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RESEARCH PAPER

The Impact of Economic Growth on Financial Performance in GCC Countries

Wissem Benali[a,*], Samir Srairi[a], Nabila Amaidi[a]
a. ESCT, University of Manouba, LARIMRAF, Campus universitaire la Manouba, Manouba, Tunisia.
* Corresponding Author, E-mail: wissembenali11@gmail.com

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Abstract
This study presents empirical findings on the relationship between financial performance and economic growth for Golf Cooperation countries panel generalized method of moments (GMM) between 2000 and 2019. The results show that banking performance, human capital, investment, trade openness, and inflation have significant positive impacts on economic growth. Robustness tests support the main findings. The relationship between banking performance and trade openness also contributes to economic growth. The study emphasizes the importance of effective banking performance, human capital, investment, and trade openness for long-term economic growth. The findings are relevant for policymakers and practitioners in the Gulf Cooperation Council countries.
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1. Introduction
The correlation between economic growth and financial development has been a well-established topic in the literature. According to Schumpeter (1911), financial resources are essential for entrepreneurs to fund both new and existing ventures, and finance has played a vital role in establishing and maintaining global businesses. A proficient financial system is expected to direct financial resources towards the most viable and productive business proposals. Robinson (1952), however, challenged the demand-following hypothesis by suggesting that financial development does not stimulate economic growth, but rather responds to the need for additional financial services due to significant economic progress. Conversely, the supply-leading hypothesis highlights the importance of developing more financial institutions, products, and services, which could ultimately enhance the overall financial system. Banks are viewed as the primary catalysts for financial

intermediation between economic sectors with inadequate funds and those with surpluses, a process that fosters economic development.

The backbone of financial sector development across the globe is a stable and efficient banking system. Numerous studies have explored the link between financial development and economic growth, including works by Beck et al. (2006), Cojocaru et al. (2016), Ehigiamusoe and Lean (2018), Jiang et al. (2013), Kamau (2011), Park and Shin (2017), Shen et al. (2018), and Soedarmono et al. (2011). These studies suggest that a well-established financial market is conducive to growth. For example, Bencivenga and Smith (1991) developed an endogenous growth model that incorporates financial intermediation to study its impact on growth. Their findings indicate that financial intermediation leads to capital accumulation, making it growth-driven. Furthermore, financial intermediaries prevent unnecessary capital liquidation, which results in further growth. Demirgüç-Kunt et al. (2011) assessed the significance of banks and securities markets in economic development, concluding that economic growth leads to more demand for financial securities than what banks can provide, gradually making securities markets more important for future economic growth. Beck and Levine (2004) analyzed the effect of stock markets and banks on long-run economic growth based on panel data and found that they contribute to economic growth.

In recent years, the focus of the literature has shifted from examining the link between financial systems and economic growth to scrutinizing the determinants of the banking system. However, the global financial crisis and recession of 2007-2008 prompted a re-examination of prior research and conclusions by scholars and policymakers. The crisis demonstrated that a failure of the financial system can have a direct and indirect impact on resource scarcity, loss of confidence in savings, increased speculation, reduced investment, and misallocation of resources, leading to stagnation, unemployment, and poverty. The banking system's inability or failure to lend to the real economy due to financial instability was a major factor in the drastic decline in the real sector during the crisis. This has prompted economists and policymakers to question the optimal size of the financial system for stable economic growth. While banking performance plays a crucial role in promoting growth, does an excessively large banking system become a drag on the rest of the economy? Some researchers suggest that the relationship between financial development and economic growth is nonlinear for developed countries but linear for emerging economies. In this paper, we investigate the linear relationship between banking performance and economic growth in emerging economies.

The banking sector and stock market are crucial components of a well-functioning financial system that contribute to economic growth, according to several studies (Mustafa, 2023; Seelanatha, 2010; Danish, 2023). In particular, stability in the banking sector is important for firms to secure the necessary funding for existing and new investments. This study aims to investigate the dynamic relationship between banking performance and economic growth in GCC countries. The analysis considers several factors that moderate this relationship, including human capital, institutional quality, trade openness, investment, and government expenditure. While many previous studies have examined the impact of financial development on economic growth, few have adequately estimated the impact of banking performance on economic growth in this region. The study uses the generalized method of moments (GMM), a panel data technique that accounts for endogeneity issues, time-invariant effects, and lagged dependent variables. By investigating the impact of banking sector performance on economic growth in GCC countries, this study addresses an important gap in the literature.

