq compared to some countries in the Arab world %*

Palestine	Kuwait	Jordan	Iraq	Egypt	Algeria	UAE	The state the year
25	80	42	20	32	43	87	2017
Libya	Lebanon	Morocco West, sunset	Tunisia	the two seas	Saudi Arabia	The state the year	
66	45	28	37	83	72	2017	

Source : The Global Findex Database 2017

As for borrowing from official financial institutions as an indicator that reflects the level of financial inclusion and the efficiency of financial institutions in the country, it can be identified through the percentages of adults who borrowed from official financial institutions regardless of the reason for borrowing, and in this regard, the table below can be followed to identify At the level of that percentage in Iraq compared to the rest of the Arab countries, and from it we note that the borrowing rates and that

recorded disparity between the Arab countries, but it is the least or the lowest in Iraq, as it reaches 3%, especially if compared to the rest of the Arab countries in which this ratio ranges Between the highest level in the Emirates, which amounted to 19%, and the lowest rate in Palestine, which amounted to 2%. Thus, Iraq ranks among the countries in which this percentage is low and below the level of ambition. Which indicates the difficulty of accessing official financial channels, and increases the chance of financial exclusion in it

Table 2 *Percentage of adults who borrowed from official financial institutions in Iraq compared to some countries in the Arab world %*

Palestine	Kuwait	Jordan	Iraq	Egypt	Algeria	UAE	The state the year
2	16	17	3	7	5	19	2017



<b>Libya</b>	<b>Lebanon</b>	<b>Morocco, West, sunset</b>	<b>Tunisia</b>	<b>the two seas</b>	<b>Saudi Arabia</b>	<b>The state /</b> <b>the year</b>
<b>5</b>	<b>17</b>	<b>5</b>	<b>9</b>	<b>16</b>	<b>11</b>	<b>2017</b>

Source : The Global Findex Database 2017

As for the third indicator of financial inclusion represented in bill payments through bill payments using an official financial institution account, the percentage of adults who pay bills using an official financial institution account is low in the Arab countries, with the exception of Saudi Arabia and Bahrain, and Iraq

is classified among Within the countries where this percentage is low, which means the reluctance or the inability to exploit the financial accounts in it, which records one of the reasons behind not reaching the required level of financial inclusion, and as shown in the table below :

Table 3 *Percentage of adults who pay bills using the account of official financial institutions in Iraq compared to some countries in the Arab world %*

<b>Palestine</b>	<b>Kuwait</b>	<b>Jordan</b>	<b>Iraq</b>	<b>Egypt</b>	<b>Algeria</b>	<b>UAE</b>	<b>The state /</b> <b>the year</b>
<b>4</b>	<b>6</b>	<b>4</b>	<b>5</b>	<b>-</b>	<b>8</b>	<b>28</b>	<b>2017</b>
<b>Libya</b>	<b>Lebanon</b>	<b>Morocco, West, sunset</b>	<b>Tunisia</b>	<b>the two seas</b>	<b>Saudi Arabia</b>	<b>The state /</b> <b>the year</b>	
<b>7</b>	<b>-</b>	<b>1</b>	<b>4</b>	<b>22</b>	<b>32</b>	<b>2017</b>	

Source : The Global Findex Database 2017

As for the financial inclusion index related to the percentage of using an official financial institution account to receive wages for adults, it indicates an increase in the Gulf countries only,

as is the case in the previous indicators, and it is lowest in Iraq, reaching 3%, and as shown in Table below :-

Table 4 *the percentage of adults who use the official financial institutions account to receive wages in Iraq compared to some countries in the Arab world %*

<b>Palestine</b>	<b>Kuwait</b>	<b>Jordan</b>	<b>Iraq</b>	<b>Egypt</b>	<b>Algeria</b>	<b>UAE</b>	<b>The state /</b> <b>the year</b>
<b>6</b>	<b>50</b>	<b>11</b>	<b>3</b>	<b>10</b>	<b>8</b>	<b>66</b>	<b>2017</b>
<b>Libya</b>	<b>Lebanon</b>	<b>Morocco, West, sunset</b>	<b>Tunisia</b>	<b>the two seas</b>	<b>Saudi Arabia</b>	<b>The state /</b> <b>the year</b>	
<b>13</b>	<b>14</b>	<b>6</b>	<b>10</b>	<b>50</b>	<b>29</b>	<b>2017</b>	

