FINANCIAL DEVELOPMENT, INSTITUTIONAL QUALITY, AND ECONOMIC GROWTH: A PANEL FIXED EFFECTS ANALYSIS OF EMERGING AND ADVANCED ECONOMIES

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ABSTRACT

Understanding why financial development promotes economic growth in some countries but not in others remains a central question in development and financial economics. This study examines the relationship between financial development, institutional quality, and economic growth, with a particular focus on whether institutional quality conditions the growth effects of financial development across emerging and advanced economies. Using an unbalanced panel of countries over the period 2015–2023, the analysis employs a two-way fixed effects framework to control for unobserved country-specific heterogeneity and common global shocks. Financial development is proxied by domestic credit to the private sector, while institutional quality is measured using a composite index constructed from the six Worldwide Governance Indicators through principal component analysis. The results indicate that financial development, in isolation, does not exert a robust effect on economic growth once fixed effects are accounted for. However, the interaction between financial development and institutional quality is positive and statistically significant, suggesting that the growth payoff from financial deepening depends critically on governance conditions. Marginal effects analysis shows that financial development is growth-enhancing only at higher levels of institutional quality, while its effect is negligible or negative in weak institutional environments. Subsample analysis reveals that this conditioning mechanism is substantially stronger in emerging economies than in advanced economies. Robustness checks using an alternative composite measure of trade openness yield qualitatively similar conclusions. The findings support a conditional view of the finance–growth nexus, highlighting the central role of institutional quality in enabling financial development to translate into sustained economic growth.

KEYWORDS: Financial Development, Institutional Quality, Economic Growth, Fixed Effects Panel Data, Emerging and Advanced Economies.

1. INTRODUCTION

The question of the determinants of economic growth has been one of the major issues of concern in economics especially because there have always been differences between the emerging and the advanced economies. The most commonly pointed out drivers include financial development and institutional quality, which are generally considered as key drivers of long-run performance. Although more profound financial systems can mobilize savings, facilitating intermediation and investing capital in productive activities, whether finance works or not depends often on the institutional context of writing and enforcing financial contracts. Finance may also suppress growth by weakening institutions that can misallocate resources and engage in rent-seeking during the process of intermediation. Empirical evidence is still inconclusive, particularly in the diverse economies at various levels of development despite the extensive research done on the same.

Recent work on finance-growth studies is increasingly feeling the necessity to transcend single indicator explanations and describe the multidimensionality of financial development. In this respect, the IMF broad-based Financial Development Index (FDI) framework has played a significant role in pointing out the joint nature of depth, access, and efficiency in defining financial systems and the fact that various proxies may suggest different growth associations (Svirydzenka, 2016). Meanwhile, empirical studies that analyze finance and growth in an emerging or middle-income setting tend to find that the effect of financial development is estimated to be much more informative when institutional quality is included in the analysis, suggesting that the state of governance determines whether finance leads to growth (Bayraktar et al., 2023).

Parallel efforts in the field of institutional economics still highlight the point that institutions not only organize incentives but also regulate the enforcement of contracts, and returns to investment and innovation. Although the underlying arguments about the relationship between institutions and long-run growth are still very powerful (Acemoglu et al., 2005), the availability of better measurement tools has made the indicators of governance applied in cross-country analysis more transparent and interpretable. An example is the Worldwide Governance Indicators (WGI), which offer an annual score of six dimensions of governance and explicitly give margins of error, which allows a more cautious cross-country and cross-temporal comparison (Kaufmann & Kraay, 2024).

A new body of literature is emerging to the effect that finance is not a self-sufficient phenomenon; the growth impacts of financial development can be contingent on the quality of institutions. Weaker screening, politically connected lending or misallocation may be linked to financial deepening in low-governance settings, but stronger institutions may facilitate more productive credit allocation as well as reduce transaction costs.

The empirical evidence on this interaction is still context-dependent and country-sample, proxy financial and institutional, and the extent of addressing unobserved heterogeneity econometrically (Bayraktar et al., 2023; Kaufmann & Kraay, 2024). Moreover, recent research points to the fact that even trade openness is a multi-dimensional concept, which is not only the amount of trade flows, but also the ability to interact efficiently in global markets due to the integration of infrastructure and services, which leads to the necessity of more comprehensive measures of openness in growth regressions.

