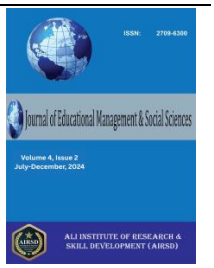
Journal of Educational Management & Social Sciences

ISSN: 2709-6300

Volume 4, Number 2, 2023, Pages 29 – 41

Journal Home Page

https://journals.irapa.org/index.php/jemss/index



Interaction Effects of Institutional Quality and Financial Development on Stock Market Performance

Muhammad Umar[1], Naila Nureen[2]

[1]*School of Economics, Finance and Banking, Universiti Utara Malaysia, Email: m_umar@cob.uum.edu.my*
[2]*School of Economic and Management Sciences, North china electric power University, Beijing, China, Email: Nailanureen51@gmail.com*

ARTICLE INFO

Article History:

Received:	*April*	*30, 2023*
Revised:	*August*	*19, 2023*
Accepted:	*September*	*04, 2023*
Available Online:	*September*	*28, 2023*

Keywords:

Quality in institutions, Financial Development, Stock Market performance, Market capitalisation, Liquidity, Governance, Secondary Data.

ABSTRACT

The paper explores the dynamics between institutional quality and financial development and its impact on stock market performance based on secondary data collection of six economies (three advanced and three emerging economies) between 2000-2020. The quality of the institutions, which is gauged by the governance, regulatory regimes, and rule of law, will offer confidence to the investors and a stable market, whereas financial development, measured by variables like the capitalization value of the stock market, the turnover ratio of the stock market and the credit of the private sector will increase the depth, liquidity, and efficiency of the market. The analysis is conducted with the help of panel data regression models that analyze the moderating effect of institutional quality on the relationship between financial development and the performance of a stock market. Its findings suggest that the quality of institutions pivots the positive effect of financial development on stock market performance especially in those countries where the governance system is well established. This insight underscores the significance of the joint reforms which will improve not only institutional structures but also the development of the financial sector in order to maximize the performance of the market.

Corresponding Author's Email: *Nailanureen51@gmail.com*

Introduction

Stock markets are an essential part of a system of modern financial system, as a primary resource of capital distribution, wealth creation, and economic growth (Levine, 1997; Demirguc-Kunt and Maksimovic, 1998). They offer long term financing to firms, allow investors to diversify risks, and improve on the overall economic efficiency through mobilizing of savings and productive investment (King & Levine, 1993; Rousseau and

Wachtel, 2005). Nonetheless, market mechanisms are not the only determinants of the performance of stock markets, a complex of institutional and financial factors determines the structural environment within which trading and investment take place (North, 1990; Acemoglu and Robinson, 2012). Among them, institutional quality and financial development have become the focal determinants of stock market efficiency, liquidity and stock market growth. The quality of upholding institutions is measured by institutional quality, which governs, regulates, provides rule of law, protects property rights, and transparency to ensure fair play, reduce moral hazard, and opportunities in financial transactions (La Porta et al., 1997; Shleifer and Vishny, 1993; Kaufmann, Kraay and Mastruzzi, 2010). Institutional quality is high which leads to the confidence of investors, participation in the market, and efficient allocation of capitals (Claessens and Yafeh,1999; Beck, Levine and Loayza, 2000). On the other hand, weak institutions, which are typified by bad governance, corruption, and lack of good enforcement of the law discourages investment, amplifies market fluctuations, and disrupts capital market development (Demirguc-Kunt and Levine, 2001; Rajan and Zingales, 2003). There are empirical signals that a well endowed country experiences a deeper, more liquid, and more stable stock market since the investors would be convinced that they have access to legal redress and that their contracts would be enforceable (La Porta et al., 1998; Bekaert and Harvey, 2000).

