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ARDL Framework for Analyzing the Impact of Financial Inclusion on Economic Growth in Iraq

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Abstract: The purpose of this study is to examine the connection between Iraq's economic growth and financial inclusion from 2008 to 2022. To find both short- and long-term associations between the variables used in this research, unit root tests, error correction models, and cointegration approaches are employed. Overall, the empirical findings suggest that a substantial portion of the rise in economic growth is attributed to the banking sector. According to the study, there was a negative correlation between Iraq's GDP growth throughout the study period and the variables of banking density and Banking spread, which represent aspects of financial inclusion. This is primarily due to a lack of sound banking planning that focused on growing the bank branch network and distributing its services throughout the nation's largest geographic area. This had a detrimental effect on the ability to offer these banking services to as many people as possible. The high level of public and private sector confidence in the banking system was reflected in the positive correlation between long-term economic growth and the variables of loans and deposits, which indicate the dimensions of financial inclusion. This suggests that the utilization of these banking and financial services enhances the banking industry's contribution to stimulating economic activity, which in turn fosters economic growth.

Keywords: Financial Inclusion, Economic Growth, Iraq, ARDL

1. Introduction

This initiative focuses on expanding financial inclusion by leveraging mobile and internet channels to deliver safe, affordable, and user-friendly financial services across multiple jurisdictions. We propose a collaborative, multi-stakeholder approach to harmonize regulatory frameworks, ensure data privacy, and promote interoperable payment ecosystems [1]. Financial inclusion is crucial for economic stability and equitable opportunity for individuals and society [2]. This was followed by significant technological developments in the financial sector, reinforcing the need for a national financial inclusion strategy. The plan aims to provide a package of financial services to low-income individuals and small and medium-sized enterprises.

The financial sector has subsequently witnessed significant technological developments, reinforcing the need for a national framework for financial inclusion. The plan aims to deliver a range of financial services to low-income individuals and small and medium-sized enterprises [3]. Governments worldwide place a great deal of importance on financial funding to support economic growth.

Emerging nations advocate for financial inclusion as a strategy to alleviate poverty and enhance living conditions [4]. The growth of the banking sector has played a key role in the progress of the economy since it has made it easier to trade, spend, and use resources

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[5]. Financial inclusion means that everyone, regardless of their beliefs, financial condition, or wealth, can meet their financial needs with private bank and other financial products and services. Financial inclusion means everyone has the necessary funds to work and fulfill economic and social goals. This approach is crucial for comfortable living and efficient financial management [6]. Although financial inclusion has made great strides, little is known about its long-term impacts on the economy and society beyond the short-term benefits of improving financial stability and reducing poverty [7]. This study employs an ARDL-based analysis of time series spanning 2008-2022 to illuminate the crucial relationship between financial inclusion and economic growth in developing economies, with Iraq serving as a representative example. What are the immediate and enduring impacts of financial inclusion components—specifically banking penetration, banking density, loans, and deposits—on economic growth, as measured by GDP, within the Iraqi economy? Policymakers and researchers can utilize the findings to formulate both short-term and long-term stabilization initiatives and economic development strategies. Temporal horizons are crucial to econometric modeling, hence the ARDL model was chosen. An economist group was formed in 2001 to determine short- and long-term parameters, adjustment speed, and long-term equilibrium. This approach can help us choose the proper model, use it, make conclusions, and evaluate how quickly the economy has to adjust to return to long-term growth following a negative shock. We can use this process to select the right model, determine how to utilize it, draw conclusions based on it, and determine how quickly the economy needs to adjust to return to a path of long-term growth after a negative shock [8]. The rest of the study sections are arranged as will be explained below.:

Section Two discusses the research's theoretical basis, and Section Three describes the study's methodology and approach. Section Four presents the study's real-world results, and Section Five concludes the study by summarizing the findings and providing recommendations.

Theoretical Background of Research

This paper defines financial inclusion, evaluates measuring methods, and analyzes its implications on economic growth.[9] Researchers concur that incorporating low-income populations into the formal banking system is vital for promoting economic growth, with particular emphasis on countries [10]. This makes it easier for people to access local loans and financial resources, which helps the economy grow. This makes it easier to generate income, which in turn stimulates economic activity. [11] It is also well known that financial inclusion can transform society by providing people with the means to afford education, fund worthwhile projects, and enhance their own skills. [12] Financial inclusion helps small enterprises mitigate economic shocks through risk management and asset pooling, improving quality of life for individuals and families. [13]

