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THE ROLE OF INSTITUTIONAL QUALITY IN FINANCE-GROWTH NEXUS: EVIDENCE FROM GCC COUNTRIES

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ABSTRACT

This study aims to determine the relationship between financial development and economic growth with respect to the state of institutional quality on 3 Gulf Cooperation Council (GCC) countries, namely, Oman, Qatar and United Arab Emirates from 2008 to 2022. Using the dynamic generalized method of moments in a panel data analysis, we found that financial development has a positive effect on economic growth. Equally important, the institutional quality plays a significant and positive role in economic growth. More interestingly, the study finds that the institutional development is complementary to financial development. As a policy implication, we recommend that policymakers place special importance on implementing policies that result in the deepening of financial systems, including a sound institutional framework. Thus, by promoting the development of a country's financial system, economic growth will be accelerated.

Keywords: Financial development, Institutions, Economic growth, Panel data analysis.

JEL Classification: F23, F34, F43.

1. INTRODUCTION

The relationship between financial development and economic growth has received a great deal of attention in recent decades. Indeed, it has been argued that countries that are relatively more financially developed are better suited to avoid or withstand currency crises (Federici and Carioli, 2009). Consequently, promoting the financial development in many developing countries may have important positive consequences for the many organizations and individuals within such countries that are affected by economic downturns.

According to Levine (2005), the financial system should boost savings and investment decisions, which engenders economic growth by performing the five primary functions listed below: First, generate pre-investment information on potential investments and allocated capital; second, control investments and ensure their compliance with corporate governance. Third, facilitate the exchange, the diversification, and the management of risks. Fourth, mobilize and share savings, and finally, facilitate the exchange of goods and services. In fact, financial development is the result of the increase of the financial system's efficiency in performing these crucial functions.

According to North (1990), institutions are a set of formal and informal rules and norms that organize social, political, and economic relations. In fact, while formal rules, such as constitutions, laws, and property rights exist, informal rules, such as social norms, customs, or traditions shape the thought and behavior. Intuitively, North's (1990) broad definition provides a good reason to expect that institutions would matter explicitly for the extent to which financial development can affect economic growth. It has been long assumed that the presence of strong institutions contributes to the financial system's ability to perform its functions efficiently, which promotes economic growth. In other words, the contribution of a well-developed financial system to economic growth depends greatly on the development of institutions, which are of great importance.

In terms of institutional quality and financial sector performance, GCC countries are making inroads with a significant improvement in the institutional environment and financial deepening. Differences in institutional quality and financial development can have a significant impact on economic growth. In more applied works (for example, World Bank, 2002) institutions appear crucial for supporting markets and increasing competition, for the definition and enforcement of property rights and contracts, for the diffusion of information about market transactions hence, for the reduction of uncertainty in exchange; in short, for the efficient distribution of resources.

In fact, this paper examines the interaction impact between financial development and institutions on economic growth within the context of the GCC countries. Indeed, financial development contributes to economic growth in the GCC region which, in turn, generates additional revenues for the governments and the populations of the region through fiscal policies and job creation. Additionally, institutional quality and better governance tend to amplify the positive impacts of financial development on economic growth in the region.

This study further contributes to the empirical literature on financial development and economic growth by contextualizing four aspects. First, it considers the role of the institutional quality in explaining the financial development and economic growth relationship in the context of the GCC countries. Second, we used the economic freedom index developed by the Fraser Institute in examining the potential role of the institutional quality in determining the financial development-growth nexus. The knowledge of this is fundamental for policy formulations and implementations. Third, the empirical method involves regressing economic growth on financial development, institutions, interactions between these two variables, and other growth determinants recommended in the literature. However, the financial development and institutions variables are likely to be endogenous, possibly because of feedback from economic growth to financial development and institutions. Therefore, this study uses the generalized method of moments (GMM) estimation to deal with endogeneity and simultaneity bias. Last, in terms of policy implications, the results of this research will guide policy makers in designing policies aimed at better institutional quality which is potent in ensuring the effectiveness of financial development and promoting the economic growth.

The main purpose of this paper is to examine the role of institutions in mediating the financial development effect on economic growth on a panel of 3 GCC countries, namely, Oman, Qatar and United Arab Emirates over the period 2008-2022. Our dynamic panel regression analyses show that financial development positively and significantly effects economic growth in the GCC countries. This study also highlights the positive complementarities between financial development and institutions, which implies that the institutional quality is a necessary condition for the financial development to accelerate economic growth. In fact, the higher the level of institutional quality, the more finance stimulates economic growth. Therefore, the efforts made to improve the quality of

institutions should be prioritized for the development goals of the GCC countries that intend to accelerate economic growth through the financial system.

