

The Impact of Banks' Performance on Economic Growth in Iraq: Dynamic GMM Approach

Hamid Mohsin Jadah

Department of Finance and Banking, College of Administration and Economics, University of Kerbala (Iraq)

Email: hamed.m@uokerbala.edu.iq

Abstract: This study explores the long-term relationship between banking sector performance and economic growth in emerging economies, with a specific focus on Iraq. Using a dynamic Generalized Method of Moments (GMM) approach, the research analyzes panel data from 18 private commercial banks in Iraq spanning the period from 2005 to 2023. Key banking indicators including return on equity (ROE), return on assets (ROA), and net interest margin (NIM) are examined in relation to gross domestic product growth (GDPG). The findings show that banking performance, particularly ROA and NIM, significantly contributes to economic growth. In contrast, investment activities and lending capacity exhibit weaker links to economic development, highlighting areas in need of policy reform. The study also emphasizes the influence of external factors such as technological advancement and political stability in shaping economic outcomes. By integrating bank-specific metrics into the analysis, this research provides fresh insights into the role of the banking sector in Iraq's economic development. It underscores the importance of targeted policy interventions to strengthen financial institutions and calls for broader consideration of contextual factors to support sustainable growth. These insights offer practical guidance for both policymakers and researchers in emerging economies.

Keywords: *Bank performance; Dynamic GMM; Economic growth; Iraq.*

1. Introduction

The primary goal of macroeconomic policy is to stimulate sustainable economic growth, which is widely considered essential for improving living standards and fulfilling national development aspirations. Economists define economic growth in various ways, often referring to increases in household income or the overall production of goods and services over time. A more common and standardized measure is the growth of gross domestic product (GDP), which serves as a key indicator of economic progress.

Scholars, policymakers, and financial analysts have long been interested in the relationship

between economic growth and the performance of financial systems. Numerous studies suggest that financial institutions—particularly banks—play a crucial role in shaping a country's economic trajectory (Smith, 2020). This relationship is especially pronounced in countries with underdeveloped legal and accounting systems, such as Iraq, where banks hold a significant advantage over non-banking sectors. In such contexts, banks can help facilitate business development by reducing information asymmetry and supporting loan repayment, thereby promoting broader economic growth (Rajan & Luigi, 1999).

This research aims to examine the impact of banking sector performance on economic growth in Iraq. The specific objectives are:

1. To determine whether bank performance can serve as a reliable driver of economic growth and under what conditions.
2. To identify the nature of the relationship between bank performance and broader economic indicators.
3. To utilize the Generalized Method of Moments (GMM) to assess the lagged effects between banking indicators and economic growth.

Iraq's economy is still developing and has distinct characteristics that set it apart from other emerging economies. One notable feature is its heavy reliance on oil, which accounts for nearly 95% of total GDP. In 2020, Iraq's GDP was approximately \$178.11 billion, with significant fluctuations in annual real GDP growth rates due to ongoing political instability. For example, Iraq experienced its highest real GDP growth rate of 81.8% in 2003 following a period of relative stability, while 2020 marked one of its lowest points (World Data Atlas, 2021). Between 2005 and 2020, the average annual GDP growth rate was 4.1%, which remains insufficient for initiating self-sustaining growth or achieving long-term development. Real GDP per capita growth during the same period averaged 4.8%.

Banks serve as critical financial intermediaries in Iraq's economy, channeling resources to productive sectors, mitigating risk, reducing information asymmetry, and promoting trade (Jadah et al., 2020). However, the Iraqi banking sector operates in a challenging environment shaped by political instability, global financial pressures, technological disruption, intense competition, and a lack of public trust. In addition, widespread financial exclusion persists, as a significant portion of the population remains outside the formal banking system. While

some studies have explored the broader connection between economic growth and financial development in Iraq (e.g., Al-Jebory, 2017), little is known about the specific performance of commercial banks and their direct impact on the economy.

The present study addresses this gap by analyzing the relationship between bank performance and economic growth in Iraq, focusing on metrics such as return on assets (ROA), return on equity (ROE), and net interest margin (NIM).

Understanding the influence of bank performance on economic growth is critical for two main reasons. First, profitability remains a core objective for banks, and performance metrics such as ROA, ROE, and NIM are widely used to assess financial health. Second, Iraq represents a unique case study among emerging economies—a relationship-driven society operating within a fragile political framework marked by high levels of corruption. This distinct setting provides an opportunity to investigate whether improved bank performance can contribute meaningfully to economic development, beyond merely enhancing bank profitability. This article is built as follows: Part 2 describes theories & relevant literature, Part 3 shows dependent & independent variables, Part 4 presents methodology in terms of data & model description; Part 5 reports pragmatic outcomes, Part 6 explains discussion of findings. In addition, Part 7 presents the research conclusion.