Financial Inclusion: Concepts and Dimensions

Access to responsible, reasonably priced, and easily accessible financial services, including loans, insurance, bill payment, and savings, is made possible for both individuals and enterprises through financial integration.[14] For the economy to be more stable, people, especially those with low incomes, need to have access to banking services.[7] One of the main goals of these initiatives is to help those who do not have enough money to open an account with a bank so that they can take part in the economy on a larger scale [15]. Financial inclusion is a multifaceted concept that encompasses both the supply side, which focuses on ensuring that everyone has access to financial services, and the demand side, which examines how individuals utilize these services.[16] The World Bank defines access to financial services as the absence of both price and non-price barriers to their utilization. On the other hand, the percentage of people who have an account with a financial institution is used to measure financial inclusion.[17] This

highlights the importance of both accessibility and utilization of financial services in assessing the level of financial inclusion within an economy. [18]

Theories and Signs of Economic Growth

Economic growth means an increase in the production of goods and services in a particular economy over a specific period of time, and is measured by the percentage change in real gross domestic product. [19] This technique demonstrates an improvement in the country's financial situation, which is vital for boosting the economy's cash flow. [20] This connection is crucial for developing nations to understand because policies that make it easier for people and businesses to get loans can boost national economies and spur growth.[21] A crucial measure of economic growth is the annual percentage rise in gross domestic product (GDP). A country's gross domestic product (GDP) is the monetary worth of all final goods and services produced within its borders during a certain time period.[22] The primary goal of boosting economic growth is to improve society, encompassing the raising of living standards, the generation of employment opportunities, and the enhancement of people's quality of life. [23]

Nexus between Financial Inclusion and Economic Growth

The relationship between financial inclusion and economic growth is reciprocal and synergistic, with each one making the other better. Increasing the use and accessibility of financial services can boost the economy, and vice versa. An advanced financial system fosters economic growth by facilitating effortless saving, seamless investment, and efficient resource allocation to productive sectors. Thus, improving financial inclusion is a social imperative, productivity booster, and wealth distribution advocate. A mature economy helps its financial sector flourish; therefore, advanced financial systems are necessary for economic growth. [24] By distributing risk and reducing reliance on unofficial financial channels-which are less effective and more susceptible to shocks-financial inclusion can also boost economic growth.

Additionally, because it facilitates the movement of capital and improves its utilization, financial development-which includes financial inclusion- is critical to the economic progress of emerging nations. [25] Due to inadequate infrastructure and a reliance on cash transactions, Iraq's financial system requires focused efforts on financial literacy and access measures. [26] Although mobile commerce could be beneficial for Iraq, several issues are hindering its growth, particularly in terms of adoption and the current state of the technology infrastructure. [27]

The Iraqi economy, which is heavily reliant on oil, faces significant challenges in generating new revenue streams and strengthening its private sector.[28] It requires significant strengthening of financial institutions to transition toward a more diversified economy that relies less on oil revenue.[29] This includes supporting investment alternatives that enhance financial performance, particularly in the banking sector, to stimulate economic activity and reduce reliance on oil. [30] The banking sector's performance is important for the economy to grow. [31] Small firms and individuals often struggle to obtain credit, which prevents banks from diversifying and creating jobs. [32]

A lack of trust, as well as a lack of financial literacy in formal financial institutions, which has been ongoing for decades due to instability and weak financial infrastructure, exacerbates the dependence on cash. [33] We need a comprehensive plan to enhance digital payment systems, expand banking services to underserved and remote areas, and educate people on effective financial management.[34] Financial inclusion efforts should focus on providing specialized services and targeting specific demographic groups, including individuals with disabilities. [35].

2. Materials and Methods

The study's methodology aimed to thoroughly examine the relationship between financial inclusion and economic growth within Iraq's unique environment, encompassing

the country's socioeconomic and political characteristics. This method combines quantitative and descriptive approaches to help understand the complex aspects of financial access and its broader economic impact. The study employs an inductive technique, drawing on current research and actual data to examine aspects of the Iraqi economy [28]. We obtained the data from reputable international organizations, such as the World Bank and the Central Bank of Iraq, to ensure its accuracy and trustworthiness. This helped us obtain a comprehensive picture of financial inclusion indicators for various groups of people [21]. This careful approach to gathering information lays a strong foundation for examining the impact of financial inclusion measures on Iraq's economic growth. In this study, the independent variable is financial inclusion indicators, and the dependent variable is economic growth, which is measured by the real GDP growth rate. The G20 leaders agreed with the Global Alliance for Financial Inclusion's ideas for a basic set of financial inclusion metrics. These indicators pertain to three principal dimensions: [36].

- a. Access to financial services (the ability to use financial services from formal institutions)
- b. Use of financial services (the extent to which customers use the financial services provided by financial institutions)
- c. Quality of financial services

The Central Bank of Iraq considers two key factors when evaluating financial inclusion indicators in Iraq: the ease of access to financial services and their frequency of use. The third dimension, quality, is not included because there are no standards or data. We used banking density and banking penetration to illustrate the ease of access to financial services. Banking penetration is calculated as the number of bank branches per total population. To get the banking density, we divide the total population (1,000 people) by the number of bank branches [37]. When it comes to the dimension of financial service use, loans and deposits are the variables that show it.