The remainder of this paper is organized as follow. Section 2 covers the existing literature review. Section 3 presents the data and methodology employed. The empirical results are presented in Section 4. Finally, Section 5 draws conclusions and the main contributions of the study.

2. LITERATURE REVIEW

2.1. Financial Development and Economic Growth

In this context, Schumpeter and Opie (1934) highlighted the role of financial institutions in supporting productive investments and encouraging innovation, both of which foster growth. In a cross-country analysis, King and Levine (1993), conducted several econometric studies that provided empirical support for the leading view that finance promotes economic growth. On the other hand, Gurley and Shaw (1955) and Goldsmith (1969) argued that more developed financial markets promote economic growth by mobilizing savings to finance the most productive investments. As for McKinnon (1973) and Shaw (1973), they argued that pervasive financial regulations involving interest rate ceilings and reserve requirements, especially in the developing countries, impede saving-investment decisions. Moreover, they stressed the importance of financial liberalization via the deregulation of the interest rates, which would lead to an increase in loanable funds as well as to a more efficient allocation of economic resources. Furthermore, the emergence of the endogenous growth theory (Lucas, 1988; Romer, 1986) generated renewed interest in the role of financial development in promoting economic growth. This literature highlights the positive role played by the financial system in improving economic growth, in particular by mobilizing savings, efficient resource allocation to the more productive investments, while reducing transaction costs, diversifying risks, and facilitating the exchange of goods and services.

In fact, the empirical literature on the relationship between finance and economic growth is extensive. However, there has been no consensus on the relationship between financial development and economic growth in terms of the position and significance of finance in economic growth, as well as the direction of causality. Regarding the developing countries, Xu (2000) examined the effect of financial development on economic growth in 41 developing countries selected from Latin America, Asia, and Africa from 1960 to 1993. It was revealed that financial development is essential for economic growth in 27 countries, but has a negative impact in 14 others. As for Bittencourt (2012), he investigated the effect of financial development on economic growth in four Latin American countries, including Argentina, Bolivia, Brazil, and Peru over the period 1980 -2007. He found that financial development is positively and substantially related to economic growth. For their part, using data from 42 developing countries in Latin America and Asia from 1996 to 2011, Aizenman et al. (2015) revealed the existence of significant differences between both regions in terms of the impact of financial development on growth, and found that financial development has a negative on economic growth in many sectors. They also showed that financial development is beneficial to economic growth only up to a certain point, beyond which new financial development is likely to have a negative impact on economic growth.

The impact of financial development on economic growth in the Middle East and North Africa (MENA) countries in recent years has attracted both scholars and economists' attention. In this context, Arayssi et al. (2019) studied the impact of financial development on economic growth in a framework that also accounted for government institutions in the MENA region over the period 2005-2014. They pointed out that financial development plays a significant role in promoting economic growth, while political instability adversely affects economic growth. They claimed that

a well-developed financial system is a necessary but not a sufficient condition to accelerate economic growth. However, Kar et al. (2011) found that there is no clear consensus on the direction of causality between financial development and economic growth in 12 MENA countries from 1980 to 2007. They also observed that the findings are country specific. This viewpoint was earlier unveiled by Naceur and Ghazouani (2007) who investigated the impact of financial development on economic growth in 11 MENA countries. They showed that banking development and stock market development have no significant positive impact on economic growth. At the extreme, Grassa and Gazdar (2014) confirmed that Islamic banking development leads to economic growth in the five GCC countries from 1996 to 2011 however, no significant association was observed between conventional financial development and economic growth.

For their part, Muhammad et al. (2016) argued that financial development impacts positively economic growth in all GCC countries from 1975 to 2012. They also indicated that FDI, private investment and oil production affect positively economic growth. They advised that policy makers in the GCC countries would reinforce the solidity and security of the financial system to promote their intermediation process, so that the mobilization of local financial resources is rapid enough to effectively allocate them to different capital needs, with appropriate monitoring, diversification and risk management. All these actions would finally help achieve the essential objective of promoting productivity in the private sector in each country of the GCC.

