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Original Article

An Empirical Analysis of the Determinants of Financial Development: Evidence from Emerging Markets

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Abstract *- The finance literature consistently indicates a long-term relationship between economic growth and financial development. Both theoretical frameworks and empirical studies confirm that financial development plays a positive role in promoting economic growth. Given the significant role of financial institutions in fostering economic growth, recent attention in finance-growth literature has shifted to exploring the determinants of financial development. A substantial body of research has been conducted at both country and cross-country levels, but less attention has been paid to emerging economies' dynamic and growing context. This study investigates the determinants of financial development in emerging market economies from 2000 to 2022. The study employs panel regression, utilizing pooled OLS, Random Effects, and Fixed Effects models. The empirical results show that trade openness, gross capital formation, financial openness, and income per capita all significantly and positively affect financial development. Although political stability is positively correlated with financial development, it is statistically insignificant in the context of emerging economies. These findings provide important policy implications, underscoring the importance of promoting trade openness, capital investment, per capita income, and financial openness as critical factors in fostering financial sector growth in emerging markets.*

Keywords *- Financial development, Trade openness, Gross capital formation, Income per capita, Political stability.*

1. Introduction

Financial economists have extensively researched the relationship between financial development and economic growth. Both theoretical frameworks and empirical studies support the consensus that financial development positively impacts economic growth. It is widely recognized that well-functioning financial markets play a crucial role in driving economic growth, regardless of a country's level of development. Over the last three decades, it is undeniable that the financial sectors of many developed countries have been pivotal in driving economic growth. They facilitate economic development by investing capital and channelling aggregate savings into productive investments. The financial sector is also essential for fostering a robust and diversified economy, thus contributing to economic growth. Nevertheless, the failure of any component within the financial sector, such as banks, savings and credit lending, or other financial institutions, can have widespread implications and negatively impact the real economy. This has been evident in various financial crises, such as those experienced by Southeast Asian countries in 1997, the Russian Federation in 1998, Turkey in 2001, and the recent global financial crisis. Conversely, a well-functioning and well-managed financial sector can greatly benefit a nation, enabling it to modernize and develop, distinguishing itself from other countries.

Given financial institutions' crucial role in fostering economic growth, the finance-growth literature has recently shifted its attention towards the determinants of financial development. Subsequent studies have examined the factors affecting financial development. These studies have considered aspects such as legal, political, and cultural factors, bank ownership, bank concentration, and geographical disparities among countries that are key for the financial sector growth. All of these factors may impact the development of financial markets. One particularly noteworthy study by La Porta (1997) emphasized the influence of legal traditions in defining laws and enforcement mechanisms, particularly those aimed at protecting the rights of external investors, on financial development.

Similarly, Beck et al. (2003) stated that adaptable and flexible legal systems are crucial in promoting financial development. These systems are better able to meet the changing financial needs of the economy, thus fostering overall growth and development. Likewise, Rajan and Zingales (2003) emphasize the impact of political systems on financial development policies. They argued that closed political systems are more inclined to hinder the development of financial systems that promote competition and pose a threat to entrenched powers compared to open political

systems. Similarly, Azali et al. (2011) looked at the role of political institutions on financial development using the panel data from 1980 to 2006. Their study revealed that politics had a significant effect on financial development. Other studies investigated the determinants of financial development beyond the legal and political system. Raza el.(2014) explored the determinants of financial development, and they found that net foreign direct investment and the rule of law are the key factors in financial development. In the context of arab countries, Al-Fayoumi and Abuzayed (2014) examined whether openness is associated with financial development using panel data from 1985 to 2011. Interestingly, their study found that trade and financial openness do not affect the financial development in the study countries.

In light of the significant socioeconomic impacts of financial development, many countries have prioritized strengthening their financial sectors. However, the outcomes of these efforts have varied widely. Therefore, a fundamental question arises: why do some countries have better financial systems that support growth while others do not? Answering this question necessitates examining the factors that influence financial development across nations. Consequently, investigating the drivers of financial development has become increasingly crucial for countries aiming to achieve robust and sustainable economic growth. In particular, examining the factors influencing financial development in emerging economies is crucial due to these substantial economic potential, growing populations, and increasing integration into the global economy. However, they often encounter structural constraints and institutional challenges that impede financial development. Hence, Understanding the determinants of financial development in these contexts can provide valuable information for policymakers, practitioners, and researchers on effective strategies to promote inclusive and sustainable financial systems. Additionally, improved financial development can help with capital mobilization, resource allocation, and entrepreneurship, all contributing to overall economic development and social welfare.

While many previous studies have predominantly focused on analyzing financial development at the country level, little attention has been given to emerging markets' growing and dynamic context. This study investigates the determinants of financial development across various emerging economies to address this gap and contribute to the expanding body of finance literature. This research aims to shed light on the unique economic, institutional, and policy factors driving financial development in these markets, offering valuable insights that can inform future research and policy formulation.