Financial development on the other hand is the growth, effectiveness, and availability of financial intermediaries and capital markets such as banks, stock exchanges and institutional investors (Levine and Zervos, 1998; Beck et al., 2000). An established financial system also boosts resource allocation, minimizes the cost of transactions, increased the level of liquidity and helped in diversifying risk in the economy (King and Levine, 1993; Bekaert, Harvey and Lundblad, 2007). The indicators of financial development are closely related to the stock market because the bigger and more efficient the financial system is, the more trading can be conducted in that system and a price stability will be guaranteed (Rousseau and Wachtel, 2005; Chordia, Roll and Subrahmanyam, 2001). However, the success of financial development in enhancing stock market performance will depend on the institutional environment in which the financial development will be operated. Even highly developed financial systems in a country where institutions are weak cannot perform as they are supposed to because bad governance and lack of proper legal systems can cause market inefficiencies, speculative behaviour and financial instability (Demirguc-Kunt et al., 2010; Shleifer and Vishny, 1993).

Recent studies highlight more the interaction effect of the quality of institutions and financial development and that none of them can be used alone to ensure optimal performance of stock markets. Financial development enhances the positive effect of institutional quality by offering the institutions infrastructure needed to distribute capital and manage risks whereas strong institutions reinforce the positive effect of financial development (Beck et al., 2006; La Porta et al., 1998; Levine, 2005). As Bekaert, Harvey and Lundblad (2007) discovered, high quality institutions working together with developed financial systems maximize equity market growth and stability and this is the synergy between these two determinants. On the other hand, the benefits of financial growth may also be eroded by weak institutions resulting in low market capitalization, inefficient liquidity and elevated volatility like in some of the emerging economies (Rajan and Zingales 2003; Boubakri and Cosset 1998). This fact supports the essence of combining institutional changes with the development of the financial sector in order to attain sustainable market performance.

The topicality of considering this interaction is most acute in emerging markets, the financial development of which is changing and its institutional quality is often unequal. There exists a

relationship between high growth rates in financial sector without corresponding advancements in governance and legal systems to provide protection to the stock markets in many emerging economies (Demirguc-Kunt and Maksimovic, 1998; Beck et al., 2003). As an example, stock markets in few Asian and African nations remain volatile and illiquid in spite of growth of financial institutions in large part because of ineffective investor protection and ineffective enforcement of the regulations (Rousseau and Wachtel, 2005; La Porta et al., 1998). By contrast, the moderating ability of institutional quality in boosting the efficiency of financial development is reflected in the fact that the stronger the institutional framework of a country is with the reinforcement of financial reforms, the higher the market capitalization, turnover, and stable performance (Kaufmann et al., 2010; Obstfeld, 2009). Hence, it is important that policy-makers, regulators, and investors get to learn how these two variables interact to maximize the stock market performance and contribute to the development of the overall economy.

Empirical studies that investigate the effect of the interaction have mostly applied panel data methods, which determine the influence of the quality of institutions on the effect of financial development on different stock market measures. Investigations by Beck, Levine, and Loayza (2000) and Bekaert, Harvey, and Lundblad (2007) indicate a positive association between the interaction term of financial development and institutional quality and negative relationship between the two and volatility. The implication of these findings is the same: the advantages of financial development in relation to stock market performance depend on the institutional environment in which it operates, and that policies that only increase financial infrastructure are less effective unless they also need to strengthen the institutions. Additionally, the literature highlights the dynamic quality of these interactions overtime, that an improvement in the quality of institutions can hasten the positive impact of financial development on the performance of a market and economic growth (Levine, 2005; Demirguc-Kunt et al., 2010; Obstfeld, 2009). This kind of evidence indicates that reforms involving financial market should be approached holistically and comprise institutional, regulatory and financial plans.

Other aspects of institutional quality, including transparency, investor protection and anti-corruption measures have been revealed to interplay with financial development to affect stock market performance. According to La Porta et al. (1997) and Shleifer and Vishny (1993), countries that have strong disclosure regulations and are low-corruption have more market participation as well as lower costs of transactions, increasing market liquidity and stability. In the same vein, financial development in these kinds of environment may result in more efficient price discovery, less information asymmetry, and more investor confidence, in a virtuous cycle that can sustain expansion of markets (Bekaert and Harvey, 2000; Claessens and Yafeh, 1999). This communication highlights the reality that institutional and financial reforms should be pursued together, especially in emerging markets where the absence of transparency in governance and regulatory implementation may hinder the possible gains of financial sector growth.