The study reveals several significant relationships that contribute to the understanding of economic growth in Golf Cooperation countries. Firstly, the study highlights the positive and significant impact of banking performance, measured by return on equity (ROE), on economic growth. This finding emphasizes the crucial role of an effective banking sector in driving economic growth in these countries. Secondly, the study identifies the importance of human capital, investment, trade openness, and inflation in fostering economic growth. These variables exhibit significant positive relationships with economic growth, providing valuable insights into the drivers of economic expansion in the Golf Cooperation countries. Additionally, the study acknowledges the negative impact of the global financial crisis in 2007-2008 on economic growth across the sample countries. This recognition underscores the relevance of external shocks and their influence on economic performance. Furthermore, the robustness tests conducted in the study strengthen the reliability and validity of the findings. By utilizing different measures of banking performance and excluding advanced economies from the sample, the study verifies the consistency and resilience of the main results.

The paper is organized as follows: In section 2, a literature review is provided, first in general and then specifically focusing on the countries that are being studied. Section 3 describes the econometric methodology used, including the approach, model, and variable specification. In section 4, the data used in the

study are discussed, including their sources and limitations. Section 5 presents the empirical findings. Finally, the last section concludes the paper.

2. Literature Review

The banking system is an essential component of the economy, and its performance can impact other sectors by creating structural distortions in the economic system. Various studies have examined the relationship between banking performance and economic growth across different countries, regions, and economic unions. However, due to variations in the geographic scope, econometric methods employed, and data sources utilized, the findings of these studies differ, especially after the global financial crisis in 2007-2008.

Law and Singh (2014) used a dynamic panel threshold approach to study the relationship between finance and economic growth in 87 advanced and less developed countries, and found that the finance-growth nexus is conditional, where the level of financial development contributes positively to economic growth only up to a certain point. Further development of finance beyond this level tends to have a negative effect on economic growth. Beck et al. (2014) investigated the relationship between financial system size, financial intermediation, GDP per-capita growth, and volatility growth in 77 sample countries between 1980 and 2007. Their findings suggest that financial intermediation enhances growth and reduces volatility in the long-run. However, in the short-run, a large financial sector encourages growth despite the higher volatility cost in high-income countries. Samargandi et al. (2014) used pooled mean group estimation to examine the dynamic impact of financial development on economic growth across 52 middle-income countries from 1980 to 2008, and found an inverted U-shaped relationship between finance and growth in the long-run. They also found that the relationship between finance and growth was insignificant in the short-run, suggesting that too much finance can have a negative effect on growth in the countries studied.

Rasoulinezhad and Mostaghimi Ghomi (2022) examine the relationship between financial development and sustainable economic development in selected Asian countries from 1993 to 2018. Using advanced estimation methods, they find a positive and significant long-term association between financial depth, financial inclusion, economic growth, urban growth, energy intensity, and sustainable development. However, they observe an inverse relationship between money supply and sustainable development. The study suggests policy measures such as improving financial market efficiency, strengthening the role of the financial sector

in national production, and regulating the finance-industry relationship to promote sustainable economic development in the analyzed Asian countries.

The relationship between financial development and economic growth has been explored in relation to the regulatory framework and institutional quality by some scholars. Beck et al. (2006) studied the impact of banking regulations, bank concentration, and domestic institutions on the probability of a country experiencing systemic banking crises, using data from 69 countries from 1980 to 1997. The study found that focused banking systems were less vulnerable to banking crises, despite controlling for variations in regulatory policies, domestic institutions affecting competition, macroeconomic situations, and economic shocks. Additionally, domestic institutions and regulatory policies that impeded competition were linked to higher banking system instability.

In a study by Law and Azman-Saini (2012), a dynamic model of Generalized Method of Moments (GMM) was used to investigate the effect of institutional quality on stock market and banking indicators in developed and developing countries between 1996 and 2004. Institutional quality was found to be a significant determinant of financial development in the sample countries when the banking sector indicator was used to represent financial development.