For his part, Al-Jarallah (2022) showed that financial development and natural resource rents exert a positive effect on total factor productivity in GCC countries from 1984 to 2019. Likewise, he found that promoting trade openness benefits total factor productivity. Nevertheless, growing corruption and population declines productivity. Furthermore, he asserted that it is important to improve trade and financial openness in foreign countries and to effectively use natural resource rents for real GDP growth.

For their part, Riache et al. (2024) examined factors influencing economic growth in GCC nations from 2001 to 2021. They pointed out that financial development, proxied by domestic credit to private sector by banks (% of GDP), influence positively real GDP growth. They argued that it is imperative to implement policies that fortify the banking industry, expand corporate credit availability, and stimulate private sector investment to promote economic growth in the region. As for Fengju and Wubishet (2024), they examined the relationship between financial development, institutions and economic growth in 18 East African countries from 1995 to 2021.They found that the impact of financial development on economic growth in East Africa is multifaceted. While financial development itself demonstrates a positive influence on economic growth, this effect is significantly amplified in countries with stronger institutional frameworks. This advises that robust institutions act as a catalyst, maximizing the positive effect of financial development on economic growth.

More recently, Abd and Debs (2024) studied the effect of financial market depth on achieving economic growth in the GCC countries over the period 2000-2019. They pointed out that there was a significant positive influence of financial market depth on economic growth. Their result corroborates with the leading supply theory, which suggested that the financial system influences economic growth in developing countries, where the presence of financial institutions and financial intermediaries has a significant influence on enhancing economic growth.

2.2. Institutions And Finance-Growth Nexus

Institutions are considered as legal and social rules/norms that govern economic systems as well as reward the markets and growth enhancing activities (North, 1990; Acemoglu et al. 2001). It is

approved that strong institutions are the cornerstone of sustainable development through different types of channels. Financial markets and institutions emerge as an optimal response to technological and informational constraints within a given set of rules-of-the-game or institutions. As such, financial market imperfections through financial constraints, incomplete risk sharing, liquidity shortages, and weak market discipline affect the accumulation of capital (Acemoglu and Robinson, 2010). This is largely linked to asymmetric information and transaction costs in which well-developed institutions can go a long way in ensuring a better operating environment.

Therefore, institutions are important for financial development to promote economic growth because institutional arrangements have the potential to ameliorate or worsen the information frictions and transaction costs that characterize the development of the financial markets. Moreover, the quality of institutions plays a significant role in promoting the finance-growth nexus because it protects property rights, enforces contract terms, and shapes macro-financial policy. For his part, Love (2003) also asserted that the better the institutions, the higher the financial development, and the better the investment and economic growth will be as financial constraints are reduced. As a result, the reduction of financial constraints helps businesses invest based on their growth opportunities and improve their profitability and capital allocation. However, Demetriades and Law (2006) assert that an increase of financial development may not reflect an increase of economic growth due to the banking system's corruption or policy inconsistency, which can divert credit to inefficient activities. As a result, the possibility that financial development to improve economic growth depends on the evolution of the institutions that carry out that development, by reducing uncertainty and encouraging productive investments.

Moreover, political and economic institutions matter in the finance-growth nexus. According to Fernandez and Tamayo (2017), underdeveloped financial system is illustrated by high information and transaction costs, and institutions matter to the extent that they are the fundamental roots of these costs. Institutions, financial development and growth linkage can principally be explained by (i) ensuring property rights enforcement in financial contracts, as well as (ii) effectively designing and implementing macroeconomic and financial policy. As such, the financial development and good institutions would then enhance economic growth, largely by reducing financial constraints, increasing risk-sharing, and providing adequate liquidity. This would, in turn, translate into greater rates of capital investment and more efficient allocation of resources.

Empirical literature has been argued that finance-growth nexus is conditional on the level of institutional quality (Law et al. 2018; Gazdar and Cherif 2015; Law et al. 2013) an economy develops or fails to develop. Good institutions provide stimuli that improve the efficiency of financial system to allocate resources to investment that promote economic growth, while weak institutions accommodate sharp practices and opportunistic behavior that culminate in corruption and political interferences that divert credit to unproductive and wasteful activities which leak out the economic growth benefits and productivity-enhancing tendency of financial development. Following this statement, researchers have empirically studied the role of institutional quality in financial development-economic growth nexus.