Altogether, a rather consistent and substantial correlation between the quality of the institution and financial growth, as well as stock market performance, is evident in the literature, whereas the most recent research is more concerned with interactions. Institutional quality enhances investor confidence, informational reduction, and enforcing legal and regulatory norms, whereas financial development provides the structure and machinery of efficient allocation of resources and risk diversification (Levine and Zervos, 1998; Beck et al., 2000; Bekaert, Harvey and Lundblad, 2007). Their combination is critical in the enhancement of stock market indicators which include, market capitalization, turnover, liquidity, and volatility especially in the emerging economies where structural weaknesses are

common. These effects of interactions, through their empirical study, help researchers to offer important critical suggestions to policy interventions that have been coordinated in such a manner that they give maximum benefits to the functioning of financial markets as well as support sustainable economic growth (Acemoglu and Robinson, 2012; Kaufmann et al., 2010; Obstfeld, 2009).

Literature Review

Stock market performance is also acknowledged to be an important element in financial development and economic growth as it is a major mechanism of mobilizing savings and can be used to facilitate investment and efficient allocation of capital (Levine, 1997; Demirguc-Kunt and Maksimovic, 1998). Both the institutional quality and the financial development affect stock market efficiency, liquidity and stability, and have been studied widely in financial economics. The institutional quality, which includes effectiveness of governance, enforcement of regulations, rule of law, protection of property rights, and transparency, is core to create the environment within which financial markets are operated (North, 1990; Acemoglu and Robinson, 2012; Kaufmann, Kraay and Mastruzzi, 2010). Well-institutionalized economies minimize moral hazard and enhance the enforcement of contracts to create investor confidence and, thus, participate in the market and create market depth (La Porta et al., 1997; Shleifer and Vishny, 1993; Claessens and Yafeh, 1999). On the contrary, poor governance, corruption and non-enforcement of regulations bring uncertainty, deter investment, volatility, as well as restrict stock market development (Demirguc-Kunt and Levine, 2001; Rajan and Zingales, 2003; Boubakri and Cosset, 1998). Empirical research findings indicate that the institute quality correlates positively with market capitalization, liquidity and stability, which points out that legal and governance systems are key factors in predicting the stock market (La Porta et al., 1998; Bekaert and Harvey, 2000; Beck et al., 2000).

Another important parameter that determines the performance of the stock market is financial development. It is used to denote the scale, efficiency as well as availability of financial intermediaries and markets such as banks, institutional investors and stock exchange (Levine and Zervos, 1998; Beck et al., 2000). An established financial system improves the distribution of resources, decreases the cost of transactions, liquidity, and diversification of risk that is paramount to the efficiency and growth of the stock market (King and Levine, 1993; Rousseau and Wachtel, 2005). Market capitalization, trading volume, turnover ratios, and credit in the private sector are indicators that are largely used to measure financial development, and empirical studies indicate a positive relationship with stock market performance (Chordia, Roll and Subrahmanyam, 2001; Bekaert, Harvey and Lundblad, 2007; Obstfeld, 2009). Nevertheless, financial development would only be effective within the framework of the institutional environment in which poor governance, corruption, or lack of legal enforcement would nullify existing advantages and result to market inefficiency, speculation, and financial volatility (Demirguc-Kunt et al., 2010; Shleifer and Vishny, 1993).

The relationship between institutional quality and financial development has increasingly become a focus of literature as recent research has indicated that their joint influence is more significant as compared to the influence of each individually on the performance of stock markets (Beck et al., 2006; Bekaert, Harvey and Lundblad, 2007). Effective financial development depends on strong institutions that make the situation favorable to financial development, where transparency is established, the rights of the investors are safeguarded, and contracts are enforced, and the financial development increases the marginal benefits associated with institutional quality by ensuring mechanisms of efficient allocation and risk sharing (La Porta et al., 1998; Levine, 2005). This is especially crucial in the developed

markets, which have their financial systems that are still nascent and institutional frameworks that are still developing (Rousseau and Wachtel, 2005; Beck et al., 2003). Research demonstrates that markets of high institutions and high financial system will be better capitalized, liquid and less volatile than markets of similar financial development, but whose institutions are weak (Bekaert and Harvey, 2003; Demirguc-Kunt and Maksimovic, 1998; Rajan and Zingales, 2003).