Do the evaluation. The Pesaran & Shin (2001) ARDL approach was used to analyze variable cointegration. They claim that integrated variables can respond to any disturbance that may undermine long-term prediction. The error correction model, employing the ARDL methodology, illustrates the degree to which short-term shocks influence the variables. On the other hand, the changes that happen when disturbances are fixed within a year are also measured [38]. ARDL has many benefits, one of which is that it does not need the integration of all variables in a uniform order. It can be utilized irrespective of whether the variables are first-order integrated, zero-order integrated, or a hybrid of both. However, second-order variables cannot be used [39].

Some researchers Check that adding any second-order variable causes the model to fail [40]. Consequently, unit root tests are recommended to confirm that the model is free from any second-order variables. The second benefit of the ARDL method is that it enables you to determine how quickly the system will return to long-term equilibrium after a short-term external disturbance. The ARDL methodology was selected for cointegration due to its appropriateness for studies with relatively small sample sizes, in a similar vein, Pesaran and Shin (2001) concede that this methodology yields more accurate and adaptable short- and long-term coefficients. [8] In accordance with the literature and the study's objectives, the econometric model used is described, which statistically demonstrates the relationships between the variables employed. The dependent variable is economic growth, represented by GDP at current prices in the local currency, symbolized by the symbol (Y). The independent variable includes financial inclusion indicators, as follows:

Bank density, denoted by (X_1)

Banking penetration, denoted by (X_2)

Loans, denoted by (z)

Deposits, denoted by (z_1)

Based on the theoretical framework of the study, it is assumed to test the following functional relationship:

$$Y = a + (B_1X_1) + (B_2X_2) + (B_3z) + (B_4z_1) + u_t$$

Where Y stands for GDP, (X_1 X_2 , z , z_1) represent indicators of financial inclusion. Appendix (1) shows the time series data for the variables of the standard model.

3. Results and Discussion

This section presents real data derived from the econometric models and estimation methods mentioned above. Analyzing the correlation between economic development and financial inclusion in Iraq. It demonstrates the importance of making it easier for people to access funds, thereby supporting Iraq's economic growth. A clear explanation is provided of how financial participation measures impact GDP [41]. The empirical results are presented in tables with detailed explanations, as they are important for promoting economic growth in Iraq.

Testing the stability of study variables:

The stationarity of variables in time series analysis is distinctly evident. The non-stationarity of estimated variables may result in erroneous test outcomes, as indicated by time series economics research. All examined variables were assessed for unit root issues, as the time-series data demonstrate this complication. This guarantees the integrity of the cointegration test by offering a dependable and effective evaluation of time series [38]. Multiple tests were used, including the extended Dickey-Fuller test, which assumes an autoregressive AR process creates a time series. The Phillips-Perron test operates under the broader premise that time series are generated by an autoregressive integrated moving average (ARIMA) process. As a result, the Phillips-Perron test outperforms the extended Dickey-Fuller test in terms of testing capabilities and accuracy, particularly when the sample size is limited [42]. As in the case of this study, the Phillips-Perron test was adopted, and Table No. (1) shows the results obtained from the test for the variables under study.

Table 1. Phillips–Perron Test Results.

PP		At Level				
	Variables	X_1	X_2	z	z_1	Y
With constant	t-Statistic	-1.3710	-1.5203	-0.4933	-0.3089	-0.4299
	Prob.	0.5904	0.5165	0.8847	0.9168	0.8967
	Result	no	no	no	no	no
With constant & Trend	t-Statistic	-3.0624	-3.5060	-3.0080	-1.9398	-1.6068
	Prob.	0.1249	0.0479	0.1388	0.6212	0.7785
	Result	no	**	no	no	no
Without constant & Trend	t-Statistic	-0.1284	-0.2848	2.1014	1.0050	1.2870
	Prob.	0.6353	0.5792	0.9909	0.9152	0.9483
	Result	no	no	no	no	no
At First Difference						
	Variables	$d(X_1)$	$d(X_2)$	$d(z)$	$d(z_1)$	$d(Y)$
With constant	t-Statistic	-7.4838	-7.4843	-8.3930	-7.6410	-7.7205
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000
	Result	***	***	***	***	***
With constant & Trend	t-Statistic	-7.8407	-7.9010	-8.3068	-7.8217	-7.7618
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0000
	Result	***	***	***	***	***
	t-Statistic	-7.5498	-7.5498	-7.5498	-7.5498	-7.5498

Without constant & Trend	Prob. Result	0.0000 ***	0.0000 ***	0.0000 ***	0.0000 ***	0.0000 ***
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Notes: Note: (*) Significant at the 10%; (**) Significant at the 5%; (***) Significant at the 1% and (no) Not Significant.