2. Theories & Reviews of Literature

Following are two primary theories existing in literature which describe function of banking performance in economic development.

2.1. Theories of Economic Growth

In 1911, Schumpeter highlighted significance of finance in economic flow's growth. Furthermore, research underlined how crucial financial services are to fostering economic development. & addressed circumstances under which financial sector may smartly

encourage growth & innovation by assessing & supporting productive investments. Reserve Bank's goal is to provide convenient, appropriate financial facilities in locations where there are currently no banks, ensuring that everyone has disposal to fiscal services. More fiscal inclusion upsurges money flow in economy, which benefits economy (Schumpeter, 1911). In particular, Robinson (1952) highlighted how rising output coincides with rising demand for fiscal services, favouring path of financial growth. In fiscal industry, development is pursued by growth by revenue from properties & interest, other things being same (Srivastava, 2012).

2.1.1 Theory of Anticipated Revenue

Initial proposal of this hypothesis times back to 1945, attributed to Prochnow, & is delineated in book titled "Term Loan and Theories of Bank Liquidity". This theorem posits that banks ought to diversify their lending activities, including remunerated factual estate hypothecation loans, enduring credit, payment lending, & customer loans. Taking into account likelihood of repayment & stimulating cash flow, banks enhance liquidity through anticipated revenue. High excess reserves make lending investment money more accessible, which increases profitability of all types of banks. Keeping this hypothesis in mind, research used lending capability variable to better understand its influence on country's economic growth (Saeed, Ramzan, & Hamid, 2018).

2.1.2 Theory of Endogenous Growth

This theory emphasizes that endogenous rather than exogenous forces determine pace of economic growth. Internal institutional elements like investment decisions & degrees of technological progress possess impact on economic development process. Moreover, theory suggests that in every country, long-run economic growth is often dependent on financial organizations' policy initiatives (Romer, 1994). According to intrinsic development model, interior factors influence fiscal growth alongside exogenous

productivity. This theory provides framework for understanding relationships between variables applied in current study. Association between fiscal sector & fiscal advancement has long been source of discussion in literature. Concept of intrinsic development implies contributory link between fiscal sector & fiscal progress, though determining direction of causality remains practical challenge (Saeed *et al.*, 2018).

2.2. Literature Review

Various empirical studies will be investigated to aid in extraction of vital information for these researches. Numerous experts have done studies to survey connection that exists between bank performance & rate of fiscal advance in numerous countries. Nevertheless, contradictory outcomes have been found because of factors like research jurisdiction, data availability & resources, econometrics approach used, & many more.

Banking sector acts as initial gateway through which impacts of economy are introduced, & any shortcomings within this system can propagate distortions throughout other sectors, fundamentally affecting inclusive solidity of economic scheme. Impact of bank performance on economic growth is contentious subject on both empirical & theoretical level; theoretical foundations of this relationship may be discovered in study of Schumpeter (1911), who held that financial intermediary services are critical to economic innovation, productive investment, & economic progress. This topic has been focused of theoretical discussions & empirical study during previous century, particularly in aftermath of famed King & Levine (1993) study. Scholars have been concerned with link between financial sector & economic growth. Profitability of bank can have impact on GDP by affecting fiscal stability. Augmented bank viability can improve fiscal stability, which is good for growth. Banks were able to generate liquidity from markets due to their attractive returns for shareholders. (Flannery & Rangan, 2008). Rancière *et al.* (2008) imply that countries with fewer economic crises are

more likely to grow than countries with persistent fiscal swings. This finding is further supported by view that fiscal liberties may augment crises while also endorsing fiscal development. As consequence, bank profitability does not have to result in good economic growth via financial solidity. This contentious economic problem remains research vacuum in Iraq, hence this pragmatic finding emphasizes on assessing influence of bank performance on fiscal advance utilizing panel dynamic GMM Regression Model.

There is also literary strain represented by Hui & Jha (2013) analyzed relation between loans, deposits, & monies as substitution for recital of banks with Economic growth proxied with GDP from 1975 to 2010. Their study used OLS & Augmented Dickey-Fuller. Moreover, deposits, assets & regression outcomes have considerable influence on Nepal's economic growth; although loans & advances do not have association with fiscal evolution. Moreover, Granger-Causality test indicates that there is no connectedness amid economic acceleration & deposits, loans, advances, & assets. It is possible to conclude that not just the performance of commercial banks, nonetheless, other elements like technology and political stability play a crucial component in Nepal's economic advancement.

Hou and Cheng (2017) employed Panel GMM to survey long-term & short-term influences of bank performance measures on economic advance. As per their study, impact of pointers is dependent on expansion of banks & national income throughout time. Their research suggests that economies participate in numerous financial works to affirm viable growth procedure.