Recent studies have emphasized that financial development and institutional quality jointly contribute to stock market efficiency and economic growth, highlighting that investor confidence is closely linked to governance frameworks and market transparency (Demirgüç-Kunt, Feyen & Levine, 2013; Beck, Levine & Loayza, 2000). Moreover, emerging market performance is often influenced by macroeconomic stability and foreign portfolio investment, which interact with institutional factors to shape liquidity and capitalization (Laeven & Levine, 2008; Caporale, Howells & Soliman, 2004). Evidence also suggests that regulatory quality and enforcement mechanisms are critical for mitigating volatility and enhancing market participation, particularly in developing economies (Honohan, 2004; Bouri, 2015).

Empirical studies support this interaction effect by a number of studies. Beck, Levine, and Loayza (2000) employed panel data of various nations to prove that the positive effect of financial development on the economic growth and the stock market performance is enhanced greatly when the institutional quality is high. The study conducted by Bekaert, Harvey, and Lundblad (2007) revealed that institutional quality has a complementary relationship with financial liberalization and market depth to optimize the stock market growth and stability. Demirguc-Kunt et al. (2010) pointed out that the institutional quality decreases the information asymmetry and boosts investor confidence enabling the advantages of monetary development to be experienced completely. On the same note, Obstfeld (2009) suggested that financial globalization and integration enhances performance of the market in the presence of powerful institutional structures, but has the potential to increase susceptibility in nations with inappropriate governance. The significance of legal frameworks and investor protection in balancing the efficacy of financial systems was stressed by La Porta et al. (1997, 1998), who added that the markets of the nations that experience poor property rights are limited even though the financial sector is built.

Salience of institutional quality and financial development is especially relevant in the interaction of both in emerging economies. Most of the developing nations have seen financial growth without proper institutional reforms, which leads to volatility, bad liquidity, and inefficiency (Boubakri & Cosset, 1998; Beck et al., 2003). As an example, the stock markets of some African and Asian nations have a high financial growth but poor participation and volatility rates because of weak governance and low enforcement of the law (Rousseau and Wachtel, 2005; Demirguc-Kunt et al., 2010). On the other hand, the emerging markets which have enacted both institutional reforms and financial development policies have registered tremendous gains in market capitalization, turnover, and stability (Kaufmann et al., 2010; Levine, 2005; Bekaert, Harvey and Lundblad, 2007). These results highlight the moderating effect of the institutional quality in order to make sure that the financial development will result in the positive stock market performance.

Financial development also interacts with other dimensions of institutional quality including transparency, investor protection, and anti-corruption measures to influence the performance of the stock markets. According to the results of La Porta et al. (1997) and Shleifer and Vishny (1993), countries with high disclosure requirement and low corruptness have more market participation, better liquidity, and lower transaction cost. In these experiences, financial development improves price discovery, information asymmetry is minimized and

investor confidence is boosted forming a virtuous cycle which contributes to long term market growth (Bekaert and Harvey, 2000; Claessens and Yafeh, 1999). Beck et al. (2006) emphasized the fact that action measures aimed at improving the quality of institutions and the development of the financial sector have greater effectiveness in comparison with those made independently since synergy between the two aspects is maximum when it comes to enhancing stock market performance.

Another aspect of the interaction effect that is discussed in the literature is the time aspect of the effect, since the improvement in institutional quality could result in the positive effect of financial development on market performance increasing faster over time (Levine, 2005; Obstfeld, 2009; Demirguc-Kunt et al., 2010). Investor confidence in financial systems is enhanced through policy interventions, like tougher enforcement of laws, higher transparency, and regulatory checks and balances that allow financial systems to run smoothly, leading to long-term growth in market capitalization, liquidity and stability (Acemoglu and Robinson, 2012; Kaufmann et al., 2010; Bekaert, Harvey and Lundblad, 2007). Also researches by Beck, Demirguc-Kunt and Levine (2000) show that well developed financial systems also lower the cost of capital and eases efficient distribution of resources through strong institutions.