Source: Author's computation using E-views-12 statistical package

The table above shows that the variables under study are not stationary at the level, except for the variable (X_2), which was stationary at a 5% significance level in the presence of a constant and a general trend. In contrast, all variables became stationary at the first level of analysis. Since the ARDL model methodology relies on stable data at the first difference or a combination of the first difference and the level, provided that there are no stable variables at the second difference (I_2), the ARDL test was conducted. The results indicated the significance of the F-statistic. As for the Durbin-Watson statistic value of (1.706412), it indicates that the model is free of the problem of autocorrelation.

Then, the bounds test for cointegration was conducted, which compares the null hypothesis-stating that there is no long-run relationship between the variables-with the alternative hypothesis-stating that a long-run relationship exists between the variables. The existence of a cointegration relationship is confirmed by using the (F) statistic and comparing it with the upper and lower limits. According to the rules, the null hypothesis is accepted if the estimated (F) statistic is less than the critical values of the lower limits, and the alternative hypothesis is accepted when the value of the estimated (F) statistic is greater than the upper limits [38].

After conducting the test, it was shown, as in Table (2), that the value of the ((F)) statistic is (11.44649), which is greater than all the upper and lower limits, which means the existence of a cointegration relationship between the variables under study and demonstrates the validity of the long-term relationship between economic growth and financial inclusion indicators in the model. This confirms that the variables move together in the long run and that any short-term changes will return to equilibrium in the long run.

Table 2. ARDL Bounds Test for co-integration results.

Test statistic	Value	K	Decision
F- statistic	11.44649	4	Reject H_0 and accept H_1 .
Critical Value Bounds significance	I_0 Bounds	I_1 Bounds	Series are co-integrated.
10%	2.2	3.09	
5%	2.56	3.49	
2.5%	2.88	3.87	
1%	3.29	4.37	

Source: Author's computation using E-views-12 statistical package

Estimation of the error correction model according to the ARDL methodology

Table 3 shows that the coefficients (X_1) and (X_2), which represent banking density and banking penetration, indicate a statistically insignificant negative effect on Iraq's long-term economic growth during the study period. The negative signs of both coefficients indicate that banking density and banking penetration had a negative impact on Iraq's economy during the study period. Because the two variables depend on the number of bank branches and the population of Iraq, the country needs to add more bank branches and spread them out more evenly. The banking system in Iraq is generally weak, which has a negative impact. This is because there is insufficient infrastructure to establish a robust banking system that supports economic growth. This has made it very hard to get banking services.

Additionally, many people are unfamiliar with financial matters or cultural nuances. The Central Bank of Iraq has recently attempted to establish numerous new banks, expand the branches of existing banks (both government and private), and initiate various new programs. However, none of these efforts have led to any growth that fits with the goal. This finding is consistent with a 2024 study by Al-Dhabawi et al. [37] Lafta & Lafta (2019) found that there are 78 banks in Iraq, including seven government banks, 24 local commercial banks, 29 local Islamic banks, and 18 branches of international banks. One of the factors that makes it more difficult for people to access financial services is that these banks are currently only available in four governorates: Baghdad, Basra, Erbil, and Najaf [43]. This means that the other governorates cannot get financial services. The coefficient (z), which represents loans, has a positive impact on economic growth throughout the study. The p-value of 0.02 indicates that the effect is statistically significant at the 5% level, despite being small. This study shows that a 1% increase in loans leads to a 1.5% increase in economic growth, assuming all other factors remain constant. A 1% increase in deposits boosts economic growth by 4%, which is statistically significant at the 5% level.

Table 3. ARDL Long-run estimated results.

Variable	coefficient	Std. Error	t-statistic	p-value
X1	-2.603086	16.78493	-0.155085	0.8780
X2	-4227.350	10612.52	-0.398336	0.6938
z	1.564247	0.670555	2.332765	0.0280
Z1	4.105807	0.283121	14.50196	0.0000
C	304.6393	843.3957	0.361206	0.7210
EC = (Y) - (-2.6031*X1 -4227.3498*X2 + 1.5642*Z +4.1058*Z1 + 304.6393)				

Source: Author's computation using E-views-12 statistical package

From Table 4, we find the short-term impact of financial inclusion indicators on economic growth in Iraq. Table 4 provides a summary of the model's short-term characteristics during its transition to equilibrium. As expected, the lagged error term coefficient, or adjustment speed (-1.7), has a negative sign and is statistically significant at a 1% significance level, indicating that the variables gradually return to their normal state after a shock occurs. Since its absolute value is greater than one, this means that the model returns to equilibrium within a short period. The short-term coefficients of the banking density and banking penetration variables indicate that they have a negative impact on economic growth and are statistically significant at a 5% significance level.