With these factors in mind, the current paper analyses the correlation between financial and economic growth and implicitly manoes institutional quality as a conditioning variable and compares emerging and developed economies based on the IMF World Economic Outlook (International Monetary Fund [IMF], 2025). The analysis is based on a panel fixed effects model, which is used to account for country-specific characteristics that are time-invariant and shared shocks across the world using an unbalanced panel that spans the latest period possible, as determined by the data. Domestic credit to the private sector as a percentage of GDP is used as a proxy of financial development, a composite index based on the six WGI dimensions is used to measure institutional quality, and the macroeconomic variables are obtained through the World Development Indicators (World Bank, 2024a, 2024b).

The research has added value to the literature in three aspects. To begin with, it offers a single empirical test that the institutions moderate the relationship between finance and growth. Second, it measures heterogeneity of emerging and developed economies. Third, it uses fixed effects with time effects which reduces bias due to unobserved country heterogeneity and common shocks which enhances the credibility of inference as compared to pooled methods.

The rest of the paper follows in the following way. The data and methodology are described in Section 2. The empirical results are given in Section 3,

implications in Section 4 and the conclusion is given in Section 5.

1.1. Research Objectives

The concurrent discussion about the finance-growth nexus, as well as the increasing importance of institutional quality as one of the key conditions of critical conditions, drives the given research to the following objectives of the study

1. To examine the effect of financial development on economic growth in emerging and advanced economies using a panel fixed effects framework that accounts for unobserved country-specific heterogeneity.
2. To assess the direct role of institutional quality in influencing economic growth, employing a composite governance index that captures multiple institutional dimensions.
3. To investigate whether institutional quality conditions the relationship between financial development and economic growth, by explicitly modelling their interaction and comparing the resulting effects across emerging and advanced economies.

Collectively, the objectives give a systematic foundation of the joint and interactive functions of financial development and institutional quality in determining economic growth at various levels of economic development.

2. DATA AND METHODOLOGY

2.1. Data Sources and Sample Construction

This paper uses an unbalanced panel sample of emerging and developed economies between the year 2009 and 2023, and the duration of the study is based on the availability of institutional quality measures. There is the IMF World Economic Outlook (WEO) classification which is commonly applied in the cross-country macroeconomic literature and classifies countries as advanced or emerging. In order to have a robust and comparative sample, only sovereign countries that have at least 15 annual observations of key variables are included in the final sample.

The macroeconomic variables such as economic growth, financial development, and control variables are obtained in the World Development Indicators (WDI) of World Bank. The data on institutional quality indicators is acquired through the Worldwide Governance Indicators (WGI) database that offers internationally comparable scores of governance in countries and across time. Severely discontinuous data, micro states, and aggregate regions (e.g. world or income groups) are excluded to prevent the distortion of the panel structure.

All datasets are standardised on the country-year level, transformed into a long panel and aggregated with the help of the same country identifiers. The last data is estimable by panel fixed effects and completely replicable.

2.2. Variable Definitions and Measurement

2.2.1. Economic Growth

The growth rate of the real GDP per capita is used to measure economic growth in percentage terms. It is a better measure than aggregate GDP growth because it considers population changes and a more reliable indicator of changes in average standards of living. The indicator is the result of the World Development Indicators and is a norm in the empirical growth literature (World Bank, 2024a).

2.2.2. Financial Development

Domestic credit to the private sector is a percentage of GDP, which is the proxy of financial development as it measures the extent of financial intermediation and the ability of the financial system to channel resources to productive activities in the private sector. The indicator is common in the finance-growth literature and is considered a dependable indicator of the development of the banking industry especially in cross-country research (Levine, 2005; Bayraktar et al., 2023).

Automated teller machines (ATMs) as a measure of robustness are retained to measure financial access as a 100,000 adult. Nonetheless, the variable is not used in the specification of the base because it has less relevance in the financial depth and a higher rate of missing data in the emerging economies.

2.2.3. Institutional Quality

The institutional quality is measured on a composite index based on the six Worldwide Governance Indicators, which include voice and accountability, political stability and lack of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. These indicators represent the complementary aspects of institutional performance and governance.

A principal component analysis (PCA) is used to decrease the dimensions and address the issue of multicollinearity. The composite institutional quality index is the first principal component, which explains the majority of the common variation of the six indicators. This method is well-known in the institutional economics body of literature, and it enables the parsimonious description of the overall quality of governance (Kaufmann et al., 2010).