The subsequent sections of the paper follow this structure: Section two examines existing literature on the topic, providing a critical review of scholarly research in the field. Section three explains the empirical model and econometric methods utilized in the study, while section four presents the data used for analysis. Section five is dedicated to presenting and discussing the econometric findings, thoroughly analyzing the results and their implications. Finally, section six provides a comprehensive summary of the study's key findings and concludes with a discussion that contextualizes these findings within the broader research context.

1.1. Research Hypotheses

The research puts forward a set of compelling hypotheses based on a thorough review of theoretical frameworks and empirical studies in financial development. It suggests that various factors play a significant role in shaping financial development in emerging economic markets. For instance, it proposes that increased trade openness, characterized by greater integration into global markets, will positively impact financial development by opening up access to external capital, diversifying funding sources, and fostering financial innovation. Similarly, it anticipates that higher levels of gross capital formation, indicating increased investment in physical assets and infrastructure, will contribute positively to financial development by providing a robust foundation for expanding financial intermediation and credit provision.

Furthermore, Greater financial openness, characterized by liberalized capital markets and reduced restrictions on cross-border financial transactions, is hypothesized to enhance financial development. Political stability and the absence of violence are essential for creating an enabling environment for the development of the financial sector. Countries with stable political climates are expected to have higher levels of financial development due to increased investor confidence. Additionally, per capita income drives financial development, stimulating demand for financial services.

The researcher hypothesized the following:

- H_1: Higher levels of trade openness are positively associated with financial development in emerging markets.
- $H_{2:}$:Increased gross capital formation positively influences financial development in emerging markets.
- H_3: Increased financial openness leads to higher levels of financial development.
- H_4: Countries with greater political stability and less violence experience higher financial development
- H_5: Higher per capita income is positively associated with increased financial development.

2. Review of the Literature

2.1. Empirical Review

Numerous empirical studies have extensively explored the factors determining financial development in developed and developing nations, employing various methodological approaches such as panel data analysis and time-series

econometrics. These studies provide valuable insights into the drivers of growth in the financial sector.

Nevertheless, despite recognizing the significance and advantages of a well-developed financial system, there is still a lack of consensus regarding the determinants of financial sector development across different jurisdictions. Various authors have emphasized different variables as noteworthy determinants in this context.

Building on the seminal work of La Porta et al.(1997), it was found that legal frameworks and enforcement mechanisms play a critical role in fostering financial development. Other studies have also examined various factors. A notable empirical study by Al-Qudah (2019) explored the determinants of financial development in Jordan. The study utilized time series data from 1990 to 2018 and employed rigorous methodologies, including the Johansen cointegration test, VAR, and VECM. The empirical findings revealed that trade openness, GDP per capita, and foreign direct investment had significant and positive effects on financial development in Jordan. While the tax revenues and inflation rates were found to harm financial development, although these effects were not statistically significant. Although focused solely on Jordan, it provides valuable insights into the determinants of financial development within the context of that specific country.

A similar study by Asratie (2021) examined determinants of financial development in Ethiopia, using annual data from 1980 to 2019 from the Auto Regressive Distributed Lag estimation method. The study findings revealed that inflation, political freedom, economic growth, and Trade openness had positively affected credit to the private sector as a proxy of financial development; in contrast, the empirical results show that external debt, reserve requirements, and lending had negatively impacted financial development.

In a broader context, Ayadi et al. (2015) investigated the determinants of financial development across the Mediterranean, utilizing time series data from 1985 to 2009. The study concluded that robust legal institutions, good democratic governance, and effective implementation of financial reforms can significantly contribute to positive financial development. Furthermore, the study results indicated that inflation and government debt harm financial development.

Moreover, Badeeb and Lean (2015) analyzed the Determinants of Financial Development in the Republic of Yemen utilizing a time series econometric method from 1980 to 2012. Their findings indicate that economic growth, natural resource dependence, trade openness, and inflation are key factors influencing financial development in Yemen. The empirical results further demonstrate that economic growth and trade openness positively impact financial development, while natural resource dependence yields a negative impact. However, the effect of inflation on financial development is contingent upon the measurement of financial development. In contrast, Aslam et al. (2018) conducted a study on financial development in Pakistan using econometric regression and correlation analysis. Their research identified inflation, trade openness, market capitalization, investment rate, and interest rate as the main factors influencing financial development in Pakistan. The study found that these variables had a statistically significant impact on financial development in Pakistan.