Table 4. ARDL short-run estimated results.

Variables	Coefficients	Std. error	t-statistic	P - value
D (Y (-1))	1.011924	0.146015	6.930258	0.0000
D (Y (-2))	1.011924	0.146015	6.930258	0.0000
D (Y (-3))	0.971782	0.138873	6.997655	0.0000
D(Y (-4))	0.150684	0.102456	1.470718	0.1538
D(Y (-5))	0.212351	0.098747	2.150444	0.0414
D(Y (-6))	0.212351	0.098747	2.150444	0.0414
D(X1)	-35.64794	12.89776	-2.763886	0.0106
D(X1(-1))	-30.70294	12.79329	-2.399925	0.0242
D(X1(-2))	-30.70294	12.79329	-2.399925	0.0242
D(X1(-3))	-30.13005	9.802705	-3.073646	0.0051
D(x2)	-20061.17	7902.637	-2.538541	0.0177
D(x2(-1))	-10854.54	7885.658	-1.376491	0.1809
D(x2(-2))	-10854.54	7885.658	-1.376491	0.1809

D(x2(-3))	-10280.58	5158.611	-1.992897	0.0573
D(z)	-4.603704	1.457129	-3.159435	0.0041
D(z (-1))	-6.896765	1.617816	-4.263010	0.0003
D(z (-2))	-6.896765	1.617816	-4.263010	0.0003
D(z (-3))	-6.430292	1.562931	-4.114252	0.0004
D(z1)	5.730487	0.413153	13.87014	0.0000
D(z1(-1))	-2.531356	0.605733	-4.178994	0.0003
D(z1 (-2))	-2.531356	0.605733	-4.178994	0.0003
D(z1 (-3))	-1.949477	0.476344	-4.092578	0.0004
CointEq (-1)	-1.745055	0.192224	-9.078257	0.0000

Source: Author's computation using E-views 12 statistical package.

R-squared= 0.896692, Adjusted R-squared = 0.820933, F-statistics= 50.95985

Prob.(F-statistics) = 0.00000, DW statistics= 1.706412

Econometric diagnostic tests

A number of diagnostic tests were employed, including normality tests, serial correlation tests, heteroscedasticity tests, and specification error tests, to assess the reliability and stability of the variables and ensure that the required assumptions of the ARDL model were met. The residuals were examined for normal distribution, and the serial correlation of the regressed variables was verified to ensure that they did not exhibit any serial correlation. The validity of the model was also verified in terms of heteroscedasticity, using the cumulative sum of repeated residuals (CUSUM) test and the cumulative sum of squared residuals (CUSUMASQ) to assess the reliability of the ARDL model. The results were presented in Table No. (5).

Table 5. Diagnostic Test Results.

Problem	Test	Probability	Conclusion
Normality	Jarque Bera	0.4230	Normality exists
Serial Correlation	Breusch- Godfrey LM test	0.2948	No Serial Correlation
Heteroscedasticity	ARCH	0.1813	No Heteroscedasticity
Specification error	Ramsey RESET	0.0845	Correctly specified

Source: Author's computation using Eviews-12 statistical package

The table indicates that the model residuals are normally distributed and do not exhibit any issues with multicollinearity, serial correlation, heteroscedasticity, or model specification error. The properties above are desirable for ordinary least squares models, so the estimated model is considered sufficiently defined. The CUSUM and CUSUMASQ tests shown in Figures (1) and (2) confirmed the accuracy of the estimated results and their adequacy for economic forecasting and decision-making.

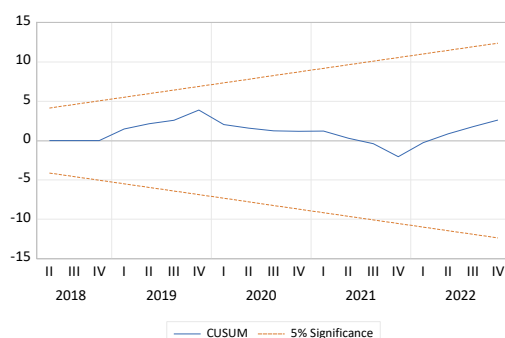


Figure 1. CUSUM Plot.

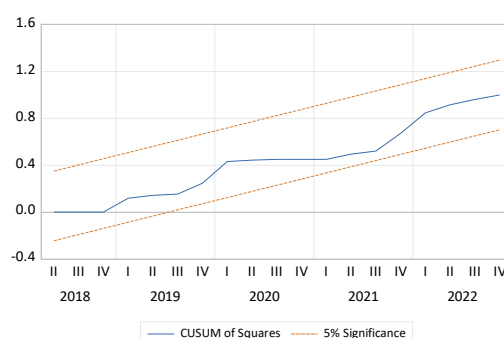


Figure 2. CUSUM of squares Plot.