2.2.4. Control Variables

To separate implications of financial development and institutional quality on economic growth, the analysis has controlled the effect of trade openness with a composite index of effective trade openness. The index is based on three World Development Indicators that total trade as a percentage of GDP, trade in services as a percentage of GDP and the infrastructure component of the Logistics Performance Index. These measures are a combination of exposure to international trade and ability to effectively participate in international markets. The index is built on the basis of the principal component analysis to prevent arbitrary weighting and eliminate dimensionality, keeping the first principal component. Because the Logistics Performance Index is published bi-annually, non survey years are filled forward and backward within countries and then the index is built.

2.3. Econometric Specification

The empirical model relies on a panel fixed effects model, that adjusts against unobserved, time-invariant country-specific attributes that could be affecting economic growth, e.g., geography, historical factors or cultural attributes. The model of the econometric base is defined as follows:

$$\text{Growth}_{it} = \alpha + \beta_1 FD_{it} + \beta_2 IQ_{it} + \beta_3 (FD_{it} \times IQ_{it}) + \gamma TO_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$

where $Growth_{it}$ denotes GDP per capita growth in country i at time t, FD_{it} represents financial development, IQ_{it} denotes institutional quality, and TO_{it} denotes trade openness. Country fixed effects (μ_i) capture unobserved heterogeneity, while time fixed effects (λ_t) control for global shocks affecting all countries simultaneously. The error term ε_{it} is assumed to be idiosyncratic.

By including an interaction term between financial development and institutional quality, it is possible to explicitly test the hypothesis that the growth-enhancing effects of finance are contingent on the quality of institutions. This condition is in line with the theoretical claims that the financial systems can be more effective in facilitating growth in case they are backed by effective legal and regulatory frameworks (Acemoglu et al., 2005).

2.4. Estimation Strategy and Robustness Considerations

All the estimates are made with within-group (fixed effects) estimators and the standard errors are clustered at the country level to establish heteroskedasticity and serial correlation. The fixed effects estimation is better than pooled ordinary least squares and random effects models because it helps to reduce the bias due to some characteristics that are omitted and which were constant over time and across countries.

Alternative specifications to determine robustness include financial access (ATM per 100,000 adults) and do not include the composite trade openness index. Moreover, the estimation is made separately in the emerging and advanced economies to investigate the heterogeneity in the relationship between finance and institution and growth in relation to various levels of economic development.

3. RESULTS

3.1. Validity of the composite indices

3.1.1. Institutional Quality Index (IQ_Index)

The six indicators of governance are appropriate in reducing dimensions and creating indices. The Kaiser-Meyer-Olkin (KMO) value shows that the sampling adequacy is excellent (KMO = 0.897) and the Bartlett test of sphericity has rejected the null hypothesis of no relationship among the governance measures (kh2 = 4885.340, df = 15, p <.001).

Table 1: KMO and Bartlett's Test, with Total Variance Explained for IQ_Index.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.						.897
Bartlett's Test of Sphericity			Approx. Chi-Square			4885.340
			df			15
			Sig.			<.001
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		Cumulative %
	Total	% of Variance	Cumulative %	Total	% of Variance	
1	5.163	86.057	86.057	5.163	86.057	86.057
2	.455	7.580	93.637			
3	.252	4.198	97.835			
4	.063	1.050	98.885			
5	.041	.678	99.562			
6	.026	.438	100.000			
Extraction Method: Principal Component Analysis						

The first principal component is dominant with a total variance of 86.057 percent implying that there is a strong common governance dimension between the six governance indicators.

Thus, it is retained as the composite institutional quality index (IQ_Index), which is presented in Table 1.

3.1.2. Effective Trade Openness Index (Robustness Proxy)

The effective trade openness proxy is also statistically admissible to PCA, although the adequacy of the sampling is moderate and not strong. The KMO value is 0.560 and Bartlett test is significant (kh2 = 193.758, df = 3, p <.001). The former accounts 67.169 percent of the total variance. These diagnostics indicate that indeed the measures associated with openness do have a common element, but one should expect the moderate KMO to be more of a robustness measure than a baseline control (at least with known coverage limitations of LPI-related data), as evidenced in Table 2.