Source : The Global Findex Database 2017

With regard to the indicator of the percentage of credit card ownership by adults in the Arab countries, we note from Table (5) that similar to the previous indicators, the Gulf countries lead in the ownership of credit cards by adults over the rest of the Arab countries, which recorded low rates, and Iraq was located in The lowest rank by 2%, and although recently the number of banking services has been increasing in Iraq, as well as the number of credit card owners, as it reached at the end of

2015 to 18053 cards attributed to the population density of the mentioned year reaching 1223 cards per One hundred thousand adults, while the discount card was also witnessing a continuous increase, as it amounted to 55,806 cards for the year 2015 attributed to the population density of the aforementioned year, reaching 3956 cards for every one hundred thousand adults, despite all that, it did not reach the level that raises rates Financial inclusion in Iraq :

Table 5 Percentage of adults who own a credit card in Iraq compared to some countries in the Arab world %

Palestine	Kuwait	Jordan	Iraq	Egypt	Algeria	UAE	The state the year
3	22	3	2	3	3	45	2017
Libya	Lebanon	Morocco , West, sunset	Tunisia	the two seas	Saudi Arabia	The state the year	
10	15th	-	7	30	16	2017	

Source : The Global Findex Database 2017

On the other hand, and to complete the picture about the features of financial inclusion in Iraq, it is necessary to measure the level of access to financial services, and this is done by knowing the banking density and banking spread, and based on what was mentioned in the Financial Stability Report for 2019, the Iraqi banking system It consists of (73) banks up to the aforementioned year, including (7) government

banks and (66) local and foreign private banks, the majority of which are commercial banks, whose number reaches (43) banks, then Islamic banks 27 banks, then specialized banks And there are (3) banks , and thus it is clear that the banking spread and banking density in Iraq are below the level of ambition, and this can be inferred through Table 6

Table 6 Banking Density and Banking Spread in Iraq for the Period 2015-2019

banking diffusion	banking density	Number of bank branches	Population (thousand people)	the year
2,31	43,24	854	36933	2015
2,29	43,74	866	37883	2016
2,27	44,05	843	37140	2017
2,26	44,16	865	38200	2018
2,25	44,25	888	39300	2019

Source: Central Bank of Iraq, Annual Financial Stability Report, 2019, p. 90

With regard to access to financial and banking services in Iraq, the Central Bank of Iraq has

sought to increase electronic payment services, in order to introduce the largest possible number

of individuals within the financial system. The number of ATM and POS devices has increased , and the number of ATM devices has reached (2.5) devices per 1000 km in 2019 and they are spread in malls, commercial centers, some government departments and borrowing headquarters, knowing that this percentage of ATM devices was the proportion of the population (per 100 thousand people) estimated at (4) 16) One device per 100,000 adults for the same year. As for POS devices , it amounted to (9.2) devices per 1000 km for the mentioned year, noting that this percentage of POS devices was proportional to the population (per 100 thousand people) estimated at (10.3) devices per 100 thousand adults for the same year And these percentages are considered low when compared to the global level and even at the level of the Arab region

The previous quick reading of the indicators of financial inclusion in Iraq, and after comparing the same ratios with their counterparts in different Arab countries in terms of economic and political conditions, it is clear that Iraq is classified among the Arab countries with low rates of financial inclusion. Based on the foregoing, we can say that there are obstacles and challenges that impede the requirements of digital transformation of financial inclusion in Iraq, as it is one of the countries with low rates of financial inclusion

The third axis / challenges of digital financial inclusion and investigation requirements in Iraq

First: Challenges :-

The digitization process in Iraq faces great challenges that mitigate its effective effects, especially in the field of improving the standard of living of individuals through financial inclusion applications, and at the forefront of those challenges are

· The inability of the organizational structures of the financial sectors to achieve increases in access to finance due to the incompleteness of the developed structure of these structures

- Reduction in the level of competition between financial and banking institutions

- The absence of clear and specific financial and legal classifications for microfinance institutions, as most of them are registered as non-governmental organizations, which impedes the development of a supervisory and control framework capable of following up the performance of these institutions, and therefore it is difficult to determine the extent of their ability to obtain the necessary financial resources To conduct its various operations by attracting deposits or borrowing

- The slowdown in the improvement in the activities of non-bank financial institutions, specifically savings institutions and investment funds, and the weakness of debt instruments and markets, especially bonds and sukuk markets, and this may result in an increased dependence on bank credit that guarantees short-term resources and It is not suitable to meet the long-term financing needs of individuals and companies

- The increasing rates of poverty and unemployment, the spread of financial illiteracy, ignorance of banking services and a low level of banking awareness