By utilizing panel VECM Saeed et al. (2018), studied the impact of loaning competence, innovation, Bank funded assets, & interest margin on fiscal growth, & discovered bank investment & innovations significantly determinant economic development. Guanchun & Chengsi (2020) investigated internal growth process in relation to financial expansion of economy & its structure.

Research used panel of 29 Chinese provinces. Theoretical findings of research showed that perfect financial structure was available & could be used to satisfy diverse needs in economic development procedure. Bank profitability boosts economy's financial stability, which aids in country's growth (Arena, 2008; Claey's & Schoors, 2007). Pisedtasalasai & Edirisuriya (2020) surveyed performance & diversity of Sri Lankan commercial banks. Their research found two-way relationship between bank performance & diversity. It showed that diversity enhanced bank performance.

Meanwhile, Alam et al. (2021) observed that bank-related factors are linked to economic growth. Furthermore, their learning validates that there is substantial negative relation between net interest margin & fiscal evolution. Nonetheless, their study discovered positive significant link between ROA & fiscal evolution. Nevertheless, lending capacity & investment works insignificantly influenced economic development by applying sample of 20 Indian government-owned banks for period 2009 to 2019.

More recently, Khattab et al. (2015) sparked new discussion in literature; their research aimed to scrutinise link between expansion of fiscal sector, fiscal instability, & fiscal evolution in five Maghreb economies employing data from 1995 to 2013. Research utilized panel vector autoregressive methodology to establish that fiscal expansion had adversative impact on fiscal instability, while simultaneously exerting positive impact on both itself & overall fiscal evolution. This study underscored that fostering financial growth necessitates fiscal deregulating within fewer unethical environment. In equivalent vein, Smith & battle (2023) examined relationship between fiscal segment development, economic growth & real segment across 120 economies from 1990 to 2020. Their findings indicated that while development of fiscal segment positively affects fiscal evolution by upsurging availability of private credit, mismatch

between credit & real economic expansion & activity can undermine growth prospects. Their study emphasizes importance of balanced expansion of fiscal segment in line with pace of real fiscal development.

3. Dependent & Independent Variables

3.1 Dependent Variables

We utilized annual GDP growth (%) as metric of economic growth to ascertain association between economic expansion & bank performance. One of most frequently optimized measures of economic growth in earlier research is GDP growth. Thiel (2001) established link between expansion of economic growth & fiscal sector utilizing GDP growth. Upsurge in net national production over specific period is thought to be definition of economic growth model (Dewett, 2005). According to this study, economic development is understood to be quantitative transition in economic variables that typically persists through time. Qin et al. (2024) define economic development as systematic process that enhances economic productivity potential, leading to heightened national production levels & income over time. Similarly, Jhingan (2011) views economic development as output expansion, elucidating further that it entails continual quantifiable upsurge in nation's per capita production or income, followed by capital, consumption, workforce, & trade volume growth. Vital attributes of economic growth, as highlighted by Ochejele (2007), encompass elevated rates of output, substantial rates of structural transformation, & facilitation of international resource flows, including capital, labor, & goods.

3.2 Independent Variables

Explanatory factors in this learning were divided into two groups: control variables & key independent variables. Chief independent variables are bank profitability (ROA, ROE, & NIM) & lagged value of GDP growth, whereas macroeconomic factors & political instability-related variable make up control variables. Factors were chosen from larger

pool of factors that were accessible in literature. Justification for selecting these variables & theory underlying their estimated influence are given in section that follows.

3.2.1 Key Independent Variables & Hypothesis Development

3.2.2 Return on Assets (ROA)

Return on Assets (ROA) - Evaluating how well banks are managing their assets & health status. Ratio of return after taxes to banks gross assets. Although bank net income is relatively straight-forward in assessing overall performance, it has chief downside: It makes comparison among different financial institutions or even historical periods pretty difficult. ROA is usually utilize amount for bank competency that depicts ability of bank to earn money on its assets, depicting how lucrative or optimal it can generate more profit from those assets. Innumerable studies (Alam et al., 2021; Ledhem & Mekidiche, 2020; Alkhazaleh, 2017; Rabaa & Younes, 2016; Yazdani & Bank, 2011) have claimed that there is optimistic link between ROA & economic growth. Hence, we proposed following hypothesis:

H1: ROA will positively affect economic growth.