Various research studies conducted by Boopen et al. (2012), Cizo et al. (2020), and Falahaty and Hook (2013) offer important insights into the factors affecting financial development in different regions. Boopen et al.(2012) focused on Mauritius using the ARDL method and discovered that trade openness and financial liberalization drive financial development in Mauritius. Moreover, investment rates, per capita income, and literacy rates were identified as crucial for stimulating financial growth, while inflation negatively impacted both the short and long term. Similarly, Cizo et al. (2020) investigated the European Union context and found that openness, legal traditions, and political stability positively influence financial development, with the strength of these relationships varying over time. Lastly, Falahaty and Hook (2013) examined nine Middle Eastern and North African countries from 1991 to 2009, revealing that economic growth, trade openness, bank concentration, institutional quality, and government ownership of banks were significant determinants of financial development. However, the impact of these factors differed between the fully modified and dynamic ordinary least squares models used in the study.

Moreover, a study by Bilquess et al . (2010) investigated the factors affecting the financial development in d-8 countries from 1985 to 2008 using the dynamic panel data method; the study found that capital flows, trade openness, and institutions are the most important determinants of financial development in D-8 countries. Similarly, Hamzah et al. (2019) examined the relationship between financial development, economic growth, and institutions. The findings underscored the importance of key indicators such as the banking sector, stock market, and trade openness with the existence of good institutions, which are key for financial development. In contrast, using the Barro regression model, Gural and Lomachynska (2017) studied the influence of Foreign Direct Investment (FDI) and financial development on economic growth in the Visegrád countries. The findings demonstrated a substantial positive impact of FDI and financial development on the economic growth dynamics of the Visegrad Group (V4) nations.

Kim et al.(2016) conducted an empirical study to explore the determinants of financial development in Asia and the Pacific. They used a dynamic generalized method of moments

and analyzed data from 26 economies spanning 1995-2011. The study's findings revealed that institutional quality and good governance were crucial factors driving financial development in developing economies. Likewise, economic growth and trade openness played significant roles in shaping financial development in developed economies. This study emphasizes the diverse influences of institutional quality, trade openness, and economic growth on financial development within the region. Similarly, in different contexts, a study by Mbulawa (2015) explored the determinants of credit for the private sector and financial development in the Southern Africa Development Community (SADC). The study used fixed effects and dynamic models with generalized method moments estimations on annual panel data from 1996 to 2010 across 11 SADC countries to identify key factors influencing financial development. The study found that credit to the public sector, GDP per capita, gross fixed capital formation, financial openness, interest rates, and institutional factors positively impacted financial development, while savings and government debt had a negative influence. This research provides valuable insights into the factors shaping financial development in the SADC region.

Muhammad and Ka'oje (2021) also investigated Nigeria's financial development determinants comprehensively. They utilized an Autoregressive Distributive Lag (ARDL) model with time series data covering the years 1981 to 2016. Their findings revealed that quality of life, foreign direct investment, and debt services positively impacted financial development. Meanwhile, inflation, economic growth, government expenditure, and trade openness showed a negative association. Interestingly, the study indicated that the relationship between financial development and institutions did not demonstrate statistical significance. The research emphasized the critical roles of quality of life and debt services as key determinants shaping financial development in Nigeria during the study period.

In a parallel study, Musakwa and Odhiambo (2011) analyzed the causal relationship between financial development and economic growth in Botswana. The study used the Autoregressive Distributed Lag (ARDL) approach to cointegration and the ECM-based Granger causality test to analyze the dynamics between financial development and economic growth. Surprisingly, the findings revealed no causal relationships between financial development and economic growth, irrespective of the proxy used for financial development and the time frame considered. Similarly, a study conducted by Najimu (2019) in Ghana assessed the determinants of financial development using time series analysis with ordinary least squares. The study revealed significant insights, highlighting trade openness and economic growth as crucial determinants impacting Ghana's financial sector development. Although they were statistically insignificant, inflation and human capital were identified as key determinants that negatively affect financial development. Likewise, in Mexico, a study on the determinants of financial deepening by Elizabeth (2019) found that the rule of law, financial savings, and financial education are the main determinants in Mexico. Both studies underscore the critical role of specific determinants in shaping financial development within their respective countries.