4. Conclusion

The section concludes with suggestions and outcomes from both theoretical and applied research. The results that followed from the statistical evaluation of the study's hypothetical approach were:-

- a. Financial inclusion ensures improved access to financial and banking services for all individuals, especially those with limited income and small business owners. Access to these services leads to higher incomes and reduced unemployment in the future.
- b. Financial inclusion remains weak and does not achieve its intended purpose due to the concentration of banks in major urban centers, namely Erbil, Basra, Baghdad, and Mosul.
- c. Weak use of electronic payment services is due to the lack of familiarity of most members of society with how to use these services, in addition to the lack of initiatives by the monetary authority to spread banking awareness among members of society.
- d. The study conducted a detailed analysis of the impact of financial inclusion indicators on economic growth in Iraq during the period 2008-2022. It adopted the banking density and banking penetration indicators as indicators of access to financial inclusion, while loans and deposits represented the financial services usage index. The effects of these indicators were tested using the ARDL methodology. The experimental results indicated the presence of co-integration between the study variables.
- e. The results showed a negative relationship between the banking density index and banking penetration on economic growth during the period studied. This is due to inadequate banking planning, which hinders branch and service expansion across the country. This hurt the broadest possible part of society from receiving financial services.
- f. Results were positively correlated with loans and deposits. The public and private sectors have great confidence in the financial system. Utilizing these financial and banking services enhances the banking sector's ability to stimulate economic activity, ultimately leading to greater economic growth.

Recommendations

- a. Developing the infrastructure of the financial and banking sector in Iraq, especially in rural and remote areas. This infrastructure encompasses legislative rules, an increase in the number of bank branches and financial institutions, and improvements in the quality of banking services provided to achieve a more inclusive and stable financial system.
- b. Spreading financial literacy among segments of society, particularly youth. Promoting financial literacy is the first step towards financial inclusion. This includes launching initiatives targeting this segment, as well as investing in the widespread adoption of mobile phones by providing financial services through these devices at lower and more effective costs.
- c. Working to promote the spread of Islamic banks, which may be an effective solution for those excluded from the financial system for religious reasons.

- d. Prioritizing the access to financial services indicator, given its effective role in motivating the second indicator related to the use of these financial services. Access to banking services at the appropriate time and place, in the required quantity, and in an accessible manner encourages their use.
- e. The Central Bank should instruct banks to reduce the cost of opening an account and limit the routine procedures that are adopted, which ultimately lead to individuals being repelled from the banking sector, in addition to dividing the banking services provided to customers into various categories, so that the prices of banking services are in accordance with the category to which the service is provided. In this way, the provision of banking services is not limited to categories with limited income, but also includes those with high incomes, at lower prices, which is an attractive factor for dealing with government banks.