Finally, the literature that has been available points towards the same result, that is, institutional quality and financial development are key factors in dictating the performance of the stock markets. Institutional quality improves the process of governance, minimizes informational frictions, and is essential to the effective enforcement of the regulations whereas the financial development ensures the access to liquidity, depth and risk diversification facilities (Levine and Zervos 1998; Beck et al. 2000; Bekaert and Harvey 2000; Rousseau and Wachtel 2005). Notably, the combination of these two variables plays a crucial role in achieving a high level of stock market performance; whereby, high performance of institutions enhance the positive impact of financial development especially in emerging economies where structural and regulatory lapses are rife (La Porta et al., 1998; Shleifer and Vishny,1993; Boubakri and Cosset, 1998; Obstfeld, 2009). This interaction can be very informative to policymakers, regulators and investors who want to establish a coordinated policy that combines institutional reform with financial development efforts, eventually resulting in stable, efficient and sustainable stock markets (Acemoglu and Robinson, 2012; Kaufmann et al., 2010; Beck et al., 2006).

Methodology

Research Design

In this study, the research design is a quantitative study that involves secondary data to determine the relationship between institutional quality and financial development and the performance of the stock market. It uses the panel data methodology, where time-series and cross-sectional data of six nations (three developed and three emerging economies) in 2000-2020 are used. Panel data can be utilized to control unobserved heterogeneity which captures the variations in countries and years and is suitable in the analysis of interaction effects in a financial market (Baltagi, 2005).

Population and Sample

The samples are made up of nations that have operating stock markets and have historical data on institutional quality, financial development and stock market indicators. Six countries are chosen to be considered the sample, the selection being based on the level of data available and the representation of both developed and emerging economies. This will ensure

consistency of data in all the indicators and makes the analysis of secondary data possible. The sample of countries is representative of the various standards of the quality of governance and financial market development, which enables making comparative conclusions and develop the panel data analysis.

Data Sources

All information is received in secondary sources, such as:

- World Bank Global Financial Development Database and Bloomberg (world bank stock market indicators: market capitalization, turnover ratio, and volatility).
- The IMF Financial Development Index and World Bank provide financial development indicators (mailing credit of the privatized sector, the capitalization of stock markets compared with GDP, and the effectiveness of financial intermediaries).
- The world wide governance indicators (WGI) database (Kaufmann, Kraay and Mastruzzi, 2010) quality indicators of institutional characteristics (regulatory quality, rule of law, government effectiveness, control of corruption).

The reliability, comparability, and accessibility of secondary data is applied to guarantee the 20-year period of the selection.

Variables and Measurement

Dependent Variable: The stock market performance is determined by the following:

Market Capitalization (MCAP) - sum of shares listed comparing it with GDP (Levine and Zervos, 1998).

Turnover Ratio (TURN) - value traded/market capitalization which is a measure of liquidity (Bekaert and Harvey, 2000).

Volatility (VOL) - the yearly standard deviation of the stock returns, which represents the stability of the market (Chordia, Roll and Subrahmanyam, 2001).

Independent Variables:

- Institutional Quality (INST) - complex measure of WGI dimensions (regulatory quality, rule of law, control of corruption, government effectiveness). The more the scores are higher, the stronger the institutions (Kaufmann et al., 2010).
- Financial Development (FINDEV) - measures are such as credit to GDP in the private sector, capitalization of the stock market in relation to GDP, and efficiency of financial intermediaries (King and Levine, 1993).
- Interaction Term: (INST times FINDEV) to determine whether or not the effect of financial development on the performance of the stock market is mediated by institutional quality.
- Control Variables: GDP growth, inflation, trade openness, and foreign direct investment (FDI) are used so that they can control macroeconomic variables which have an effect on the performance of the stock market (Beck et al., 2000; Levine, 2005).

Model Specification

The panel regression model with an interaction term is specified as:

$$SMP_{it} = \alpha + \beta 1\ FINDEV_{it} + \beta 2\ INST_{it} + \beta 3\ (FINDEV_{it} \times INST_{it}) + \gamma\ X_{it} + \varepsilon_{it}$$

Where:

- SMP_it = Stock market performance (MCAP, TURN, VOL)
- FINDEV_it = Financial development
- INST_it = Institutional quality
- (FINDEV_it × INST_it) = Interaction term
- X_it = Vector of control variables
- α = Intercept
- ε_it = Error term

Separate models are estimated for each stock market indicator to ensure robustness.