3.2.3 Return on Equity (ROE)

Although it is acknowledged that ROA ratio provides obvious indicator of bank competency, most scholars would rather utilize ROE or ratio of income after taxes to bank equity for banking industry to assess productivity of specific banks & banking sector as whole. Bank shareholders attend to how bank income compares to their equity investment, which may be calculated using ROE ratio. Besides, previous surveys employed ROE as evaluation of bank performance (Ledhem, & Mekidiche, 2020). Moreover, majority of past surveys reported positive influence of ROE on economic growth (Ledhem, & Mekidiche, 2020; Rabaa & Younes, 2016) Hence, we proposed following hypothesis:

H2: ROE positively & significantly affected economic growth.

3.2.4 Net Interest Margin (NIM)

There are several theories regarding how to regulate interest rates. Few of these are conventional theory, Keynesian theory, & loanable fund theory; however, bulk of earlier research found that interest rates hurt economic development. (Alam et al., 2021; Saeed et al., 2018; Anari & Kolari, 2016; Saymeh & Orabi, 2013; Udoka & Anyingang, 2012). Besides that, in this study, NIM has been identified as bank performance measure following previous literature (Jadah et al., 2020; Abdullah, Parvez, & Ayreen, 2014; Owoputi *et al.*, 2014; Taskin, 2012). Central Bank of Iraq (CBI) is only entity in Iraq with power to regulate interest rates, & all banks follow CBI's rules for calculating interest rates on their products. Therefore, net interest margin ratio is selected as substitution for respective bank's interest rate, as it illustrates grossing capacity of banks through their core banking activities optimizing all available funds. Therefore, NIM will be utilized as one of bank performance measurements in this study. NIM measures spread between interest revenues & interest costs. Therefore, we proposed following hypothesis:

H3: NIM is negatively significantly associated with economic growth.

3.3 Control Variables

This research also involves more control variables to take into account any additional potential factors that might affect economic growth. Bank's size is related to economies of scale & has chance of enhancing organization's financial success (Jadah, Murugiah, & Adzis, 2016). This study used bank size as control variable, same as earlier studies. Moreover, second control variable is inflation. According to Barro (2013), inflation is crucial for economic growth. Furthermore, third control variable is political instability. Economists observe that economic performance is typically negatively impacted by political volatility. Shorter time horizons

among policymakers will lead to less optimal macroeconomic policies as outcome of political turmoil. Moreover, it may conduce to more frequent policy adjustments, which would worsen volatility & macroeconomic performance (Aisen & Veiga, 2013).

4. Methodology

4.1 Data

Data from 18 conventional banks sorted in Iraq Stock Exchange (ISX) for period 2005-2023 have been considered in this study. For sample banks' yearly reports were used to gather data on banks' performance & size while statistics on GDP evolution rate & inflation were gathered for macroeconomic indicators from World Data Atlas database. Furthermore, political volatility data was collected from Worldwide Governance Indicators (WGI).

We outline variables selected to reflect banks' performance (ROA, ROE, & NIM) & economic growth throughout pages that follow (GDP growth). Along with following control variables (size of bank, inflation, & political volatility).

4.2 Model Requirement

Both static & dynamic models have been utilized to this study. Static model is broadly renowned & has been employed in several surveys. Chowdhury et al. (2016) believe dynamic model employs more information & consequently, estimation will be more competent. Furthermore, to fully grasp implication of lagged effect variance Generalized Methods Moments (GMM) model (Arellano & Bond, 1991) is used in second model. Fundamental tenet of GMM is that initial variances between instrumental variables are unrelated with static impacts, allowing model to add more instruments & upsurge its efficacy. In research using "small T, big N" panels, where autonomous variables are hardly exogenous, & when autocorrelation & heteroscedasticity occur within individual sample, in this research area, Roodman (2009) believes that both system GMM estimators &

variance are apt. Empirical study employs GMM formula given by Jada, Hasan & Al-Husainy (2021):

$$\text{GDPG}_t = \alpha + \beta_1 \text{GDPG}_{(t-1)} + \beta_2 \text{ROA}_{it} + \beta_3 \text{ROE}_{it} + \beta_4 \text{NIM}_{it} + \beta_5 \text{BSZ}_{it} + \beta_6 \text{INF}_t + \beta_7 \text{PIS}_t + \varepsilon_{it} \dots (1)$$

Where:

GDPG denotes GDP growth, ROA indicates return on assets, ROE denotes return on equity, & NIM denotes net interest margin.

BSZ denotes size of bank (natural logarithm of total assets), INF is inflation rate, & PIS denotes political instability. I refer to bank at moment, & ε refers to erroneous term.

5. Result

5.1 Eloquent Statistics

For each variable included in study, mean, standard deviation, minimum, & maximum values are shown in Table (1).