This research contributes uniquely to the debate on the finance-growth literature by identifying the factors influencing financial development, particularly in emerging market economies in the study period. While previous studies have extensively explored financial development, most of these studies have focused on developing countries, which gives less attention to the context of emerging economics. Hence, this study aims to fill the gap in understanding the dynamics of financial systems in emerging markets, given their strategic importance due to globalization and trade liberalization. Unlike other studies that considered country-level or regional analysis (like Al-Qudah, 2019; Falahaty & Hook, 2013), this research applies the comprehensive panel analysis, which allows reflecting reflections of the determinants of financial sector growth under multiple emerging economies under the study period while also includes recent global financial changes including those post-2008 crisis reforms and the COVID-19 pandemic which many previous studies like Ayadi et al., (2015) missed out on. Moreover, whereas much previous research has included specific factors such as institutional quality or trade openness, this research adopts multiple variables constituting trade openness, gross capital formation, financial openness, and per capita income using advanced and accurate panel estimations: Pooled OLS, RE, and FE models. However, interestingly, the current study reveals that political stability has no significant effect, bearing in mind that prior literature, including Cizo et al. (2020) and Kim et al. (2016), pointed to political factors as crucial determinants. This divergence points to distinctive realities of emerging markets marked by the fact that, unlike in developed economies, economic forces can outweigh political factors in determining financial development. Furthermore, the study's policy implications, particularly its emphasis on trade openness and financial liberalization, are consistent with previous findings while providing new insights into the shifting financial landscapes of emerging economies. This study emphasizes emerging markets' vital role as key players in the global financial system by filling gaps in the literature and giving a comprehensive perspective of financial development.

3. Methodology and Model Specification

This section outlines the methodological approach adopted to investigate the determinants of financial development within emerging economies. The study used panel data encompassing twenty emerging countries from 2000 to 2022 to analyze the factors influencing financial development comprehensively. The research aimed to achieve

a robust and reliable analysis using panel regression by controlling for all time-invariant country characteristics and year-fixed effects across the panel.

3.1. Data and Variables of the Study

The study utilized secondary data from the World Bank development database covering 2000 to 2022. The research identified key explanatory variables crucial to understanding financial development in emerging economic contexts by leveraging existing theoretical and empirical literature. These variables include Trade Openness (measured as total trade as a percentage of GDP), Gross Capital Formation (as a percentage of GDP), Political Stability, and Absence of Violence/Terrorism (measured by Percentile Rank). Additionally, financial openness was assessed using the Chinn-Ito index (KAOPEN) alongside GDP per capita. Central to the analysis, banks operationalized financial development as domestic credit for the private sector as a percentage of GDP.

3.2. Model Specification

The empirical model employed in this study aims to explore the factors influencing financial development within emerging markets. The model examines the relationship between Financial Development (FD) and several key determinants using panel regression analysis with fixed effects for both country and year. Specifically, Equation (1) represents the main model, where Financial Development (FD) is a function of Trade Openness (TOP), Gross Capital Formation (GCF), Political Stability (PS), Financial Openness (FOP), and the natural logarithm of real GDP per capita (lRGDPPC).

In Equation (2), the model is specified further, with each determinant represented by its coefficient (β_1) alongside the intercept term (β_0). The error term (ε_{it}) captures unobserved factors influencing financial development that are not accounted for in the model. Additionally, the model incorporates country-specific fixed effects (α_i) and time-specific fixed effects (γ_t) to control for time-invariant individual country characteristics and year affect, respectively. This robust approach allows for a comprehensive examination of the determinants of financial development in emerging markets, providing valuable insights into the complex dynamics shaping financial systems within these contexts. The model of the study is presented below in Equations (1) and (2).

$$FD = f(TOP, \text{GCF}, \text{PS}, \text{FOP}, \text{lRGDPPC}) \quad (1)$$

$$FD_{it} = \beta_0 + \beta_1 TOP_{it} + \beta_2 \text{GCF}_{it} + \beta_3 \text{PS}_{it} + \beta_4 \text{FOP}_{it} + \beta_5 \text{lRGDPPC}_{it} + \alpha_i + \gamma_t + + \varepsilon_{it} \quad (2)$$

We expect that $\boldsymbol{\beta_1}$, $\boldsymbol{\beta_2}$, $\boldsymbol{\beta_3}$, $\boldsymbol{\beta_4}$ and $\boldsymbol{\beta_5} > 0$

4. Empirical Analysis, Results and Discussions

4.1. Descriptive Result

The descriptive statistics provided in Table 1 offer valuable insights into the economic landscape of emerging markets. Drawing from a dataset from 2000 to 2022 and comprising 460 observations, the analysis provides a comprehensive overview of key variables, shedding light on trends and fluctuations over time. Financial Development (FD) data, with a mean value of 53.736 and a standard deviation of 33.547, highlight the evolving complexity and accessibility of financial services within the emerging market context. Trade Openness (TOP) statistics reveal significant variability, indicating shifts in international trade engagement levels among emerging economies. With an average value of 71.053 and a standard deviation of 41.931, the data reflect diverse approaches to global trade integration, ranging from minimal engagement to substantial openness.

Similarly, Gross Capital Formation (GCF) statistics, with an average value of 23.108 and a standard deviation of 6.217, underscore emerging market nations' dynamic investment patterns and economic development initiatives. Furthermore, Political Stability (PS) metrics provide nuanced insights into governance dynamics within emerging economies, which are crucial for understanding their resilience and growth prospects. With a mean value of 34.417 and a standard deviation of 22.159, the range from 1.005 to 91.005 signifies varying degrees of stability experienced by these countries over the observed period.