In order to find out the nature of the aforementioned challenges in Iraq, we will summarize them as follows :

1- Low level of financial culture and banking awareness

The rapid spread of financial inclusion depends on the level of financial culture and banking awareness in a society, as financial culture reflects the ability in a society or a country to use knowledge and skills to manage financial resources to achieve what is known as financial happiness during life . The financial culture consists of six dimensions, including: (education, profession and income, money management, savings and investment, banks, risk management and insurance, taxes) As for Iraq's ranking in terms of the financial knowledge index, the percentage of the financial knowledge index in it is about 27% , which is considered low at the global and Arab levels, and this can be inferred through the following table

Table 7 Ranking of Iraq among Arab countries in the Financial Knowledge Index

Financial Knowledge Index %	The state	rank in arabic	Financial Knowledge Index %	The state	rank in arabic
27	Egypt	9	45	Tunisia	1
27	Iraq	10	44	Kuwait	2
25	Palestine	11	44	Lebanon	3
24	Jordan	12	40	the two seas	4
21	Sudan	13	38	Arab Emirates	5
15th	Somalia	14	33	Algeria	6
13	To whom	15th	33	Mauritania	7
			31	Saudi Arabia	8

Source : <http://www.uabonline.org/ar/research/financial>

It is worth noting that about 3.5 billion people in the world lack basic knowledge, and only about 34% of the adult population has adequate financial knowledge, and less than that in the Arab region, as this percentage reaches 30%, and in Only 5 Arab countries exceed the global average, while the gap in financial awareness ratios between the sexes in the world reaches 5%, and this percentage at the level of Arab countries is 8% . Which constitutes a serious challenge on the way to digital transformation of financial inclusion at the level of Arab countries in general and Iraq in particular. Because the extent to which both providers and recipients of financial services understand the importance of financial inclusion is an influential factor and an important challenge to the spread of financial inclusion

2- Weak financial technology infrastructure

The financial technology sector plays an important and active role in the field of global and Arab financial systems, as many of the needs and services related to various financial operations have become largely competing with traditional financial services in terms of accuracy, speed and cost. It also contributes to addressing the critical challenges facing the promotion of financial inclusion, through innovations that help provide financial services to the large segment of the population that does not deal with the banking system, and facilitates the availability of alternative sources of

financing for small and medium enterprises. Financial technology also contributes to achieving financial stability, through the use of technology to ensure compliance with regulations and risk management, and can facilitate foreign trade and remittances, by providing efficient and cost-effective mechanisms for cross-border payments, and the use of electronic payment methods can raise the efficiency of government operations. . Most fintech companies operate under the banner of Empowering the Unbanked . The true measure of the success of financial technology as an industry or sector does not lie in the development of another tool to provide convenience to bank customers, but in the extent of its contribution to enhancing financial inclusion for financially excluded groups and improving access to financing, especially for small, medium and micro enterprises Within this framework : Iraq still scores one of the lowest levels in the world in terms of financial inclusion, as the previous indicators in tables 1, 2, 3, 4 and 5, through which it is clear that Iraq is among the countries most deprived of Financial services and products worldwide, and this may be due to several reasons, most notably poverty, financial ignorance, and difficulty in reaching rural areas, in addition to the spread of the informal economy, not to mention the unfavorable political and security conditions that Iraq experienced. Accordingly, it can be said that the lack of technological infrastructure constitutes a major obstacle in the path of digital transformation of financial inclusion in Iraq

### 3- The decline in the role of the private sector in supporting financial services

The contribution of the private sector in supporting the movement of financial inclusion in any economy means that there will be more flexibility in the provision of financial services provided that this is framed by the rules of dealing by the regulatory authorities. As long as there is a decline in the general performance of the aforementioned sector in Iraq, this means that its ability to perform the role required of it in the field of providing financial services continues to be weak. The biggest challenge remains in activating the role of the private sector in the overall economic activity in the mentioned countries, and then achieving benefit from it in enhancing the requirements of digital transformation that supports financial inclusion in them.

### 4- Continuing macroeconomic problems and lack of economic stability

Macroeconomic problems, foremost of which are inflation and unemployment, are a significant obstacle to facing the digital transformation of financial inclusion. As the high rates of inflation and the consequent continuous increase in prices mean the society's inability to save, and this in turn will be accompanied by negative effects on the interest rate, and a continuous loss in the value of money, in addition to that, real interest rates push towards encouraging savers. Potential people are looking for alternative, non-banking ways to achieve the desired benefits. As for unemployment, it is among the economic problems that burden the majority of societies, especially Iraq, because of the resulting spread of the phenomenon of poverty that afflicts those societies and pushes towards the strenuous pursuit to provide the basic requirements for the continuation of life without having any interest in financial transactions in light of that in most cases. The aforementioned economic problems and many others draw the features of a state of economic instability in the concerned economy, and this is a complex and extremely complex challenge that hinders issues of digital transformation and financial inclusion alike.