In this context, Demirguc-Kunt and Maksimovic (1998) determined the relationship between institutions, finance and economic growth for 72 countries over the period 1978-2000. They showed that financial development is more beneficial for economic growth when countries' financial systems are implemented within sound institutional frameworks. For his part, Levine (1998) found that banking development is positively linked with a more efficient legal system (in terms of contract enforcement and creditor's rights protection). The legal component of banking development is found to be positively associated with economic growth. Relying on panel data

from 72 countries for the period 1978-2000, Demetriades and Law (2006) concluded that the positive effect of financial development is larger within a sounder institutional framework and that the link is particularly significant in poor and middle-income countries' economies, where more finance without sound institutions is likely to fail in promoting economic growth. The similar results were obtained by Yahyaoui and Rahmani (2009) in a panel study of 22 developing countries from 1990 to 2006. They argued that financial development has positive effects on economic growth when the financial system is embedded in a in a strong institutional structure.

As for Law et al. (2013), they studied the non-linearity in finance-growth nexus using institutional quality as the threshold variable in 85 countries from 1980 to 2008. They concluded that financial development significantly spurs economic growth only after reaching a certain threshold level of institutional development. They also concluded that a low quality of institution tends to distort the capacity of financial intermediaries to channel resources effectively to productive uses. Similar results were replicated by Ben Naceur et al. (2014) on a panel dataset of 12 MENA countries over the period 1960-2006. They showed that institutional quality, particularly the rule of law, promotes financial development by signaling confidence in the quality of the legal system in support of the economic activity. They also found that the stability of the financial system benefits from better institutions.

According to Gazdar and Cherif (2015), institutional quality mitigates the negative effects of financial development on economic growth in 18 MENA countries. Besides, without institutional quality, financial development has a negative impact on economic growth in these countries. Furthermore, Kutan et al. (2017) found that institutional quality plays a complementary role to financial development in promoting economic growth in 21 MENA countries from 1980 to 2012. Similarly, Law et al. (2018) showed that institutions play a central role in positively mediating between financial development and economic growth in a panel analysis of 87 countries over the period 1984-2011. They have also concluded that the capacity of financial development to improve economic growth depends on the efficiency of the institutions that implement this development by reducing uncertainty and encouraging productive economic activities.

As for Sohag et al. (2019), they investigated the role of institutional quality in finance-growth nexus in Indonesia and Malaysia and showed an inverted U-shaped relationship between finance and economic growth for Malaysia as well as for Indonesia. However, a positive change in the institutional quality was found to have a much greater impact on economic growth in Malaysia rather than playing a mediating role. Interestingly, in Indonesia, the institutional quality was found to hinder economic growth but it plays a positive and significant mediating role in the finance-growth relationship. For their part, Yahyaoui and Al Saggaf (2019) studied the connexion among financial development, quality of institutions and economic growth in six Arab Gulf countries from 1995 to 2012. They pointed out that the institutional quality is the channel of transmission from the financial sphere to the real sphere. Thus, the financial system cannot improve economic growth if it is not accompanied by a "strong institutional framework" existing by better bureaucracy, fight against corruption and solid legal and operational framework.

On the other hand, Aluko and Ibrahim (2020) have examined whether the impact of finance on economic growth is affected by the level of institutional development in 28 ASS countries between 1996 and 2015. Furthermore, they asserted that institutional quality complements financial development so as to have a greater positive impact on the economy. They have also demonstrated the threshold value of institutional quality beyond which institutions stimulate financial development so as to stimulate economic growth in the ASS countries. In fact, similar findings have been reported by Haini (2020) on a panel of data from ten ASEAN countries from 1995 to

2017, showing that institutions play a complementary role in financial development in order to promote economic growth.

Recently, Haque et al. (2022) studied the link among financial development and economic growth by considering the institutional quality of countries with substantial oil rents in six GCC countries from 2000 to 2019. They showed that economic growth contributes positively to the financial development of GCC countries and not vice versa. They also confirmed that low quality of institutions limits the influence of oil rents to financial development. They argued that in countries that accumulate oil rents, the institutional quality wants to be enhanced to advance the source of financial development. Therefore, our research contributes to the goal of the previous study by investigating the impact of institutional quality on the relationship between finance and economic growth, as well as the use of an empirical model with interaction variable.

3. DATA AND EMPIRICAL METHODOLOGY

3.1. Data

This paper considers a sample of 3 GCC countries, namely, Oman, Qatar and United Arab Emirates from 2008 to 2022. The choice of these countries is based on data availability where the dependent variable is economic growth, which is measured as the growth rate of real the GDP per capita at 2015 USD prices.