REFERENCES

- [1] S. H. Attia and H. F. Hussein, "Analysis of financial inclusion indicators in Iraq for the period 2014–2018," *Journal of the Center for Kufa Studies – University of Kufa*, no. 73, pt. 2, Jun. 2024, Iraq.
- [2] K. Shirono, "Understanding barriers to financial access: Insights from bank pricing data," *IMF Working Paper*, vol. 2024, no. 150, p. 1, 2024, doi: 10.5089/9798400280627.001.
- [3] B. Al-Abbas, R. Hamid, and B. B. A. Ezz El-Din, "Foundations and requirements of the strategy to enhance financial inclusion with reference to the Jordanian experience," *Maaref Journal*, vol. 14, no. 2, 2019.
- [4] A. Pushp et al., "Impact of financial inclusion on India's economic development under the moderating effect of internet subscribers," *Journal of Risk and Financial Management*, vol. 16, no. 5, p. 262, 2023, doi: 10.3390/jrfm16050262.
- [5] H. E. Hamdaoui and M. Cancelo, "The influence of the banking sector on economic growth and commodity prices: A panel data analysis of Spain, France, and Romania," *Commodities*, vol. 3, no. 2, pp. 168–181, 2024, doi: 10.3390/commodities3020011.
- [6] A. Hassan and S. C. A. Utulu, "Socio-economic and technological factors influencing financial inclusion among indigenous peoples in Bauchi State, Nigeria," *arXiv* (Cornell University), 2022, doi: 10.48550/arxiv.2209.11578.
- [7] D. K. Mishra et al., "Financial inclusion and its ripple effects on socio-economic development: A comprehensive review," *Journal of Risk and Financial Management*, vol. 17, no. 3, p. 105, 2024, doi: 10.3390/jrfm17030105.
- [8] Y. Abdulkarim and S. Muhammad, "The impact of government debt on economic growth in Nigeria," *Cogent Economics & Finance*, vol. 9, no. 1, pp. 1–19, 2021, doi: 10.1080/23322039.2021.1946249.
- [9] P. K. Ozili, "Financial inclusion research around the world: A review," *Forum for Social Economics*, vol. 50, no. 4, pp. 457–476, 2021, doi: 10.1080/07360932.2020.1715238.
- [10] D. T. Tulu, "Inclusive financing in developing countries: A systematic review," *Journal of World Economic Research*, 2023, doi: 10.11648/j.jwer.20231201.12.
- [11] V. Singh and B. Pushkar, "A study on financial inclusion: Need and challenges in India," *SSRN Electronic Journal*, 2019, doi: 10.2139/ssrn.3323805.
- [12] W. A. Mossie, "Financial inclusion drivers, motivations, and barriers: Evidence from Ethiopia," *Cogent Business & Management*, vol. 10, no. 1, 2023, doi: 10.1080/23311975.2023.2167291.
- [13] M. Simatele and L. Maciko, "Financial inclusion in rural South Africa: A qualitative approach," *Journal of Risk and Financial Management*, vol. 15, no. 9, p. 376, 2022, doi: 10.3390/jrfm15090376.
- [14] N. Umer et al., "Impact of financial literacy, cognitive abilities, and demographic characteristics on financial inclusion," *Research Journal for Societal Issues*, vol. 5, no. 2, p. 97, 2023, doi: 10.56976/rjsi.v5i2.95.
- [15] A. Kumar and H. Gupta, "Financial inclusion and farmers: Association between status and demographic variables," *Int. J. Recent Technol. Eng.*, vol. 8, no. 4, p. 5868, 2019, doi: 10.35940/ijrte.d8515.118419.

- [16] F. Khan, M. A. Siddiqui, and S. Imtiaz, "Role of financial literacy in achieving financial inclusion: A review, synthesis and research agenda," *Cogent Business & Management*, vol. 9, no. 1, 2022, doi: 10.1080/23311975.2022.2034236.
- [17] B. Er and M. Mutlu, "Financial inclusion and Islamic finance: A survey of Islamic financial literacy index," *Int. J. Islamic Econ. Finance Stud.*, vol. 3, no. 2, 2017, doi: 10.25272/j.2149-8407.2017.3.2.02.
- [18] A. Hakimi, H. Saidi, and L. Adili, "Does financial inclusion affect non-performing loans and liquidity risk in the MENA region? A comparative analysis between GCC and non-GCC countries," *Economies*, vol. 13, no. 5, p. 143, 2025, doi: 10.3390/economies13050143.
- [19] R. Kashyap, "Financial services, economic growth, and well-being," *SSRN Electronic Journal*, 2013, doi: 10.2139/ssrn.2431082.
- [20] A. Sharma, N. Das, and S. P. Singh, "Causal association of the entrepreneurship ecosystem and financial inclusion," *Heliyon*, vol. 9, no. 3, 2023, doi: 10.1016/j.heliyon.2023.e14596.
- [21] L. C. García, E. B. Del Brío, and M. L. Oscanoa-Victorio, "Female financial inclusion and its impacts on inclusive economic development," *Women's Studies International Forum*, vol. 77, p. 102300, 2019, doi: 10.1016/j.wsif.2019.102300.
- [22] C. D. Fouthe and P. A. Ndedi, "Analyzing factors affecting economic growth within CEMAC countries," *SSRN Electronic Journal*, 2017, doi: 10.2139/ssrn.2986075.
- [23] L. M. Batrancea, M. M. Rathnaswamy, and I. Bătrâncea, "A panel data analysis of economic growth determinants in 34 African countries," *Journal of Risk and Financial Management*, vol. 14, no. 6, p. 260, 2021, doi: 10.3390/jrfm14060260.
- [24] V. Bhandari and V. Mohite, "Banking outreach: A geographic and demographic analysis for countries of the Gulf Cooperation Council," *Emerging Economy Studies*, vol. 6, no. 2, p. 214, 2020, doi: 10.1177/2394901520977459.
- [25] D. A. Ogunlokun and L. A. A., "Effect of bank financial intermediation on agricultural performance in Nigeria," *South Asian Res. J. Bus. Manag.*, vol. 3, no. 1, p. 1, 2021, doi: 10.36346/sarjbm.2021.v03i01.001.
- [26] N. H. Neama, R. H. Abbood, and S. A. S. Aref, "Financial technology and its role in the Iraqi banking industry: Analyzing study for selected private banks of Iraq," *Open J. Bus. Manag.*, vol. 11, no. 4, p. 1577, 2023, doi: 10.4236/ojbm.2023.114087.
- [27] A. M. Sahi, "Analysis of the main factors affecting M-commerce adoption in Iraq," *arXiv* (Cornell University), 2019, doi: 10.48550/arxiv.1902.06682.
- [28] S. S. Rahim and S. N. Ali, "The role of Iraqi trade policies in stimulating productive sectors to grow for the period 2003–2019: An analytical study in light of the Malaysian experience," *J. Econ. Admin. Sci.*, vol. 27, no. 129, p. 99, 2021, doi: 10.33095/jeas.v27i129.2179.
- [29] E. Al. Yasiry, "Post-2003 war: The US' failure in Iraq's political and economic restructuring," *J. Sci. Pap. Soc. Dev. Sec.*, vol. 10, no. 5, p. 3, 2020, doi: 10.33445/sds.2020.10.5.1.
- [30] M. S. Ahmed and G. A. Hussein, "The impact of investment decisions on financial performance: An empirical study in the banking sector of Iraq," *Int. J. Bus. Manag. Econ. Rev.*, vol. 5, no. 1, p. 154, 2022, doi: 10.35409/ijbmer.2022.3364.
- [31] S. H. Lateef and A. T. Mohammed, "Liquidity and banking performance and their impact on the profits of the banking sector in the Iraqi stock exchange for the period 2015–2018," *Rev. Gestão Inovação Tecnol.*, vol. 11, no. 4, p. 4838, 2021, doi: 10.47059/revistageintec.v11i4.2507.
- [32] V. K. Nehru, "Developing Myanmar's finance sector to support rapid, inclusive, and sustainable economic growth," *SSRN Electronic Journal*, 2015, doi: 10.2139/ssrn.2655617.
- [33] E. Abdu and M. Adem, "Determinants of financial inclusion in the Afar region: Evidence from selected woredas," *Cogent Econ. Finance*, vol. 9, no. 1, 2021, doi: 10.1080/23322039.2021.1920149.
- [34] S. B. Naceur, T. Beck, M. Belhaj, and A. Barajas, "Financial inclusion: What have we learned so far? What do we have to learn?," *IMF Working Paper*, vol. 2020, no. 157, p. 1, 2020, doi: 10.5089/9781513553009.001.
- [35] L. Puli, N. Layton, D. Bell, and A. Z. M. Shahriar, "Financial inclusion for people with disability: A scoping review," *Global Health Action*, vol. 17, no. 1, 2024, doi: 10.1080/16549716.2024.2342634.