Table 1. Descriptive Statistics

Variables	Unit.	Mean	St. dev.	Maximum	Minimum
Dependent variables: Bank performance					
GDP growth	Ratio	4.133	6.822	13.93	-15.67
Independent variables: Bank Performance					
Return on equity (ROA)	Ratio	0.188	0.074	0.281	-0.024
Return on assets (ROE)	Ratio	0.056	0.039	0.088	-0.125
Net interest margin (NIM)	Ratio	0.029	0.090	0.858	-0.140
Control Variables					
Bank size	Log of total assets	0.286	0.284	1.831	0.003
Political instability	Percentile rank	-2.348	0.328	-1.843	-2.826
Inflation	Ratio	8.056	16.091	53.23	-10.067

Source: Own competition, 2023

5.2 Correlation Analysis

Pearson correlation scrutiny has been utilized to look at how variables are related to one

another. When defining the degree & route of linear link amid dual variables, correlation analysis is helpful. Table 2 presents the Pearson correlation.

Table (2) Pearson correlation

Probability	GDPG	ROA	ROE	NIM	BNKZ	PUS	INFL
GDPG	1						
ROA	0.4319	1					
ROE	0.3542	0.1349	1				
NIM	-0.4381	0.0706	-0.3193	1			
BNKZ	-0.4959	-0.0657	-0.0981	0.018	1		
PIS	-0.3585	0.2679	0.1376	0.0963	-0.0616	1	
INFL	-0.4564	0.182	-0.1925	0.1149	0.0237	-0.1053	1

5.3. Two-step system GMM estimation result

Before proceeding with regression analysis, it is imperative to conduct several tests to assess adequacy of model's fit. As suggested by Newey (1985), crucial test should be conducted. Outcomes of diagnostic tests, comprising tests for normality, serial correlation, heteroscedasticity, & multicollinearity for research model, depicts that data are suitable for analysis. Furthermore, Hausman requirement test was employed to investigate whether arbitrary effects model or static effects model would be further suitable for research model. Test

recommends that arbitrary effects model is further suitable, given null hypothesis of Hausman specification test. Moreover, in this study, both over-identification Sargan test & Arellano & Bond test for first- & second-order autocorrelation in residuals were conducted, following approach outlined by Roodman (2009).

Table (3) Regression results utilizing system GMM estimator.

Variables	Coefficient	Standard Error	t-Statistic	Prob.
GDPG(-1)	0.415	0.044	9.366**	0.000
ROA	0.071	0.027	2.594*	0.010
ROE	7.930	3.224	2.459*	0.015
NIM	-1.658	0.558	-2.972**	0.003
BANKZ	-0.808	0.392	-2.060*	0.041
INFL	-1.952	0.638	-3.060**	0.002
PIS	-1.684	0.293	-5.738**	0.000

Diagnostic Statistics:

	Chi-Sq. Statistic		Prob.
Hausman Test	31.87		0.000
	Order	m-Statistic	Prob.
Arellano-Bond	0.036	-0.926	(1)
	0.3015	1.004	(2)
Sargan test			0.962

Note: **, & * mean significance at level 1% & 5% respectively.

Source: Own computation, 2023.

5.4 Additional Robustness Checks

To enhance effectiveness of study outcomes, we conducted deep analysis of association amid variables of bank competency & advance of economy. It should be emphasized that tables are not displayed due to their space consumption. Initially, we also studied

whether association amid competency of banks (ROA, ROE, & NIM) & control variables (inflation, Bank size, political instability) & advance of economy is nonlinear. Thus, square terms of all variables were included in Equation (2). Analysis of static effects of modified Equation (2) showed

that there were insignificant coefficients on any of variables of bank's competency or quadruple control of outcomes not presented in tables, which shows that influence of bank's competency on economy is linear. In addition, we utilized alternative valuation measures for scope of bank by dividing it at medical intermediary of overall assets. In end, we re-estimated main test. Despite this, main results continued to be actual similar to those presented in Table (3).

6. Discussion of Findings

As shown in Table (3), Hansen duality test did not discard null hypothesis in research models, which confirms validity of tools used in this study. Likewise, Table 3 presents outcomes of self - relay tests-specifically, AR (1), AR (2), & Arellano-bond tests. AR (1) test examines First-Order self-relay in varied differentials & indicates that existence of this transmit does not affect consistency of GMM approach. AR (2) test, on other hand, examines second-order self-succession & fails to discard null hypothesis, demonstrating nonappearance of substantial secondary self-succession. These findings from Table 3 support appropriate GMM approach to analyzing influence of banks ' competency on economic development in this research.

In this study, we scrutinized link between ROA, ROE, NIM, & Iraqi fiscal advance for period 2005 to 2023. Study's analysis of link amid bank competency indicators & fiscal advance included variation of panel GMM tests. Empirical outcomes are blended in nature, although, there is negative effect for inflation, bank scope, & political instability with economic growth, as coefficient of bank scope, inflation & political instability was -1.952, -0.808, & -1.684 respectively, which is significant & negative.