The key variable of interest (financial development) and other control variables are obtained from the World Development Indicators (2024) published by the World Bank. In this study, financial development is measured by domestic credit to private sector by banks (% of GDP), which allows to measure the degree of intermediation carried out by the banking sector, including credit to private sector. We use this proxy because the private sector is considered the engine of economic growth in many developing countries like those in GCC (Obeng-Amponsah et al. 2019).

The extended model will also include the following institutional variable: The economic freedom of the World index from the Fraser Institute. This index is used to measure the freedom of the economic activities in a country. In fact, higher indexes are related to smaller governments (Area 1), to a stronger legal structure and security of the property rights (Area 2), access to sound money (Area 3), greater freedom of exchange with foreigners (Area 4), and more flexible regulations of credit, labor, and business (Area 5). The comprehensive and area scores are all on a scale from zero to 10, with zero being the least and 10 being most free, which implies that the greater the economic freedom, the more it enhances economic growth (Azman-Saini et al. 2010). Therefore, a positive coefficient is expected. Moreover, the data are obtained from Gwartney et al. (2024).

Our base model contains the explanatory variables common to most growth regressions showed in the literature:

- Initial GDP per capita (log): log of real GDP per capita. A negative coefficient is expected, signifying the existence of conditional convergence between countries (La Porta et al. 1998).
- Inflation rate: The growth of the consumer price index measures the annual percentage change in the consumer price index that determines the inflation rate. This rate reflects the change in prices paid by the average consumer during a given period when purchasing goods and services. A negative coefficient is expected because high inflation can deteriorate price competitiveness, leading to negative effects on foreign trade and economic growth (Elder, 2004).
- Trade openness rate measured as the percentage of imports plus exports in GDP. Trade liberalization encourages specialization in various sectors which has increased the economic

scales that encourage productivity and efficiency (Chang and Mendy, 2012). Assuming that openness to international trade is beneficial to economic growth, a positive coefficient is expected.

3.2. Empirical methodology

Therefore, the purpose of our empirical analysis is to examine if economic freedom (EF) plays an important role in influencing the effects of financial development (FD) on economic growth in the GCC countries. To this end, we employ a specification that is broadly similar to others (e.g., Law et al. 2013; Gazdar and Cherif, 2015). We consider the following model:

$$y_{i,t} = \alpha y_{i,t-1} + \beta_1 FD_{i,t} + \beta_2 EF_{i,t} + \beta_3 X_{i,t} + \mu_t + \eta_i + \varepsilon_{i,t} \quad (1)$$

Eq. (1) can also be alternatively written with the growth rate as a dependent variable as:

$$Growth_{i,t} = y_{i,t} - y_{i,t-1} = (\alpha - 1) y_{i,t-1} + \beta_1 FD_{i,t} + \beta_2 EF_{i,t} + \beta_3 X_{i,t} + \mu_t + \eta_i + \varepsilon_{i,t} \quad (2)$$

The subscript "t" represents the period, whereas represents the country, is the logarithm of the real GDP per capita, FD is the financial development variable, EF is the index of economic freedom and X is the matrix of the control variables described in the previous section, μ_t is a time specific effect, is an unobserved country-specific fixed effect and is the error term. Eq. (2) forms the basis for our estimation where $(\alpha - 1)$ is the convergence coefficient.

While FD has the potential to affect the economic activity through a host of channels, we examine one specific link between FD and economic growth, specifically the one working through EF. The hypothesis we would like to test is whether the level of EF in the host country affects FD on economic growth. To this end, we add an interaction term constructed as the product of FD and the EF (i.e., FD*EF) to Eq. (2) as an additional explanatory variable, apart from the standard variables used in the economic growth equation. If the coefficient on the interaction term is positive and significant, it implies that the marginal effect of FD on economic growth depends on the level of EF.

The regression to be estimated is the following:

$$Growth_{i,t} = (\alpha - 1) y_{i,t-1} + \beta_1 FD_{i,t} + \beta_2 EF_{i,t} + \beta_3 (FD_{i,t}.EF_{i,t}) + \beta_4 X_{i,t} + \mu_t + \eta_i + \varepsilon_{i,t} \quad (3)$$

The subject model, knows both a problem of endogeneity of the variables, and a correlation among the delayed endogenous variable and the residuals. Indeed, any convergence model is dynamic and, as a result, it introduces an additional endogeneity within the explanatory variables.