- [36] M. Ben Moussa and O. Waqman, "The reality of financial inclusion in the Arab world in light of the global Findex during the period 2011–2017, with a focus on Algeria," *J. Econ. Reforms Integr. Glob. Econ.*, vol. 13, no. 3, 2019.
- [37] H. K. Al-Dhabhawi, A. H. Shaker, and J. A. Nasser, "The reality and challenges of financial inclusion in Iraq," *Al-Ghari J. Econ. Admin. Sci.*, vol. 20, Special Issue, Univ. of Kufa, 2024.
- [38] Y. A. Abdulkarim, "Systematic review of investment indicators and economic growth in Nigeria," *Humanit. Soc. Sci. Commun.*, vol. 10, p. 500, 2023, doi: 10.1057/s41599-023-02009-x.
- [39] O. Ewetan et al., "Fiscal federalism and accountability in Nigeria: An ARDL approach," *J. Money Laundering Control*, 2020, doi: 10.1108/JMLC-05-2020-0046.
- [40] M. Rahman and A. Islam, "Some dynamic macroeconomic perspectives for India's economic growth: Applications of linear ARDL bounds testing for cointegration and VECM," *J. Financ. Econ. Policy*, vol. 12, no. 4, pp. 641–658, 2020, doi: 10.1108/JFEP-11-2018-0165.
- [41] T. Chinoda and F. M. Kapingura, "Digital financial inclusion and economic growth in Sub-Saharan Africa: The role of institutions and governance," *Afr. J. Econ. Manag. Stud.*, vol. 15, no. 1, pp. 15–30, 2024, doi: 10.1108/ajems-09-2022-0372.
- [42] A. Al-Abdeli, "Determinants of demand for imports of the Kingdom of Saudi Arabia in the framework of joint integration and error correction," *J. Saleh Abdullah Kamel Center Islamic Econ.*, Al-Azhar Univ., vol. 11, no. 32, 2007.
- [43] M. T. Lafta and B. S. Lafta, "A study analyzing the necessities of advancing financial inclusion in Iraq: Opportunities and challenges," *J. Accounting Financial Studies (JAFS)*, 4th Nat. Conf. Grad. Students, Iraq, 2019.