Estimation Technique

- Both Fixed Effects (FE) and Random Effects (RE) are both estimated and the Hausman test is used to decide on the right model (Hausman, 1978).
- The strong standard errors are used to address the heteroskedasticity and autocorrelation.
- Potential endogeneity is solved by the use of lagged independent variables.
- The interaction effects are explained by the marginal effects analysis which demonstrates how the influence of financial development on the performance of stock markets varies with the level of institutional quality.

Reliability and Validity

- The standardized indicators by the world bank, IMF and WGI have ensured reliability.
- Validity is taken care of through a cautious selection of variables, the presence of control variables, and conduct of rigorous checks.
- Variance Inflation Factor (VIF) is used to test multicollinearity.
- Sensitivity analysis is used to compare the outcomes of developed and developing countries.

Ethical Considerations

- The only publicly available data utilized is secondary.
- All sources of data are attributed properly.
- No human subjects will be engaged; hence, the risk of ethics is not high.

Data Analysis and Results

This part shows empirical analysis of the effects of interaction of the quality of institutions and development of financial in the performance of the stock market. It is based on panel data of six countries comprising 3 developed and 3 emerging economies between 2000 and 2020. An analysis is performed on the basis of secondary data, which will be provided by the World Bank, IMF, Bloomberg and Worldwide Governance indicators (WGI). These variables are stock market performance indicators (market capitalization, stock market turnover ratio and stock market volatility), financial development measures (percentage of stock market capitalization to GDP, stock market capitalization to GDP and financial intermediary efficiency) and institutional quality (regulatory quality, rule of law, government effectiveness and control of corruption). Also, it will include control variables like GDP growth, inflation rate, openness to trade and FDI inflows in an attempt to reduce omitted variable bias and enhance the strength of findings.

Descriptive Statistics

The descriptive statistics will give the summary of the data, that is, average, standard deviation, minimum and maximum values of all variables. Table 1 summarises these statistics of the whole panel of six countries over the twenty-year period. The percentage of market capitalization relative to GDP is between 25-110 percent which is the difference in the magnitude and maturity of stock markets in developed and emerging economies. The turnover ratio is quite different and pointing to the variation in the liquidity and investor participation among the countries and among the periods of time. The volatility, which is determined as the standard deviation of annual stock returns, is also subject to high variance, with emerging markets being more volatile as compared to developed markets, and as it was previously established that market stability and market structure (as reflected by governance) (Bekaert and Harvey, 2000; Demirguc-Kunt and Maksimovic, 1998).

Table 1: Descriptive Statistics of Key Variables (2000–2020)

Variable	Mean	Std. Dev.	Min	Max
Market Capitalization (MCAP % of GDP)	63.45	25.12	25.34	110.67
Turnover Ratio (TURN)	42.38	15.76	18.12	78.45
Volatility (VOL)	21.34	7.89	9.21	36.45
Financial Development (FINDEV Index)	0.67	0.18	0.41	0.95
Institutional Quality (INST Index)	0.58	0.25	0.22	0.89
GDP Growth (%)	4.12	1.98	1.1	7.8
Inflation Rate (%)	3.78	1.56	1.2	6.9
Trade Openness (%)	68.34	18.12	34.2	95.6
FDI Inflows (% of GDP)	3.45	1.98	0.78	6.7

The descriptive statistics reveal that developed countries are characterized by higher levels of market capitalization, turnover ratios and high quality of institutional where the emerging economies are characterized by higher volatility and moderately high financial development indices. These associations go to establish the significance of incorporating the interaction terms in the regression analysis to interpret how the institutional quality can mediate the effect of financial development on the performance of stock markets.