Table 1. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
FD	446	53.736	33.547	9.501	185.363
TOP	457	71.053	41.931	21.852	220.407
GCF	457	23.108	6.217	11.961	44.519
PS	440	34.417	22.159	1.005	91.005
FDI	460	3.139	7.513	-40.086	106.573
FOP	440	.472	.284	0	1
lRGDPPC	460	8.867	.793	6.627	11.037

*Notes: FD: Financial Development, TOP: Trade Openness, GCF: Gross capital formation, PS: Political Stability, FOP: Financial Openness, and Lrgdpp is the real GDP in log form. *** p<0.01, ** p<0.05, * p<0.1 are significant levels 1%, 5% and 10%, respectively*

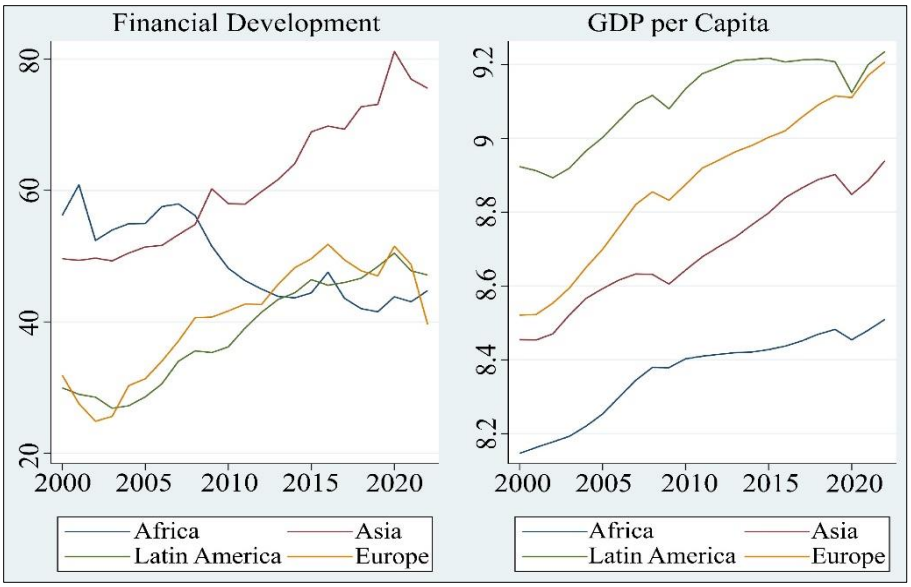

Fig. 1 FD and Per capita income trends by region, source authors' calculations

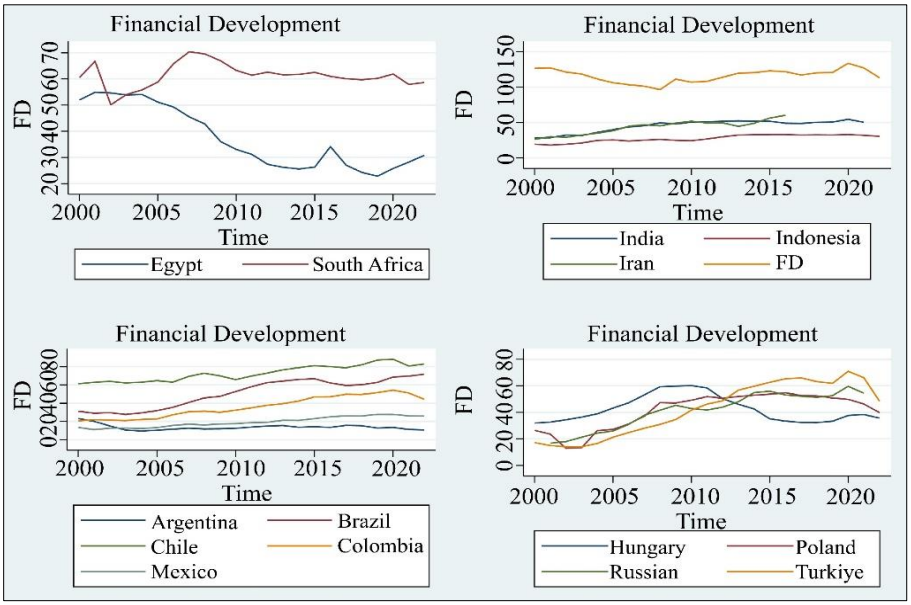

Fig. 2 Financial development by country in each continent

Figure 1 shows the trends in the financial developments and GDP per capita combined by region. As the graphs show, Asia shows growing trends in its financial sector, while Africa experienced a decline in its financial sector after the global financial sector. In contrast, Europe, which showed steady growth but showed a decline early in the 2000s

The pairwise correlations in Table 2 reveal several notable relationships among key variables. Financial Development (FD) shows a moderate positive correlation with Trade Openness (TOP) and Gross Capital Formation (GCF), indicating that countries with higher levels of international trade and investment tend to experience greater financial development. A moderate positive correlation exists between Financial Development (FD) and political stability (PS).