Muhammad et al. (2022) developed a model to analyze the relationship between financial development and economic growth in the top 10 financially developed countries. They found threshold effects, where financial development had positive or negative impacts on economic growth depending on the country and regime. Trade openness positively influenced economic growth in multiple countries, while capital formation and labor also played roles in sustaining economic growth in specific countries. The study's dynamic multipliers highlighted the varied responses of economic growth to financial development shocks in different regimes. Laeven and Levine (2009) have researched the relationship between risk-taking behavior in the banking sector and the power of shareholders within the corporate governance structure of banks. The study found that the level of risk-taking in banks was positively correlated with the relative power of shareholders. Additionally, the study showed that the impact of capital regulations, deposit insurance policies, and restrictions on bank activities were dependent on the ownership structure of each bank, meaning that the effects of these policies on risk-taking behavior varied depending on the bank's corporate governance structure. The study concluded that a one-size-fits-all regulatory approach is not suitable for the diverse range of banks in terms of their corporate governance structures. Baltagi, Demetriades, and Law (2009) used the GMM panel

data technique to examine the relationship between financial openness and the development of the financial sector in both developing and industrialized countries. The study found that the marginal effects of trade and financial openness were inversely related to the degree of financial and trade openness. Closed economies tended to utilize trade and financial sector openness more than open economies. Thus, more closed economies could benefit from opening their trade and capital accounts, which could also lead to gains in the development of their banking sector.

In their study, Rousseau and Wachtel (2009) investigate whether a high level of financial development can hinder economic growth. They observe that financial crises tend to occur when there is a decreasing reliance on financial development to drive growth. They also find that excessive reliance on credit and financial intermediation can lead to inflation, which weakens banking systems and ultimately leads to growth-inhibiting financial crises. In addition, they argue that excessive dependence on the financial sector could have contributed to the prevalence of financial liberalization in economies with weak legal and regulatory infrastructures in the late 1980s and early 1990s. In contrast to the findings of Baltagi et al. (2009), Rousseau and Wachtel find that financial liberalization has a negative impact on financial development.

The relationship between finance and economic growth operates through various channels, including the conversion of savings into investment projects, which promote productivity and investment growth (Greenwood & Jovanovic, 1990). However, the impact of financial development on productivity growth varies depending on the level of development of the country. For example, Cecchetti and Kharroubi (2012) reveal that financial development enhances productivity growth up to a certain level, and this effect is more significant in developed countries than in developing ones. In contrast, too much finance can have an adverse effect on productivity growth, as argued by Cecchetti and Kharroubi (2015). They suggest that an excessive growth rate in the financial sector could result in financing being directed towards low-productivity projects with high collateral requirements, leading to a decline in overall factor productivity. Pagano (2012) also warns that excessive finance can endanger the solvency of banks and systemic stability, which could negatively impact economic growth.

The study conducted by Nguyen et al. (2022) utilizes advanced statistical techniques to analyze the relationship between financial development and economic growth in 22 emerging markets from 1980 to 2020. Unlike previous

studies using static panel data models, their findings support a positive and linear relationship between financial development and economic growth. They also find bidirectional causality between financial development and economic growth across different measures of financial development. These results provide robust evidence of the significant impact and interplay between financial development and economic growth in the examined emerging markets. Arcand, Berkes, and Panizza (2015) investigate whether there is a point at which additional financing no longer has a significant impact on the overall productivity of an economy. Their findings suggest that the level of financial depth becomes negative when the private sector reaches its peak, i.e., 100% of GDP. This indicates that when private sector credit reaches 100%, its effect on overall growth becomes negative and does not contribute to GDP growth. Ro, Kim, and Kim (2017) argue that financial development reduces firms' financial restrictions, allowing them to access additional external financing, which promotes investment and, in turn, economic growth. However, the effects of financial development on reducing a firm's financial restrictions depend on the industry sector and the size of the firm.