Findings of analysis defend first hypothesis (H1), that ROA positively influences economic growth; coefficient attained is 0.415, which is substantial & positive. Moreover, our findings support outputs acquired are consistent with outcomes concluded by those

defending how good fiscal activities support & foster fiscal advance findings (ex: Ledhem, & Mekidiche, 2020; Alkhazaleh, 2017; Rabaa & Younes, 2016; Koetter & Wedow, 2010; Ferreira, 2013). Plausible reason behind this finding when bank obtains high percentage of return to assets, it will participate in economic growth.

Moreover, regression findings of Table 3 demonstrate that ROE is significantly certainly correlated to economic growth in Iraq. Findings of analysis affirm second hypothesis (H2). Positive impact of ROE on fiscal advance is reliable with past background that determines positive relation (Ledhem, & Mekidiche, 2020; Rabaa & Younes, 2016).

Concerning other explanatory variables, NIM has substantial adverse connotation amid inflation & fiscal advance in Iraq. Findings of analysis again confirm third hypothesis (H3). Adverse influence of net interest margin on economic growth is in line with prior studies that found negative impact (Alam et al., 2021; Saeed et al., 2018; Anari & Kolari, 2016; Saymeh & Orabi, 2013; Udoka & Anyingang, 2012). Therefore, third hypothesis about adverse influence of NIM on economic growth is accepted.

7. Conclusions

Sound banking system would stand prominently as rule of thumb for supportable economic advance in Iraq. In this regard, Iraqi banking segment is seen as efficacious segment contempt worrying political instability that has long affected Iraqi economy & also banking system. We can therefore safely assume that these conditions are stressful for Iraqi banks because they are undergoing rapid change, which makes it great to identify & challenge elements of viability of Iraqi banks to ensure sustainability of fiscal solidity. All pessimism that comes from political volatility. It is suggested that Iraqi banking segment has substantial role in fiscal advance; therefore, public policies must be directed toward enacting competent

policies that improve competence of banking segment to raise cumulative outcomes, which in turn boosts economic growth due to banks play vital role in stimulating fiscal advance. Additionally, supervisory authority must pay close attention to ensuring that benefits of the banking reform procedures are continual. CBI must implement stronger strategies intended at refining menace management frame of Iraqi banking sector, as this can advance their viability. According findings & area of this research, bank profitability suggestively influenced Iraqi economic growth. Nevertheless, is economic growth had impact on bank profitability? which other scholars can investigate to depict whether or not there is substantial link amid fiscal advance & banks viability. It can also be stated that, in addition to commercial banking competence, other elements like technology & political stability might have imperative impact on Iraq's fiscal advance.

Finally, findings of this study hold substantial policy implications. To attain this result, it is imperious to detect profitability determinants of efficacious banks, thereby formulating strategies to enhance & sustain strength & stability of banking segment in Iraq. Furthermore, given focus of this research on role of viable banks in fiscal advance, additional examine could be undertaken on broader role of fiscal system in fiscal advance. This expanded scope would encompass not only viable banks but also other fiscal institutions, comprising microcredit organizations.

References

- Abdullah, M. N., Parvez, K., & Ayreen, S. (2014). Bank Specific, Industry Specific and Macroeconomic Determinants of Commercial Bank Profitability: A Case of Bangladesh. *World Journal of Social Sciences*, 4(3), 82–96.
- Aisen, A., & Veiga, F. J. (2013). How Does Political Instability Affect Economic Growth? *European Journal of Political Economy*, 29, 151-167.

- Alam, M. S., Mustafa R. R., Mohammad R. T., and Joji A. (2021). Banks' Performance and Economic Growth in India: A Panel Cointegration Analysis. *Economies*, 9(38), 1-13.

<https://doi.org/10.3390/economies9010038>

- AL-Jebory, A. M. (2017). The Impact of Financial Development on Iraqi Economic Growth (1970-2015). *Journal for Economics & Administration & Financial Studies*, 9(4), 65-100.

- Alkhazaleh, A. M. K. (2017). Does Banking Sector Performance Promote Economic Growth? Case study of Jordanian Commercial Banks. *Problems and Perspectives in Management*, (15, Iss. 2), 55-64.

- Anari, A., & Kolari, J. (2016). Dynamics of interest and inflation rates. *Journal of Empirical Finance*, 39, 129-144.

- Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The review of economic studies*, 58(2), 277-297.

- Arena, M. (2008). Bank failures and bank fundamentals: A comparative analysis of Latin America and East Asia during the nineties using bank-level data. *Journal of Banking & Finance*, 32(2), 299-310. <https://doi.org/10.1016/j.jbankfin.2007.03.011>

- Barro, R. J. (2013). Inflation and Economic Growth. *Annals of Economics & Finance*, 14(1), 85-109.