Table 2: KMO and Bartlett's Test, with Total Variance Explained for ETO.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.560
Bartlett's Test of Sphericity	Approx. Chi-Square		193.758
	df		3
	Sig.		<.001
Component	**Initial Eigenvalues**		
	Total	**% of Variance**	**Cumulative %**
1	2.015	67.169	67.169
2	.820	27.325	94.495
3	.165	5.505	100.000
Extraction Method: Principal Component Analysis.			

3.2. Baseline Two-way Fixed Effects Results (Combined Sample)

3.2.1. Model Fit and Fixed Effects Relevance

The combined specification has country and year fixed effects, which captures time-invariant country features and global shocks. The model is co-significant (F = 12.733, p <.001) and has a high level of explanatory power (R 2 = 0.683; Adjusted R 2 =0.630) with N = 436 country-year observations that can be used. The country effects as well as the year effects are statistically significant (country: p < .001; year: p < .001) which attests to the empirical applicability of two-way fixed effects.

3.2.2. Core Coefficients

In the composite model, the primary impact of financial development (credit to private sector) is not significant (B = -0.004, p = .794). The quality of institutions is statistically significant (B = 5.250, p =.009). However, the most important is that financial development is positively related with the institutional quality (B = 0.050, p =.003), meaning that the growth effect of financial development is subject to the level of institutional quality. Trade openness (trade as a percentage of GDP) does not differ significantly in the baseline (B = 0.008, p =.717), but it is also kept as a standard macro control. The estimates of the same are presented in Table 3.

Table 3: Baseline Fixed Effects Panel Regression (GLM).

Dependent Variable: gdp_growth					
Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Corrected Model	4373.823[a]	63	69.426	12.733	<.001
Intercept	.016	1	.016	.003	.957
country_id	1247.578	51	24.462	4.487	<.001
year	2654.588	8	331.824	60.858	<.001
credit_private	.371	1	.371	.068	.794
IQ_Index	37.200	1	37.200	6.823	.009
FD_IQ	49.718	1	49.718	9.119	.003
trade_gdp	.716	1	.716	.131	.717
Error	2028.289	372	5.452		
Total	7998.037	436			
Corrected Total	6402.112	435			
R Squared = .683 (Adjusted R Squared = .630)					

3.3. Interaction Interpretation via Marginal Effects (Combined Sample)

Because the model includes an interaction term, the effect of financial development on growth is conditional on institutional quality:

$$\frac{\partial Growth}{\partial FD} = \beta_1 + \beta_3 \cdot IQ.$$

Using the combined sample estimates ($\beta_1 = -0.004$, $\beta_3 = 0.050$), the implied marginal effects are reported at three standard institutional quality levels (low, mean, high), **treating IQ_Index as a standardized component score**

- **Low institutional quality (IQ = −1):**
  $$-0.004 + 0.050(-1) = -0.054$$
- **Mean institutional quality (IQ = 0):**
  $$-0.004 + 0.050(0) = -0.004$$
- **High institutional quality (IQ = +1):**
  $$-0.004 + 0.050(1) = 0.046$$

The data in figure 1 show the marginal impact of financial development on the economic growth at low, mean and high levels of institutional quality in the joint sample. The marginal effect is negative at low institutional quality, near zero at the mean and positive at the high institutional quality. This trend substantiates the fact that the growth enhancing effect of financial development can only be realized once the institutional quality is high enough.
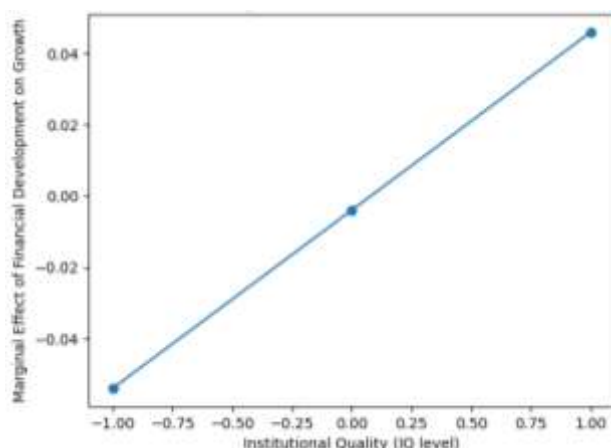

Figure 1: Marginal Effects of Financial Development for the Combined Sample.