This indicates that stable political environments may, to a certain extent, contribute to the growth of the financial sector. Lastly, the correlation between Financial Development (FD) and GDP per capita (lRGDPPC) is positive but relatively weak, with a coefficient of 0.079.

This suggests a limited association between financial development and economic prosperity, indicating that while financial sector growth may contribute to economic development, other factors also play significant roles

Table 2. Pairwise correlations: pairwise correlations

Variables	(FD)	(TOP)	(GCF)	(PS)	(FOP)	(lRGDPPC)
FD	1.000					
TOP	0.370*	1.000				
GCF	0.486*	-0.027	1.000			
PS	0.150*	0.526*	-0.166*	1.000		
FOP	-0.170*	0.422*	-0.191*	0.480*	1.000	
lRGDPPC	0.079	0.364*	-0.214*	0.622*	0.488*	1.000

*Notes: FD: Financial Development, TOP: Trade Openness, GCF: Gross capital formation, PS: Political Stability, FOP: Financial Openness, and Lrgdpp is the real GDP in log form. *** p<0.01, ** p<0.05, * p<0.1 are significant levels 1%, 5% and 10%, respectively*

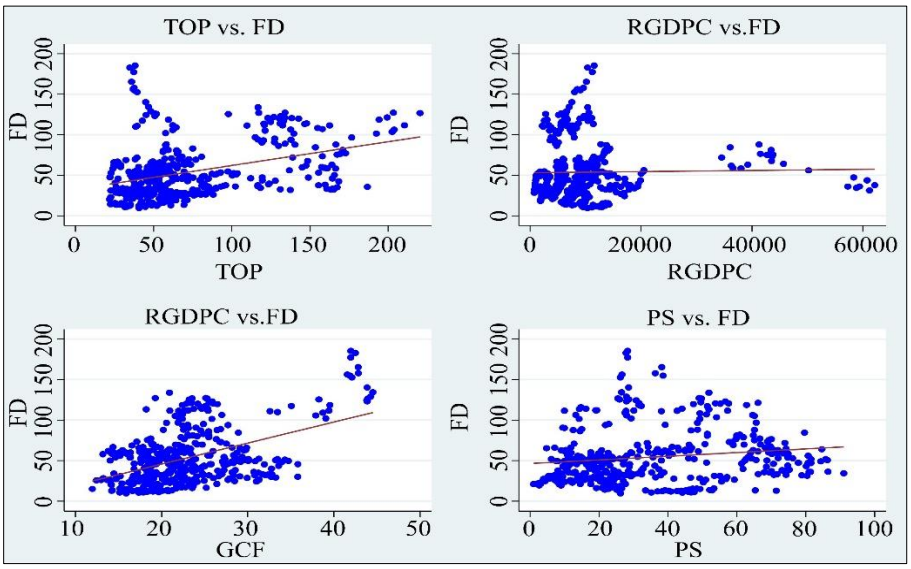

Fig. 3 Scatter plot of variables

The scatterplot below illustrates the correlations between the explanatory variables and the outcome variable, financial development. Each point represents a specific observation, with the position on the plot indicating the values of the variables. The scatterplot visually represents the relationships between financial development and the explanatory variables, including trade openness, gross capital formation, political stability, financial openness, and GDP per capita.

4.2. Empirical Strategy

This study employed three models: Pooled OLS, Fixed Effects, and Random Effects. Hausman's test was conducted to determine the most appropriate model for the research. This test evaluates whether the coefficients estimated by the Random Effects model are consistent and efficient compared to those estimated by the Fixed Effects model. The choice of model depends on the results of Hausman's test, which will indicate whether the Random Effects assumption of uncorrelated individual-specific effects holds true or if the Fixed Effects model, which accounts for individual-specific effects, is more appropriate.

4.2.1. Pooled Ordinary Least Squares (OLS)

The Pooled OLS method assumes no individual or time-specific effects on the dependent variable and treats all observations equally. It estimates the model parameters using ordinary least squares regression by pooling all available data. Unlike the Random Effects method, Pooled OLS assumes no individual or time-specific effects influence financial development.