Recent studies have provided mixed findings regarding the relationship between banking sector development and economic growth. While earlier studies have confirmed the positive impact of the banking sector on overall economic growth, more recent studies have produced varied results. For example, Tongurai and Vithessonthi (2018) found a negative impact of banking sector development on agricultural sector development, especially in countries with high degrees of banking sector development, but no effect on industrial sector development. Jayakumar et al. (2018) studied 32 European countries over 1996-2014 and found that banking competition and stability are significant long-term drivers of economic growth. Caporale et al. (2017) found that during the crisis, domestic and foreign banks in the Middle East and North Africa region had different levels of profitability. Inekwe et al. (2018) used firm-level data from 45 countries to find that ex-ante financial distress negatively affects real GDP in the long run. Neanidis (2019) found that banking supervision promotes economic growth and is one of the key aspects of economic growth in relation to banking performance.

The relationship between financial development and economic growth has been investigated by various studies. Cojocaru et al. (2016) focused on the former Communist countries of Central and Eastern Europe and the Commonwealth of Independent States and found that financial market efficiency and competitiveness have a greater impact on economic growth than the size of the market. On the other hand, Ehigiamusoe and Lean (2018) analyzed West Africa and found a positive

impact of financial development on economic growth, although this did not hold for every country in the region when taking a disaggregated approach. Shen et al. (2018) examined the impact of outliers on the causal relationship between financial development and economic growth in 48 countries and found that while estimations without accounting for outliers showed a negative effect of banking sector development on economic growth, once outliers were accounted for, a positive effect was observed.

The impact of financial performance on economic growth in post-communist countries, which were relevant to eleven out of thirteen countries in the current study (excluding only Greece and Turkey), has varied as a result of the global financial crisis, both as a block and for individual countries. While the methods used to examine the relationship between banking performance and economic growth differ from those used in this study, it is worthwhile to explore some related findings and to what extent they match those presented in this study. Efthyvoulou and Yildirim's (2014) study on the scope and impact of the financial crisis in Central and Eastern Europe (CEE) found three main findings related to banking markets, including convergence across countries coming to a halt on the eve of the global financial crisis, a variation in bank-level ownership characteristics, and different margins in asset quality and capitalization before and after the crisis. Temesvary and Banai (2017) analyzed the role of Western European banks' subsidiaries or foreign banks in CEE from 2002 to 2013 and found that, during and after the crisis, subsidiaries lowered lending in the CEE countries. This lowering of lending was caused by the better cost efficiency of the parent banks in the EU than their subsidiaries and the financial system in general of the CEE countries, as Nurboja and Košak (2017) demonstrated. Bhaumik, Owolabi, and Pal (2018) argue that multinational banks can overcome informational disadvantage in host countries such as the CEE through cross-border acquisitions in financial intermediation, but the cost of verification makes this unattractive. These and many other studies dealing with the segments of banking performance and financial intermediation contribute to the overall picture of how the banking sector can affect economic growth, which is the main focus of this study.

In addition to banking, there are other channels through which finance can directly and indirectly affect economic growth, such as the availability of pension funds (Alda, 2017; Kaushal, 2014) and capital market capitalization (Converse, 2018), trade and openness (Hagemejer, 2018), and social trust (Cui, 2017).

3. Empirical Model and Methodology

The study uses the Arellano and Bond (1991) difference-GMM and the Arellano and Bover (1995) system-GMM methods for dynamic panel GMM estimation techniques. These methods control for endogeneity among the series by taking the first difference and maintaining the same slope for all variables, which directly addresses endogeneity issues and time-invariant effects. Lagged dependent variables are also included in the GMM estimator. The Arellano and Bond (1991) method is a two-step procedure that calculates the first difference from the dynamic panel data model, with the lags of the right-hand side variables serving as instruments. If predetermined endogenous variables are present, their lagged levels are also used as instruments. However, if the dependent variable is persistent, the difference-GMM estimator may not be efficient. To overcome this issue, the Blundell and Bond (1998) method extends the difference-GMM estimator by incorporating a system with variables in both levels and first differences. The difference-GMM and system-GMM models are considered robust only if the restrictions create a system in which the results of both models are valid and there is no second-order serial correlation.