These marginal effects imply that financial development is not generally growth-enhancing: the implication of a low-governance environment is negative, whereas the implication of a high-governance environment is positive. This finding is in line with the explanation that institutional strength enhances the efficiency of the translational impact of credit deepening into productive investment and growth.

3.4. Heterogeneity Analysis: Emerging vs. Advanced Economies

To assess heterogeneity across development levels, the baseline model is estimated separately for emerging and advanced economies.

3.4.1. Emerging Economies

The emerging-economy model is also of joint significance and strong fit ($R^2 = 0.715$; Adjusted $R^2 = 0.659$) with N = 257 observations. The institutional quality is not statistically significant (B = -7.906, p =.009). Financial development has a positive relationship with institutional quality that is statistically significant (B = 0.093, p =.009). The linear credit to the private sector effect is insignificant (B = 0.023, p =.369), trade openness is insignificant (B = 0.047, p =.105).

Emerging-economy marginal effects ($\beta_1 = 0.023$, $\beta_3 = 0.093$):

- **IQ = −1:** $0.023 + 0.093(-1) = -0.070$
- **IQ = 0:** $0.023 + 0.093(0) = 0.023$
- **IQ = +1:** $0.023 + 0.093(1) = 0.116$

Figure 2 contrasts the marginal impacts of financial development in both emerging and developed economies. The marginal effect in emerging economies is strongly positive at the higher governance levels, and at lower governance levels, the marginal effect is steep. Conversely, the related relationship of advanced economies is less steep and statistically less significant, which implies that the conditioning effect of institutions is stronger in emerging economies.
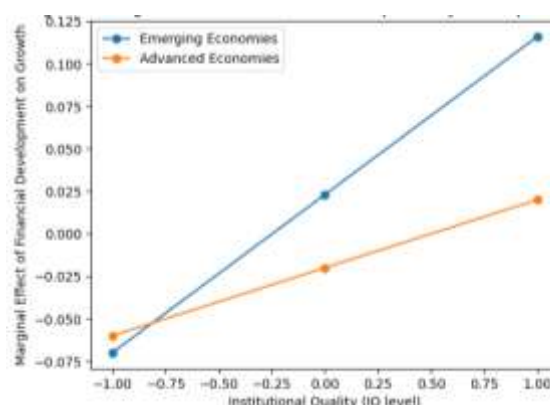

Figure 2: Marginal Effects of Financial Development by Development Group (dev_group).

The trend suggests that there is a greater conditioning role of the institutions in the emerging economies: the financial development is far more growth-enhancing at the high governance levels, but

the implied effect is negative at the low governance levels.

3.4.2. Advanced Economies

The advanced-economy model reports R^2 = 0.646; Adjusted R^2 = 0.569, with N = 179 observations. In this subsample, institutional quality is not statistically significant (B = −3.750, p = .479), and the interaction term is positive but not statistically significant (B = 0.040, p = .282). Credit to private sector remains statistically insignificant (B = −0.020, p = .616), and trade openness is also insignificant (B = −0.041, p = .251). Thus, while the point estimate on the interaction remains in the expected direction, there is no strong statistical evidence of institutional

conditioning within this subsample given the available data and specification.

Advanced-economy marginal effects (β_1=-0.020, β_3=0.040):

- IQ = −1: -0.020+0.040(-1)=-0.060
- IQ = 0: -0.020+0.040(0)=-0.020
- IQ = +1: -0.020+0.040(1)=0.020

The directionally consistent implications of these are consistent with the conditioning hypothesis but need to be approached with care since the interaction term is not significant in this output as applied to advanced economies. The estimates of the parameters of emerging and advanced economies are explained in table 4 and table 5 respectively.

Table 4a: Fixed Effects – Emerging Economies.

Tests of Between-Subjects Effects					
Dependent Variable: gdp_growth					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2972.752[a]	42	70.780	12.761	<.001
Intercept	13.972	1	13.972	2.519	.114
country_id	940.802	30	31.360	5.654	<.001
year	1548.020	8	193.502	34.888	<.001
credit_private	4.494	1	4.494	.810	.369
IQ_Index	39.000	1	39.000	7.032	.009
FD_IQ	38.526	1	38.526	6.946	.009
trade_gdp	14.667	1	14.667	2.644	.105
Error	1186.936	214	5.546		
Total	5405.440	257			
Corrected Total	4159.688	256			
a. R Squared = .715 (Adjusted R Squared = .659)					

Table 4b: Fixed Effects –Advanced Economies.