### 5- Weak levels of competition between financial and banking institutions and high

credit concentration rates, whether at the level of credit provided to individuals or companies.

The presence of a strong banking infrastructure, high levels of financial culture, depth of credit information, advanced ranks in business environment indicators, etc., are all essential conditions for making banking competition a catalyst for digital transformation in financial inclusion in any country. The scientist. But what is recorded in reality is a clear decline in the banking infrastructure, weak levels of financial culture, lack of clarity in credit information, and the late ranks in the indicators of the business environment in Iraq. All of this constituted a challenge in the field of digital transformation and financial inclusion.

### 6- Absence of a specific financial and legal classification for microfinance institutions

Microfinance institutions are registered as non-governmental organizations (NGOs), and therefore it is difficult to establish a supervisory framework on the regulation of microfinance, whether by the Central Bank of Iraq, or from an independent supervisory financial authority, and these obstacles have reduced transparency in the activity of the microfinance sector and restricted its ability to mobilize the financial resources necessary for its various operations by attracting deposits or borrowing.

### 7- The slow development of non-banking financial institutions:

The slowdown in the development of non-banking financial institutions, in particular, contractual savings institutions and investment funds, and the limited local debt instruments and markets, in particular bond and sukuk markets, leading to increased dependence on bank credit, which provides mainly short-term resources that are not suitable to meet the medium and long-term financing needs of individuals and companies.

### 8- Lack of political and security stability:

What Iraq has witnessed in terms of political fluctuations and dangerous security repercussions and the rule of the situation is as close as possible to political and security instability. All of this resulted in a lack of attention to the issues of financial inclusion and its requirements for digital transformation. As a

result, this matter was considered one of the most important challenges of digital transformation towards financial inclusion in it

#### Second: Investigation Requirements :

In light of the challenges facing digital financial inclusion in Iraq, it has become very necessary to determine the nature and size of the necessary requirements to avoid these challenges and achieve the required financial inclusion in order to reach the higher goals represented by eliminating poverty, alleviating unemployment, facilitating the completion of transactions and improving the standard of living. And the advancement of the level of projects, whatever their size, and among those requirements we mention the following :

1- Mobilizing all the energies and efforts owned by the Iraqi government to employ them towards enhancing financial inclusion, and in a way that contributes to reaching all segments of society, especially the marginalized and those with limited income, which helps in eliminating all manifestations of poverty and the dangerous repercussions resulting from it.

2- The necessity for the Central Bank of Iraq and governmental and private banks to spread the culture of financial inclusion and banking awareness in society in all its consumer and investment categories, and to adopt a series of programs that ensure the transfer of savings to the official financial system and savings through an account with one of the official financial institutions, and This step will stimulate financial inclusion to the level of ambition.

3- It is necessary to take advantage of what many countries of the world have achieved in this field, and to simulate them by establishing banks similar to those banks that have succeeded in applying digital financial inclusion at the global level.

4- Far and remote cities that lack banking services should not be neglected by opening small bank branches in them, provided that they are obligated to employ the requirements of modern digital technology (even if this is at the lowest possible level), all in order to deliver financial services to The largest possible segment of society, which contributes to raising the levels of financial inclusion

5- Obligating banks to adopt electronic services for all segments of society, and adopting the means that encourage them to use them widely.

6- Supporting all types of large, medium and small investments by diversifying the loans granted to them, and reducing the interest on those loans.

### Conclusion

The challenges faced by digital transformation in the field of financial inclusion at the level of Iraq, still represent an obstacle to the smooth path of the movement of financial inclusion in it, which constitutes a major obstacle to facing the challenges of poverty and unemployment, especially since it is classified among the Arab countries with low financial inclusion, which Most of them suffer from high rates of poverty in addition to other economic problems, which makes an urgent need to expand the scope of financial inclusion in it, and to provide loans and support more effectively for small and medium enterprises due to their important role in development and job creation. And all of this cannot be without real confronting each of the aforementioned challenges, and treating it in a way that eliminates it or mitigates its severity to ultimately advance the level of digital financial inclusion in Iraq.

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