In general, dynamic models are examined in first differences by the method generalized moments (GMM). In this context, Anderson and Hsiao (1982) suggested to use the lagged first differences of the endogenous variable as instruments. Arellano and Bond (1991) added to this list of instruments the lags of the endogenous variable by showing their orthogonality to the residuals.

It must be said that there are two kinds of GMM estimators, which are applicable to dynamic panels. These are the first difference GMM estimator (Arellano and Bond, 1991) and the system GMM estimator (Blundell and Bond, 1998), which is only an improved version of the first. As its name indicates, the first difference GMM estimator consists of estimating the equation of the model in first difference, in order to control the effect specific to the statistical unit or individual. This latter method is the one used in the most recent applied works on the association between financial

development and economic growth, notably those of Levine et al. (2000); it is on the results of this second method that we principally base our conclusions.

System GMM estimations allows not only to take into account the heterogeneity of countries but likewise to address the problem of the endogeneity of variables, which essentially arises when examining the association among financial development and economic growth. The first authors who were interested in this relationship highlighted the two-way causality (Patrick, 1966) between the two forms of development, if only because the increase in income is accompanied by a growth in savings and therefore acquisitions of financial assets. Work on the theory of endogenous growth has further reinforced the idea of double causality. The sharing of risks that financial intermediation allows and which promotes investment in new technologies involves costs and itself implies a certain level of product per capita (Greenwood and Jovanovic, 1990).

The technique of Arellano and Bond (1991) involves of rewriting the original equation in first differences, which eliminates individual fixed effects, and then using their own lagged levels as instruments for the differenced series. This method improves on the instrumental variable estimation of Anderson and Hsiao (1982) by mentioning to a set of orthogonality conditions defining optimal GMM estimators. It also resolves the difficult choice regarding the list of instruments. However, it has been revealed that this first version omits a set of orthogonality conditions that can be showed by considering a system consisting of two equations. Arellano and Bover (1995) and Blundell and Bond (1998) proposed the GMM method in system. This method consists of combining for each period the equation in first difference with that in level. In the equation in first difference, the predetermined variables are instrumented by their values in level lagged by at least one period. On the other hand, in the equation in level, the predetermined variables are instrumented by their first differences. The system of equations thus obtained is estimated simultaneously, using the GMM. Blundell and Bond (1998) verified this method using Monte Carlo simulations. They showed that the system GMM estimator is more efficient than the difference GMM estimator (Arellano and Bond, 1991) which only uses the moment conditions of the first difference equation with lagged variables as instruments.

The efficiency of the estimation of system GMM is based on the validity of two tests. First, the test of Sargan/Hansen, which enabled us to test the validity of the lagged variables and the second, is the test of Arellano and Bond where the null hypothesis is the absence of autocorrelation of errors in the second order difference equation.

Our findings confirm that there is no serial correlation, and the instruments employed are also valid. The findings of the estimation are exposed in Table (1).

4. EMPIRICAL RESULTS

At the level of table (1), the results clearly show that the coefficient of the financial development variable is positive and statistically significant at the 1% threshold, which advocates that the financial development, proxied by domestic credit to private sector by banks (% of GDP), play a vital role in economic growth in the GCC countries. The result means that, a 1% increase in financial development will lead to 0.523% increase in real GDP growth. Economic theory argues that financial development contributes to better information about potential investment opportunities and capital allocation, which helps to stimulate economic growth. Our results corroborate the predictions of the supply-side hypothesis, endogenous growth models, and the findings of some empirical studies such as those of Al-Jarallah (2022) and Riache et al. (2024).

Table 1. Financial development, institutional quality and economic growth (2008-2022)

Variable		
Initial GDP per capita		-0.29*** (-3.079)
Financial development		0.523*** (6.905)
Economic freedom		0.332** (2.596)
Financial development*Economic freedom		0.151* (2.026)
Inflation		-0.248** (-2.697)
Trade openness		0.631*** (4.565)
Constant		0.654*** (4.877)
R-squared AR(2) test (p-value) Sargan test (p-value)		0.88 0.562 0.481

Note: AR(2) is a test of second order residual serial correlation while the J-test is the Sargan over-identification test. T-statistics are in parentheses. *, ** and *** indicate a statistical significance at 10%, 5% and 1% levels, respectively.