Tests of Between-Subjects Effects					
Dependent Variable: gdp_growth					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1415.497[a]	32	44.234	8.335	<.001
Intercept	5.413	1	5.413	1.020	.314
country_id	221.717	20	11.086	2.089	.007
year	1058.242	8	132.280	24.925	<.001
credit_private	1.339	1	1.339	.252	.616
IQ_Index	2.670	1	2.670	.503	.479
FD_IQ	6.180	1	6.180	1.165	.282
trade_gdp	7.039	1	7.039	1.326	.251
Error	774.845	146	5.307		
Total	2592.597	179			
Corrected Total	2190.343	178			
a. R Squared = .646 (Adjusted R Squared = .569)					

3.5. Robustness: Replacing Baseline Openness with Effective Trade Openness Index

To assess sensitivity to the definition of openness, the baseline trade measure is replaced by the effective trade openness index. The robustness model

remains jointly significant and exhibits R^2 = 0.790; Adjusted R^2 = 0.647, with N = 140 observations. In this specification, credit to private sector is negative and statistically significant (B = −0.039, p = .045), institutional quality remains statistically significant

(B = −5.111, p = .021), and the interaction term remains positive but becomes marginally insignificant at the 5% level (B = 0.028, p = .095). The effective trade openness index is not statistically significant (B = −1.896, p = .109). The reduced sample size is consistent with the higher missingness associated with the LPI-based component, and this likely contributes to weaker precision in the

interaction estimate.

The strength exercise, in general, does not reverse the qualitative finding that the relationship between finance and growth is determined by institutional situation, even though the strength of inference on the interaction term depends on the trade proxy and the loss of observations. The findings of the robustness model are described in Table 6.

Table 6: Fixed Effects with Effective Trade Openness.

Tests of Between-Subjects Effects					
Dependent Variable: gdp_growth					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	552.860[a]	56	9.873	5.559	<.001
Intercept	19.952	1	19.952	11.234	.001
country_id	396.487	50	7.930	4.465	<.001
year	46.580	2	23.290	13.114	<.001
credit_private	7.392	1	7.392	4.163	.045
IQ_Index	9.797	1	9.797	5.517	.021
FD_IQ	5.081	1	5.081	2.861	.095
Z_effective_trade_openness	4.652	1	4.652	2.619	.109
Error	147.403	83	1.776		
Total	1626.461	140			
Corrected Total	700.263	139			
a. R Squared = .790 (Adjusted R Squared = .647)					

4. DISCUSSION AND POLICY IMPLICATIONS

4.1. Discussion

This paper evaluated the extent to which institutional quality moderates the association between financial development and economic growth, and that there is a difference in the conditioning between emerging and advanced economies. The data lends credence to a conditional finance-growth relationship: the benefits to financial deepening in terms of growth are not uniformly enjoyed in all institutional contexts; instead, the empirical relationship between finance development and growth suggests that the positive growth relation of financial development is enhanced with improvement in institutional quality.

The direct effect of financial development in the combined sample is not statistically significant when added to two-way fixed effects whereas the interaction between financial development and institutional quality is significant and positive. This trend is in line with the notion that the scale of finance is not enough to grow but the efficacy of financial intermediation relies upon governance situations that condition incentives, contract enforcement, and credit allocation. Misallocation and rent-seeking may be linked to credit growth in the weak institutions environment and more efficient intermediation and reduced transaction costs are

associated with stronger institutions. These findings are consistent with the fact that growth implications of finance may decrease or decline past some threshold, which is in line with the wider literature of non-linear finance-growth (Arcand et al., 2015).

Estimates of subsamples show that the conditioning aspect of institutions is stronger in emerging economies. The term of interaction between finance and institutional quality is higher and statistically significant in emerging economies, and the implied marginal effects suggest that a financial deepening is more growth-enhancing by material amounts as institutional quality is high. This is aligned with the understanding that institutional constraints are stronger in places with weaker and more heterogeneous governance and, therefore, institutional improvements are especially critical in transforming financial deepening into real-economy returns (Bayraktar et al., 2023; Law et al., 2013). This interaction is positive in advanced economies, but statistically insignificant in the estimated specifications, which is consistent with the fact that institutional quality may be less differentiated between advanced economies and may already be at the level that finance can operate effectively, so any further change in measured governance may no longer be informative in explaining variation in growth within that group.