To ensure partial adjustment, the empirical model consists of both time series and cross-country dimensions in the annual dataset. The specification is made for a dynamic log-linear equation for economic growth, which includes a lagged dependent variable as an explanatory variable. Therefore, the equation for economic growth is represented as a dynamic log-linear equation:

$$Y_{it} = \beta_0 + \beta_1 \mathrm{Y}_{it-1} + \beta_2 BP_{it} + + \beta_3 HC_{it} + \beta_4 X_{it} + \varepsilon_{it} \quad (1)$$

where Y_{it} is economic growth, $\mathrm{Y}_{it-1}$is the lagged dependent variable of economic growth, BP_{it} is banking performance, HC_{it} is the logarithm of human capital, and X_{it} is a vector that contains other control variables.

When the variables are transformed into natural logarithms, the model is then specified as follows:

$$LnY_{it} = \beta_0 + \beta_1 \mathrm{LnY}_{it-1} + \beta_2 LnBP_{it} + + \beta_3 LnHC_{it} + \beta_4 LnX_{it} + \varepsilon_{it} \quad (2)$$

where variables in Equation (2) that are preceded by ln are the logarithms of their counterparts defined in Equation (1). Moreover, some variables have interactions with each other, this is shown in Model 3:

$$LnY_{it} = \beta_0 + \beta_1 \mathrm{LnY}_{it-1} + \beta_2 LnBP_{it} + + \beta_3 LnHC_{it} + \beta_4 LnTO_{it} + \beta_4 LnINQ_{it} + \beta_4 LnINF_{it} + \beta_4 LnGEX_{it} + \beta_4 LnINV_{it} + \varepsilon_{it} \quad (3)$$

where $LnTO_{it}$ is the log of trade openness, $LnINQ_{it}$ is the log of institutional quality, which is measured by government effectiveness; $LnINF_{it}$ is the rate of

inflation without log because it is in the form of a rate, $LnGEX_{it}$ is the log of government expenditures, $LnINV_{it}$ is the log of gross fixed capital investment.

4. Data

Data from various sources were used to gather information on six Golf Cooperation countries between 2000 and 2019. The research did not use data from before 2000 due to political and economic turbulence in some of the countries. An unbalanced panel data type was utilized due to some missing data for certain countries. The data for banking performance, including return on assets (ROA) and return on equity (ROE), was obtained from the Financial Development and Structure Dataset (updated in September 2015), while financial development and structure data came from the World Bank. Economic growth was measured using the changes in real gross domestic product (GDP) per capita, and human capital was represented by secondary school enrollment as a share of total enrollment of students. The sum of exports and imports as a percentage of GDP was used as a proxy for trade openness, gross capital formation for investment, growth rate of the consumer price index for inflation, and final government consumption expenditure for government expenditure. The data for these variables were obtained from the World Development Indicators (WDI) of the World Bank database. Finally, government effectiveness was used to measure institutional quality, and the data were obtained from the World Governance Indicators.

5. Empirical Finding

In this section, statistical information about the variables is presented in Table 1. The table lists the number of observations, mean, standard deviation, minimum, and maximum values for each variable, along with the unit of measurement.

The coefficient of variance is used to assess the variability of each variable. Bank performance exhibits the highest coefficient of variance, indicating that it is the most volatile variable, followed by inflation and institutional quality. On the other hand, human capital has the lowest coefficient of variance.

Table 2 presents the correlation matrix of the variables, displaying the relationships between them. We observe a significant negative correlation between banking performance, human capital, institutional quality, and trade openness. Economic growth, however, shows a positive correlation only with institutional quality.

Furthermore, a strong positive correlation is found between human capital and institutional quality, as well as between human capital and government

expenditures. It is important to note that correlation does not imply causality, necessitating alternative methods to estimate the impact of these variables on economic growth.

To assess multicollinearity, a preliminary analysis using the correlation matrix coefficient was conducted. According to Gujarati & Porter (2010), multicollinearity is indicated if the partial correlation value between independent variables exceeds 0.8. However, in our case, Table 2 demonstrates that all values are below this threshold, suggesting that the model does not suffer from multicollinearity issues.