On the other hand, the economic freedom coefficient carries a positive sign and is statistically significant at the 5% threshold, implying that economic growth is stronger when economic freedom is high because it makes investment more productive. The result means that, a 1% increase in economic freedom will lead to 0.332% increase in real GDP growth. This finding is in line with that of the survey conducted by De Haan (2007) and Azman-Saini et al. (2010) who argued that economic freedom is crucial for economic growth.

The result also shows the regression results based on interaction specification using an interaction term between financial development and the economic freedom index (FD*EF). In this specification, we relied on the interaction term to establish the contingency. If the term is positive and significant, this implies that the impact of financial development on economic growth increases with economic freedom. The first thing to note is that the interaction term turns out to be positively signed and statistically significant at 10 percent level. This result implies that a better contribution of financial development to economic growth requires taking into account the interrelationship and the complementarity between financial development and the institutional quality. Moreover, good institutions develop an incentive structure that reduces uncertainty and promotes efficiency and helps spur the strong economic growth rates. This finding is consistent with that of Aluko and Ibrahim (2020) who confirmed that better intuitions complement financial development to produce stronger positive impact on economic growth.

We then introduced the level of the initial GDP per capita (the natural logarithm) as an independent variable according to the conditional convergence hypothesis. Moreover, the initial income showed an inverse relationship with economic growth, which is strongly supported by the idea of income convergence as countries with initial high income normally experience reduced production in the future while the opposite is true for countries with a low initial income. The results of income convergence are in line with the findings by Breitenlechner et al. (2015) and Yilmazkuday (2011).

Moreover, we noted that the coefficient of the inflation rate has a negative sign and is then statistically significant at 5 percent level, suggesting that a high inflation rate will havean adverse impact on economic growth. The result shows that a 1% increase in inflation would decrease real GDP growth by 0.248%. This finding suggests that inflation harms the economic growth. Consequently, the adverse effect of inflation on economic growth can be explicated by the general increase in prices, which can raise production costs within firms, creating production-related difficulties. This clearly supports the works of Sadeghi et al. (2023) who affirmed that high inflation decreases economic growth in Middle Eastern countries.

On the other hand, trade openness is also significant, at 1 percent level, in explaining the economic growth in GCC countries. The positive sign on this variable suggests that the higher trade openness, the higher economic growth. The results show that for every 1% change in the trade openness, the economic growth will increase by 0.631% suggesting trade openness also have an important effect on economic growth. This finding is in line with the study by Altaee (2018) in which, a positive association between trade openness and economic growth was found in GCC countries.

On the other hand, the p-values of second-order serial correlation and Hansen's over-identification tests indicate that the model is adequately specified. Additionally, the estimated regression passed both specification tests therefore, the null hypothesis of no second-order serial correlation cannot be rejected at 5 % level. The regression is not plagued by simultaneity bias as the orthogonality conditions cannot be rejected at 5 % level, as indicated by the Hansen test. This suggests that the equation is adequately specified and the instruments employed in the analysis are valid.

5. CONCLUSIONS AND POLICY IMPLICATIONS

The relationship between financial development and economic growth has long remained an important issue of debate in the literature. Therefore, this paper has examined the role of institutions in mediating the positive relationship between financial development and economic growth. The obtained results show that the marginal impact of financial development on economic growth depends on the institutional quality. Therefore, to test our hypothesis, this study uses the system GMM panel estimator and data from 3 GCC countries from 2008 to 2022. From the empirical analysis, we drew three important conclusions. First, the coefficient measuring the impact of the financial development on economic growth is positive and significant; indicating that financial development positively affects economic growth. Second, the institutional quality is found to be an important factor for economic growth in the selected countries. Finally, the effect of financial development on economic growth is contingent on the level of institutional development in the host countries. This supports previous empirical studies that have emphasized the complementary role of financial development and the institutional quality on economic growth (Gazdar and Cherif, 2015; Law et al. 2018).

These results have some important policy implications. This means that, in order to benefit from financial development in terms of economic growth, financial systems in GCC countries must be embedded within a sound institutional framework. As a main finding, investment profile seems to play a major role for all aspects of financial development; thus, promote a favorable business environment is of utmost importance, in order to reduce investments risks, increase confidence and attract greater foreign investment to promote economic growth. GCC countries should adopt regulatory and policy measures in order to improve the investment climate develop effective, accountable and transparent institutions for the financial system. We think that good institutions, strong legal framework, democracy and political stability are priorities for GCC countries to allow their financial systems to perform important functions to improve bank competition and intermediation efficiency.

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