The robustness test with a composite proxy of

trade openness (effectiveness) gives qualitatively similar results but lower statistical accuracy. This is conceivably due to the additional bias in missingness in logistics-related elements and the consequent contraction of the sample that may increase the confidence interval and decrease the ability to detect interaction effects. The same sensitivity of finance-growth estimates to proxy choice and sample composition has been reported in related empirical studies (Samargandi et al., 2015). Therefore, robustness model is to be understood as validity check and not as a substitute of the control of openness baseline.

Overall, the results indicate that the relationship between finance and growth can be viewed as institutionally contingent: the positive relationship between financial development and growth is more likely to exist when these developmental factors are placed in an institutional context that encourages efficient contracting, open regulation, and effective enforcement.

4.2. Policy Implications

The implications of the results on macro-financial and institutional reform strategies are obvious, particularly in the emerging economies.

First, financial deepening is not to be followed as the independent growth strategy. In settings where institutional quality is poor, initiatives aimed mainly at increasing the amount of credit might not lead to higher growth and might create the risk of misallocation and instability. The implication of the conditional results is the growth payoff of finance is dependent on the institutional environment where the financial contracts are written, enforced, and supervised (Arcand et al., 2015).

Second, institutional strengthening can be seen as an aspect of development of the financial sector that is relevant to growth. Regulatory reforms that enhance the quality of regulation, the rule of law, governmental performance, and check the corrupt can make it more likely that further credit will be devoted to productive investment instead of rent-seeking. It is especially pertinent to the emerging economies, where the effects of interaction are the most significant and governance restrictions are more binding in general (Law et al., 2013; Bayraktar et al., 2023).

Third, policy formulation must be specific at the stage of development. In developed economies where the institutional quality is more stable and less prone to variability, further financial deepening of the economy may be more growth-enhancing due to financial efficiency, competition, and innovation in the financial system, but not due to gradual improvement in institutional quality. In new economies, however, institutional reforms can have a significant positive effect on the effectiveness of financial development and hence on the growth payoff of deepening (Samargandi et al., 2015).

Lastly, openness-related reforms are important in terms of measurement and implementation. The robustness results sensitivity is achieved using an openness index that includes logistics infrastructure, that indicates that integration into global markets is multidimensional. The exposure (trade flows) and enabling capacity (logistics and infrastructure) should be considered in policies to enhance trade outcomes, but analysts and policymakers must acknowledge the empirical trade-off between more rich measurements and less data coverage across countries.

Overall, this evidence confirms the policy position in conditional finance: financial development can only play the role of supporting economic growth in the case of institutional quality, especially in the case of emerging economies.

5. CONCLUSION

This paper examines the relationship between institutional quality, financial development, and economic growth using a two-way fixed effects panel framework covering emerging and advanced economies. The results indicate that the growth effects of financial development are not uniform and depend critically on the institutional environment in which financial systems operate. For the full sample, financial development alone does not display a robust association with economic growth once unobserved country heterogeneity and global shocks are controlled for. Institutional quality, however, plays a central conditioning role. The positive and statistically significant interaction between financial development and institutional quality suggests that stronger governance enhances the capacity of financial systems to support growth. Marginal effects analysis shows that financial deepening becomes growth-enhancing only at higher levels of institutional quality, while in weak institutional environments its effects are negligible or negative. Subsample analysis reveals that this conditioning mechanism is particularly strong in emerging economies. In these countries, improvements in institutional quality substantially increase the growth payoff from financial development. In contrast, the interaction effect is weaker and statistically insignificant in advanced economies, where institutional quality is generally higher and

less variable. This pattern suggests that institutional constraints are more binding in emerging economies and that institutional reforms can meaningfully alter the effectiveness of financial development. Robustness checks using an alternative composite measure of trade openness yield qualitatively similar conclusions, though with reduced statistical precision due to data limitations. Overall, the findings support a conditional view of the finance–growth nexus in which financial development contributes to economic growth primarily when embedded within a strong institutional framework. These results have important policy implications. Financial deepening without parallel institutional strengthening is unlikely to generate sustained growth benefits, particularly in emerging economies. Financial sector development should therefore be pursued as part of a broader reform agenda emphasizing governance quality, regulatory effectiveness, and institutional capacity.

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