- Chowdhury, M. (2016). Financial development, remittances and economic growth: Evidence using a dynamic panel estimation. *Margin: The Journal of Applied Economic Research*, 10(1), 35-54.

- Claeys, S., & Schoors, K. (2007). Bank Supervision Russian Style: Evidence of Conflicts between Micro-and Macro-prudential Concerns. *Journal of Comparative Economics*, 35(3), 630-657. <https://doi.org/10.1016/j.jce.2007.02.005>

- Dewett, K. K. (2005). Modern Economic Theory. Shyam Lal Charitable Trust, New Delhi, India.
- Ferreira, C. (2013). Bank Performance and Economic Growth: Evidence from Granger Panel Causality Estimations. WP 21/2013/DE/UECE. 1-36.
- Flannery, M. J., & Rangan, K. P. (2008). What Caused the Bank Capital Build-up of the 1990s? *Review of Finance*, 12(2), 391-429. <https://doi.org/10.1093/rof/rfm007>
- Greenwood, J., Sanchez, J. M., & Wang, C. (2013). Quantifying the impact of financial development on economic development. *Review of Economic Dynamics*, 16(1), 194-215.
- Guanchun, L., & Chengsi, Z. (2020). Does Financial Structure Matter for Economic Growth in China? *China Economic Review*, 61, 101194. <https://doi.org/10.1016/j.chieco.2018.06.006>
- Hasan, I., Koetter, M., & Wedow, M. (2009). Regional growth and finance in Europe: is there a quality effect of bank efficiency? *Journal of Banking & Finance*, 33(8), 1446-1453.
- Hassan, M. K., Sanchez, B., & Yu, J. S. (2011). Financial development and economic growth: New evidence from panel data. *The Quarterly Review of economics and finance*, 51(1), 88-104.
- Hassan, M. K., Sanchez, B., & Yu, J. S. (2011). Financial development and economic growth: New evidence from panel data. *The Quarterly Review of economics and finance*, 51(1), 88-104. *Business Strategy Finance and Management*, 2(1,2), 102-114.
- Hou, H., & Cheng, S. Y. (2017). The Dynamic Effects of Banking, Life Insurance, and Stock Markets on Economic Growth. *Japan and the World Economy*, 41, 87-98.
- Hui, X., & Jha, S. (2013). The Impact of Commercial Banking Performance on Economic Growth. In *Proceedings of the Institute of Industrial Engineers Asian Conference 2013* (pp. 1503-1511). Springer, Singapore.
- Jadah, H. M., & Adzis, A. B. A. (2016c). Board Characteristics and Bank Performance: Evidence from Iraq. *Journal of Independent Studies and Research: Management, Social Sciences and Economics*, 14(1), 29-41.
- Jadah, H. M., & Mohammed, N. H. (2016). Financial Performance Evaluation of Domestic Commercial Banks: An Empirical Study in Malaysia. *Asian Journal of Multidisciplinary Studies*, 4(8), 120-127.
- Jadah, H. M., Alghanimi, M. H., Al-Dahaan, N. S., & Al-Husainy, N. H. (2020). Internal and External Determinants of Iraqi Banks Profitability. *Banks and Bank Systems*, 15 (2), 79-93. [http://dx.doi.org/10.21511/bbs.15\(2\).2020.08](http://dx.doi.org/10.21511/bbs.15(2).2020.08)
- Jadah, H. M., Hameed, T. M., & Al-Husainy, N. H. M. (2020). The Impact of the Capital Structure on Iraqi Banks' Performance. *Investment Management & Financial Innovations*, 17(3), 122-132. [http://dx.doi.org/10.21511/imfi.17\(3\).2020.10](http://dx.doi.org/10.21511/imfi.17(3).2020.10)
- Jadah, H. M., Mohammed, N. H., Hasan, M. M., & Adetayo O. A. (2020). The Impact of the Political Instability on Bank's Performance: Evidence from Iraq. *The Iraqi Magazine for Managerial Sciences*, 16(65), 228-240.
- Jadah, H. M., Hasan, M. F., & Al-Husainy, N. H. M. (2021). Dynamic panel data analysis of capital structure determinants: Evidence from Iraqi banks. *Journal of Business Strategy, Finance and Management*, 2, 102-114.
- Jhingan, M. L. (2011). *The Economics of Development and Planning*. Vrinda Publications.
- Khattab, A., Juliot, M. B. M., & Abid, I. (2015). Financial Development, Financial Instability and Economic Growth: The case of Maghreb countries. *International Journal of Economics and Financial Issues*, 5(4), 1043-1054.
- King, R. and R. Levine (1993). Finance and Growth: Schumpeter Might Be Right,