The model is specified as follows:

$$y_{1t} = \alpha_0 + \beta_k x_{it} + + e_{it}$$

Where:
α_0 is the intercept for all entities
β is the slope of the panel regression line across all entities
e_{it}: is the error term

4.2.2. Random Effects

The Random Effects method allows for individual-specific effects but assumes that these are uncorrelated with the explanatory variables. It estimates the model parameters

using a combination of within-group and between-group variation. This approach accounts for individual-specific effects by permitting each country to have its intercept, assuming these effects are random and independent of the explanatory variables. In the Random Effects Model, if the individual effects (α_i) are uncorrelated with any of the explanatory variables, the parameter estimates (β_k) can be reliably estimated for a single cross-section, eliminating the need for panel data.

The model is specified as:

$$y_{1t} = \alpha_0 + \beta_k x_{it} + \alpha_i + e_{it}$$

Where:
i is the entity index
α_0 is the intercept for all entities
$\alpha_{i.}$ is the country-specific fixed effects or the unobserved individual heterogeneity.
e_{it} is the error term

4.2.3. Fixed Effect

The Fixed Effects method controls for both individual-specific and time-specific effects by including dummy variables for each country and each time period. It eliminates time-invariant differences across countries and captures within-country variation over time.

The model is specified as:

$$y_{1t} = \alpha_i + \beta_k x_{1t} + e_{it}$$

Where:
α_i *is* intercept for each entity or individual country effect.
β is the slope of the panel regression line across all entities
e_{it}: is the error term

4.2.4. Model Robustness Check

To ensure the robustness of our regression results, we conducted the Breusch and Pagan Lagrangian multiplier test for random effects. This test determines the best model: the pooled ordinary regression or the random effect model.

The Breusch and Pagan Lagrangian multiplier test yielded a p-value less than the 0.005 significance level. This indicates that the random effect model is superior to the pooled ordinary least squares model.

Table 3. Breusch and Pagan Lagrangian multiplier test for random effects

	FD[CountryNumber,t] = Xb + u[CountryNumber] +e[CountryNumber,t]	
	Var	SD = sqrt(Var)
FD	1095.282	33.09504
e	90.0493	9.489431
u	463.0205	21.51791
Test: Var(u) = 0	chibar2(01)	1737.4
	Prob > chibar2	0.000

Table 4. Hausman fixed random

	Coefficients			
	(b) Fixed	(B) Random	(b-B) Difference	Sqrt(diaf(V_b-v-B)) Std.err.
TOP	.136347	.1302424	.0061046	0.0206371
GCF	.7548351	.8483799	.0935448	.1107477
PS	.041771	0.0617896	.10355606	.0349131
FOP	16.45722	7.745432	8.711792	1.260965
lRGPPC	14.30023	27.66643	-13.46619	3.618716
	b= Consistent under H_0 and H_a ;obtained from xtreg B=Inconstent under H_a, efficient under H_0; obtained from xtreg.			
Test of H_0: Difference in coefficients not systematic Chi2(5)= (b-B) [V_b-v_B)^(-10](b-B) = 73.80 Prob>chi2=0.0000				

Notes: FD: Financial Development, TOP: Trade Openness, GCF: Gross capital formation, PS: Political Stability, FOP: Financial Openness, and Lrgdpp is the real GDP in log form

Table 5. Hausman (1978) specification test

	Coef.
Chi-Square Test Value	73.805
P-Value	0.00

We further conducted the Hausman test to determine the most suitable mode, fixed or random effect, for our panel regression analysis. The Hausman test evaluates the consistency of coefficient estimates between the fixed effects and random effects models. Under the null hypothesis

(H_o: $Corr(\ \alpha_i, x_k\ )$ = 0 RE estimators are more efficient than FE estimators; that is, the random effects model is deemed consistent and efficient, whereas the alternative hypothesis (H_1: $Corr(\ \alpha_i, x_k\ ) \neq 0$) posits that the fixed effects model is preferable due to endogeneity concerns. The Hausman test results yielded a chi-square test value of 73.805 and a p-value of 0.000. This significant p-value indicates rejection of the null hypothesis. Consequently, given its superiority in addressing endogeneity concerns, we infer that the fixed effects model is more appropriate for our analysis.

4.3. Empirical Findings and Discussions

The empirical analysis investigates the determinants of financial development in emerging economies using panel data from 2000 to 2023. Based on the existing theoretical and empirical literature, key explanatory variables, including trade openness, gross capital formation, political stability, financial openness, and GDP per capita, are identified and regressed against financial development. Hypotheses posit positive correlations between these variables and financial development in emerging economies. The econometric model employs panel regression with country and year-fixed effects to account for unobserved heterogeneity and time-specific factors. The results reveal significant and positive associations between financial development and trade openness, gross capital formation, financial openness, and GDP per capita across all regression models. Specifically, higher levels of trade openness, investment in physical capital, financial openness, and income per capita are found to foster greater financial development. However, the relationship between political stability and financial development appears inconclusive, with mixed results across regression models. Notably, including country-fixed effects in the regression model substantially improves the explanatory power, suggesting the importance of controlling for country-specific factors.