Table 1. Descriptive Statistics of the Variables

Variable	Obs	Mean	Std. Dev.	Min	Max	Measure
Y	2.259	5.0424	3.9544	-7.0758	26.1702	Real per-capita GDP
BP	1.008	22.6171	18.8931	-10	223.12	Return on equity/assets
HC	1.678	47.6728	25.8063	0.064	99.506	Ratio of secondary school enrollment
INQ	1.644	14.3062	57.9658	-100	922.22	Government effectiveness
INV	2.254	5.3359	3.36492	0.5	17.6	Gross capital formation
TO	1.174	26.6611	20.5717	-13.1	223.12	Sum of exports/imports as a percentage of GDP
INF	2.254	4.5549	5.3061	0.2	19.5	Consumer Price Index
GEX	1.834	32.2541	26.0046	-51.55	99.819	Government final consumption expenditure

Source: Research finding.

The correlation matrix in Table 2 reveals that only human capital (HC) and institutional quality (INQ) exhibit a significant correlation (0.086), while the correlation between the other variables is weak. Interestingly, the relationship between bank performance (BP), measured by return on equity (ROE), differs from that of BP measured by return on assets (ROA).

To ensure the model is free of heteroskedasticity, we conducted both the Bruesch-Pagan Lagrange Multiplier (BP-LM) test and the Green Likelihood Ratio (LR) test. Table 3 displays the results, indicating that the p-values for both tests are less than 0.05, suggesting that the panel data suffers from heteroskedasticity.

Additionally, an autocorrelation test based on the Wooldridge test was performed and reported in Table 4. The p-values are less than 0.05, indicating the presence of first-order autocorrelation in the model. Considering the evidence of heteroskedasticity and autocorrelation, we opted to use the system-GMM and difference-GMM models with robust standard errors for estimation.

Table 2. Correlation Matrix between the Variables

	Y	BP	HC	INQ	INV	TO	INF	GEX
Y	1.0000							
BP	-0.0902	1.0000						
HC	0.0171	-0.1830	1.0000					
INQ	0.0593	-0.0303	0.0866	1.0000				
INV	0.1915	-0.0916	0.0639	0.0723	1.0000			
TO	-0.0878	0.9811	-0.1347	-0.0314	-0.0866	1.0000		
INF	-0.1371	-0.1425	0.4444	-0.0118	-0.0518	-0.0065	1.0000	
GEX	-0.0500	0.8228	-0.3806	-0.1014	-0.0804	0.8201	-0.0986	1.0000

Source: Research finding.

Table 3. Heteroskedasticity Test

Breusch-Pagan Lagrange Multiplier Panel Heteroskedasticity Test
H0: Panel Homoskedasticity – Ha: Panel Heteroskedasticity
chi2(1) = 487.31
Prob > chi2 = 0.0000

Source: Research finding.

Table 4. Autocorrelation Test

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F (1, 67) = 7.572
Prob > F = 0.0076

Source: Research finding.

The results obtained using the system GMM method indicate that banking performance has a significant and positive impact on economic growth in the sample countries, although not in all models. In other words, a 1 percent increase in banking performance leads to a 0.635 percent increase in economic growth. This key finding highlights the importance of banking performance in the overall economic growth of the Gulf Cooperation countries.

Furthermore, the results show that investment, trade openness, and inflation also have a significant and positive impact on economic growth. Specifically, a 1 percent increase in human capital, investment, trade openness, and inflation leads to an increase in economic growth by 0.094 percent, 0.090 percent, 0.075 percent, and 0.098 percent, respectively. These findings suggest that human capital is slightly more important for economic growth compared to the other variables.

The analysis after the initial estimation aligns with the theoretical requirements, which means that the null hypothesis (based on the p-values) of the Hansen and Sargan tests cannot be rejected. This indicates that the instruments used in the difference and system-GMM methods are appropriate, and the issue of over-identification restrictions in the model has been resolved. Additionally, the problem of serial autocorrelation in the models has also been addressed, as AR(2) is applied to check AR(1), and the p-values of AR(2) meet the theoretical requirements.