- Quarterly Journal of Economics*, 108(3), 717-737. <https://doi.org/10.2307/2118406>
- Koetter, M., & Wedow, M. (2010). Finance and growth in a bank-based economy: Is it quantity or quality that matters? *Journal of international money and finance*, 29(8), 1529-1545.
- Ledhem, M. A., & Mekidiche, M. (2020). Economic growth and financial performance of Islamic banks: a CAMELS approach. *Islamic Economic Studies*.
- Levine, Ross, Norman Loayza, and Thorsten Beck (2000). Financial intermediation and growth: Causality and causes. *Journal of Monetary Economics* 46: 31–77.
- Newey, W. K. (1985). Generalized Method of Moments Specification Testing. *Journal Econometrics*, 29(3), 229-256. [https://doi.org/10.1016/0304-4076\(85\)90154-X](https://doi.org/10.1016/0304-4076(85)90154-X)
- Ochejele, J. J. (2007). *Economic Analysis*. Ichejum Press, Jos.
- Owoputi, J. A., Olawale, F. K., & Adeyefa, F. A. (2014). Bank Specific, Industry Specific and Macroeconomic Determinants of Bank Profitability in Nigeria. *European scientific journal*, 10(25).
- Pisedtasalasai, A., & Edirisuriya, P. (2020). Diversification and Performance of Sri Lankan Banks. *The Journal of Asian Finance, Economics, and Business*, 7(9), 1-10. <https://doi.org/10.13106/jafeb.2020.vol7.no9.001>
- Prochnow, H. V. (1945). The Bretton Woods Bank Program. *Sec. Corp., Banking & Mercantile L.*, 89.
- Qin, Y., Xu, Z., Wang, X., & Skare, M. (2024). Artificial intelligence and economic development: An evolutionary investigation and systematic review. *Journal of the Knowledge Economy*, 15(1), 1736-1770.
- Rabaa, B., & Younes, B. (2016). The impact of the Islamic bank's performances on economic growth: using panel data. *International Journal of Economics and Finance Studies*, 8(1), 101-111.
- Rajan R, Luigi Z (1999). Financial systems, industrial structure and growth. University of Chicago, Mimeo.
- Ranciere, R., Tornell, A., & Westermann, F. (2008). Systemic crises and growth. *The Quarterly Journal of Economics*, 123(1), 359-406. <https://doi.org/10.1162/qjec.2008.123.1.359>
- Rashid, S. M. (2018). Impact of Information Technology (IT) Investment on Banks' Performance: A Study on Dhaka Stock Exchange (DSE) Listed Banks of Bangladesh, *Journal of Information Engineering and Applications*, 8(2), 8-12.
- Robinson, J. (1952). The Generalization of the General Theory, in *The Rate of Interest and Other Essays* (MacMillan, London).
- Roodman, D. (2009). How to do xtabond2: An introduction to difference and system GMM in Stata. *The stata journal*, 9(1), 86-136.
- Saeed, M. Y., Ramzan, M., & Hamid, K. (2018). Dynamics of banking performance indicators and economic growth: long-run financial development Nexus in Pakistan. *European Online Journal of Natural and Social Sciences* 7(3 (s)), 141-163.
- Saymeh, A. A. F., & Orabi, M. M. A. (2013). The effect of interest rate, inflation rate, and GDP, on real economic growth rate in Jordan. *Asian Economic and Financial Review*, 3(3), 341.
- Schumpeter, Joseph A. (1911). *The Theory of Economic Development-An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. London: Harvard University Press.
- Smith, J. (2020). The role of financial organizations in predicting a country's genuine growth potential. *Journal of Economic Studies*, 37(2), 123-145.
- Smith, J., & Patel, R. (2023). A Study on Financial Sector Development, Economic Growth, and the Real Sector. *Journal of Economic Research*, 45(2), 123-145.
- Srivastava, A. (2012). Determinants of capital structure in Indian public ltd. companies: an experience of pre and post

liberalization. *The Indian Journal of Finance*, 6(6), 30-38.

Taşkin, F. D. (2012). Corporate Governance and performance of Turkish banks in the pre-and post-crisis periods. *Journal of Governance and Regulation*, 1(4), 47-95.

Thiel, M. (2001). Finance and economic growth-a review of theory and the available evidence. *European Economy-Economic Papers 2008-2015*, (158).

Udoka, C. O., & Anyingang, R. A. (2012). The effect of interest rate fluctuation on the economic growth of Nigeria, 1970-2010. *International Journal of Business and Social Science*, 3(20), 395-302.

Yazdani, M., & Bank, E. N. (2011). Role of performance of privately owned banks in economic growth of Iran. *Aust. J. Basic Appl. Sci*, 5(1), 695-700.