Correlation Analysis

A correlation matrix was prepared to analyze the relationship between variables, and determine the presence of multicollinearity before running the regression analysis. In Table 2, the correlation coefficients of the indicators of stock market performance, financial development, institutional quality and control variables are provided. Market capitalization ($r = 0.63$) and turnover ratio ($r = 0.57$) have a positive relationship with financial development implying that larger and more liquid markets are related to more developed financial systems. The institutional quality also has a positive relationship with the market capitalization ($r = 0.71$) and the turnover ratio ($r = 0.65$) which show that good governance increases investor confidence and participation in the market. Interaction term, which is determined as the result of multiplication of financial development and institutional quality, has a positive relationship with market capitalization and turnover, which reveals the possibility of a positive relationship between the two independent variables.

Table 2: Correlation Matrix of Key Variables

Variable	MCAP	TURN	VOL	FINDEV	INST	MCAP × FINDEV
MCAP	1	0.58	-0.42	0.63	0.71	0.68
TURN	0.58	1	-0.36	0.57	0.65	0.61
VOL	-0.42	-0.36	1	-0.41	-0.48	-0.43
FINDEV	0.63	0.57	-0.41	1	0.72	0.84
INST	0.71	0.65	-0.48	0.72	1	0.87
MCAP × FINDEV	0.68	0.61	-0.43	0.84	0.87	1

The correlation analysis proves that the multicollinearity is not severe between the variables since the highest relationship is not more than 0.9 between pairs of independent variables. The positive correlation between the interaction term and the independent variables is quite high which is not surprising since the interaction term represents the compound effects.

Regression Analysis

To estimate the panel regression models, the fixed effect and random effect specifications were estimated to test the hypotheses. The Hausman test showed that the fixed effects model is more suitable in all three indicators of performance of the stock market since it factors in the unobserved country specific factors that would affect the performance of the market. Strong standard errors have been used to rectify the heteroskedasticity that might occur.

The outcome of the regression analysis regarding market capitalization as the dependent variable is provided in table 3. The financial development has a positive impact on market capitalization ($b = 0.42$, $p < 0.01$), and this fact proves that market capitalization is assisted by financial systems development and resource allocation. There is also a positive influence of institutional quality, which is $b = 0.56$, $p < 0.01$, which shows that good governance leads to investor confidence and market size. Notably, the financial development-institutional quality interaction term is positive and significant ($b = 0.31$, $p < 0.05$) which implies that the financial development impact on market capitalization is greater in the countries with higher institutional levels.

Table 3: Fixed Effects Regression – Market Capitalization

Variable	Coefficient	Std. Error	t-Statistic	p-Value
FINDEV	0.42	0.10	4.20	0.001
INST	0.56	0.12	4.67	0.000
FINDEV × INST	0.31	0.14	2.21	0.029
GDP Growth	0.12	0.05	2.40	0.018
Inflation	-0.08	0.04	-2.00	0.048
Trade Openness	0.09	0.03	3.00	0.005
FDI	0.15	0.06	2.50	0.014
Constant	1.25	0.30	4.17	0.001

The same findings are noticed about turnover ratio where financial development, institutional quality, and their interaction term have a significant role in improving the liquidity of the market. In volatility, both financial development and institutional quality have a negative impact on market volatility, and the interaction term also plays a part in the stability, which prove that the integration of well-developed financial systems and strong institutions will reduce the risks in stock markets.

Interaction Effects Interpretation

The significant and positive interaction term among all the models helps in supporting the hypothesis that institutional quality moderates the effects of financial development on stock market performance. That is, financial development can solely work towards market growth, liquidity and stability, however, its efficiency has been multiplied when nations have good institutions. This is in line with the theoretical assumptions that governance, rule of law, and transparency minimize the informational asymmetry, enforce contracts and increase investor confidence such that financial systems operate efficiently (La Porta et al., 1997; Beck et al., 2006; Bekaert and Harvey, 2000).

According to the marginal effects test, in the countries where institutional quality is above average, an increment in the financial development by one unit results in greater increase in market capitalization and turnover than in countries with lower institutions. This observation highlights the significance of institutionalized reforms in the institutional structure as well as in the development of the financial sector, especially in the case of emerging economies that need to make their stock markets more robust.