Table 6. Model estimation result-whole sample

Variables	(1) Pooled Ols FD	(2) Random Effect FD	(3) Fixed Effect FD
TOP	0.359***	0.130***	0.136***
	(0.033)	(0.039)	(0.038)
GCF	2.497***	0.848***	0.755***
	(0.192)	(0.200)	(0.221)
PS	0.136*	-0.062	0.042
	(0.074)	(0.062)	(0.059)
FOP	-48.047***	7.745**	16.457***
	(5.070)	(3.634)	(3.284)
lRGDPPC	6.523***	27.666***	14.200***
	(2.003)	(2.435)	(5.168)
Constant	-69.334***	-222.275***	-145.242***
	(17.340)	(21.914)	(45.959)
Observations	408	408	408
R-squared	0.506		0.940
year FE	No	No	YES
Country FE	No	No	YES
Number of CountryNumber		20	

*Notes: TOP = Trade Openness, CGF = Gross Capital Formation, PS Political Stability, FOP = Financial Openness, Lrgdppc is the real GDP per capita in logarithmic form. Figures in parentheses are standard errors. ***** and * indicate significance at the 1%(*** p<0.01) , 5%(** p<0.05)levels and 10%(* p<0.1), respectively.*

The positive correlation between trade openness and financial development suggests that countries engaged in international trade tend to have well-developed financial systems. This underscores the importance of integrating economies into the global market. Trade openness encourages specialization in industries dependent on financial services, while competition on the international stage prompts firms to adopt more efficient and modern financial practices. Furthermore, trade openness attracts foreign investment, which adds to the strength of financial markets. Similarly, Gross Capital Formation (GCF) drives the demand for financial services as investments in physical assets necessitate financing. This demand fuels the growth and sophistication of financial markets while contributing to productivity growth and innovation, attracting investors, and stimulating further financial development. Although political stability does not show statistical significance, it still plays a crucial role in financial development. Stable political environments provide the foundation for thriving economic activities, including trade and investments; political stability fosters investor confidence, which is essential for financial market growth. However, despite the positive relation between political

stability and financial development, this explanatory variable is statistically insignificant, suggesting that economic factors often outweigh the political considerations in driving finance in the context of emerging markets. Finally, financial openness and gross income per capita are positively linked to financial development. Countries with open financial systems tend to experience greater financial development, as openness facilitates access to international markets and capital flows. Additionally, higher gross income per capita indicates greater economic prosperity, which often correlates with more sophisticated financial systems. In essence, both financial openness and higher income levels contribute to the advancement of financial sectors, promoting economic growth and stability.

5. Conclusion and Policy Implications

This paper investigates the determinants of financial development in emerging market contexts, focusing on explanatory variables drawn from existing empirical literature. Specifically, we analyze the contributions of trade openness, gross capital formation, political stability, degree of financial openness, and income per capita to financial development in these countries. The empirical findings from our estimated model reveal a statistically significant and positive relationship between all explanatory variables and financial development. While trade openness, gross capital formation, financial openness, and gross income per capita demonstrate significant positive correlations with financial development, political stability, though statistically insignificant, still exhibits a positive association with the level of financial development in the studied context. These results validate the hypotheses posited in our study, highlighting the positive influence of trade openness, gross capital formation, political stability, financial openness, and gross income per capita on the level of financial development. The empirical findings highlight the significance of trade openness and gross capital formation for policymakers, emphasizing the need for policies promoting international trade agreements and encouraging investment in physical assets. Additionally, the positive association between political stability and financial development underscores the importance of maintaining stable governance. Leveraging the correlation between financial openness and development necessitates measures to liberalize financial markets. Efforts to boost gross income per capita through economic growth policies can expand the investor base, fostering economic prosperity and stability. These insights guide policymakers in formulating strategies to enhance financial development and drive economic growth in emerging markets.

5.1. Suggestions for Future Research

This study analyzed the factors contributing to financial growth in emerging markets. The key determinants examined include trade openness, gross capital formation, political stability, financial openness, and income per capita. The findings revealed that political stability has a relatively limited influence on shaping the financial sector in emerging markets. To gain a deeper understanding of how political factors impact financial sector growth, future research could explore how the political environment facilitates financial sector development by employing alternative estimation techniques.

Furthermore, this study primarily focused on economic and political factors to assess their impact on financial development. Future research could expand on this by examining the role of regulatory frameworks, institutional quality, and social factors in influencing financial development in emerging markets. Lastly, with the increasing adoption of financial technology (fintech) across emerging markets, future studies could investigate the role of fintech in transforming financial development, particularly its influence on financial inclusion, efficiency, and resilience. Exploring these areas could provide valuable insights into the evolving dynamics of the financial sector in emerging economies.

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