Table 5. The Impact of Banking Sector Performance on Economic Growth: Dynamic Panel GMM Model Robustness Checks

	(1)	(2)
	Two-step Sys. GMM	One-step Sys. GMM
L.Y	0.246***	0.247***
	(93.55)	(8.39)
BP	0.224***	0.221**
	(-22.92)	(-2.36)
HC	0.0776***	0.0766***
	(19.14)	(3.18)
INQ	0.000714	0.000592
	(0.94)	(0.16)
INV	0.214***	0.218***
	(25.91)	(4.78)
TO	0.181***	0.177**
	(16.90)	(2.12)
INF	-0.301***	-0.312***
	(-33.53)	(-4.30)
GEX	0.0486***	0.0429
	(5.02)	(0.89)
Sargan test	1.0000	0.0000
AR(2)	0.3090	0.3090
_cons	-0.506	-0.276
	(-1.48)	(-0.17)
N	901	901

Source: Research finding.

To confirm the primary discovery of the study and assess its resilience, a different measure of banking performance (ROA) is utilized. The outcomes in Table 5 support the primary finding that banking performance has a favorable and significant effect on economic growth in the Gulf Cooperation nations.

Specifically, a 1 percent increase in banking performance leads to a 0.012 percent rise in economic growth.

However, the economic importance of the estimated coefficients for the banking sector decreases significantly when robustness tests are conducted. For example, the results in Table 5 demonstrate that a 1 percent increase in banking performance positively impacts economic growth by 0.012 percent, which is a significant drop from the previously reported 0.635 percent. These outcomes indicate that the economic importance of banking sector performance on economic growth is dependent on the alternative indicators of banking performance used.

According to the results, human capital, investment, and trade openness have a more favorable and significant impact on economic growth. Specifically, a 1 percent increase in human capital, investment, and trade openness leads to a positive influence on economic growth by 0.309 percent, 0.097 percent, and 0.819 percent, respectively. The robustness tests support the notion that trade openness and human capital are comparatively more important for economic growth in these nations.

Additionally, the post-estimation analysis of the model meets the theoretical requirements, as evidenced by the fact that the null hypothesis of both the Sargan and Hansen tests cannot be rejected. This implies that the instruments used in the model are valid, and the issue of over-identification restrictions has been resolved. Furthermore, the problem of serial autocorrelation in the model has been addressed since AR(2) is employed to check AR(1), and the p-values of AR(2) satisfy the theoretical requirements. Thus, the model is free of autocorrelation problems.

To investigate the indirect effect of banking performance and trade openness on economic growth, the two variables were interacted with bank performance. The main finding in Table 5 indicates that banking performance has a positive and significant influence on economic growth, which is consistent with the findings of other models. Based on both the system and difference GMM approaches, the marginal effect of banking performance and trade openness on economic growth is positive and significant. A trade sector that is open promotes banking sector performance and has a favorable effect on long-term economic growth.

The marginal effect of banking performance and investment on economic growth is also positive and significant based on both system and difference GMM. This implies that effective banking performance encourages investment and positively impacts long-term economic growth.

6. Conclusion and Limitations of the Study

This research aimed to investigate the impact of banking performance on economic growth in six Gulf Cooperation countries between 2000 and 2019, while considering other relevant control variables. Dynamic panel GMM models were utilized for the analysis. The primary empirical result reveals a positive and statistically significant relationship between banking sector performance and economic growth in these countries. This finding emphasizes the significance of a sound and effective banking sector as a vital determinant of economic growth in the sample countries.

To support this main finding, an alternative indicator of banking efficiency (ROA) was used, demonstrating the robustness of the main results, even though the economic significance of banking performance decreased when the ROA was employed.

In addition to the positive and statistically significant relationship between banking performance and economic growth in Gulf Cooperation countries, the study also found that human capital, investment, and trade openness have a positive impact on economic growth in some, but not all, models. Based on these findings, the study suggests that policymakers in these countries should focus on maintaining or improving the efficiency of their banking systems and consider regional policy integration to measure and enhance banking efficiency through a proper legislative framework.

The study is limited by significant differences and inconsistencies within the contiguous geographical region, creating endogeneity problems. Despite having a similar geographical size and number of countries, the region is economically and financially heterogeneous. Only six countries are included in the study, while the remaining countries are successor states of former countries with a mixed economic system involving state plans and the market. These differences raise skepticism among scholars and researchers about conducting a joint study for all countries due to the endogeneity problem.

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