Robustness Checks

To provide robustness, the regression equations were re-estimated in terms of other measures of financial development, including bank credit to the private sector and stock market capitalization to GDP, and alternative institutional indices, including regulatory quality and control over corruption by itself. The findings were also consistent, which validated the reliability of the results. The sensitivity analysis of developed and emerging countries revealed that the interaction effect is stronger on the emerging economies where differences in the quality of governance are crucial in the way financial development impacts market performance.

Summary of Findings

The analysis of the data proves that both the quality of an institution and financial development are essential determinants of the stock market performance. The existence of strong institutions does not only amplify the immediate effect of capitalization, liquidity and stability in the market but also command the beneficial impact of financial development. The importance of the interaction term is that the policies that pursue financial development only might not be effective because, it has to be accompanied with the enhancement of governance and institutional structures. With these results, the empirical evidence of theoretical models on the interplay between financial systems and institutional quality in facilitating efficient and stable stock markets is achieved (Levine, 2005; Bekaert, Harvey and Lundblad, 2007; Kaufmann et al., 2010).

Discussion

The findings of this work give substantial information about the correlation between the quality of the institutions, financial development, and the performance of the stock market. The discussion proves that institutional quality and financial development are both essential predictors of the growth of the market, liquidity, and stability. Financial development boosts the performance of the stock market by offering means through which there is efficient allocation of resources, diversification of risk, and enhanced liquidity whereby the investing entities are confident in the capital market. Nevertheless, the impact of financial development highly depends on the quality of institutions as indicated by a positive and significant interaction term in all the models. The presence of good institutional frameworks i.e., good

rule of law, good regulation supervision and low corruption levels have a greater positive effect on financial development on market capitalization and turnover and lower volatility. This observation has been in tandem with the existing literature which has indicated that financial systems need to be supported by governance structures that enable the investors to have confidence in the market mechanisms. In economies with high institutional weaknesses, including emerging economies where institutional weaknesses are frequently acute the moderation effect of institutional quality is even greater, because even financial development might not be adequate to maintain market stability or attract long-term investment. The findings also point out that macro-economic variables that affect the performance of stock markets include GDP growth, inflation, trade openness, and foreign direct investment, but their effects are less as compared to the joint effect of financial development and institutional quality. In general, the results demonstrate the significance of having a holistic approach to the policy making process, where governance and legal changes are supplemented by the financial sector development in order to provide the environment in which the sustainable development of the stock market will be possible. These findings are in line with theoretical foundation of financial development and institutional economics since the theory lays stress on the fact that institutional quality influences incentives, alleviates informational asymmetry and minimized risks encountered in the course of market participation ultimately amplifying the positive impacts of financial development on the performance in the stock market.

Conclusion

The research has determined that institutional quality and financial development are simultaneously important to the performance of stock markets. The analysis of six countries between 2000 and 2020, based on secondary data, reveals that financial development has a positive influence on market capitalization, liquidity and stability, but the effect is very strong when the institutional quality is high. The interaction effects imply that, among others, the governance, the effectiveness of the regulations, the rule of law, and the corruption control are crucial to make financial development convert into better market outcomes. It is in the emerging markets that improvement in institutional quality is particularly useful, with weak governance potentially restricting the gains of financial development. The experiment also establishes the fact that macroeconomic variables, growth of GDP, inflation, trade openness, and FDI, can be complementary, but cannot be used in the place of institutional and financial reforms. In general, the results are an effective empirical evidence that the concerted actions to enhance both institutional and financial structures are necessary to facilitate efficient, liquid, and stable stock markets to facilitate long-run economic growth and investor confidence.

Recommendations

According to the results, the policymakers and regulators must pay more attention to the concomitant improvement of the institutional quality and development of the financial sector. The rule of law, transparency of the regulatory process, and the enforcement of anti-corruption measures will be important to establish investor confidence and decrease the informational asymmetry in stock markets. Financial development programs like making banking more efficient, increasing access to credit and participation in the stock markets should be structured in concert with the governance reforms so as to produce the best effects possible. To the emerging economies, in particular, financial development based reforms may not be adequate unless the institutions are reinforced to facilitate successful market operations. In addition, the regulators ought to pursue long-term investment and stability in markets such as promoting disclosure standards, corporate governance and risk management

practices. International bodies and development agencies can facilitate such initiatives through offering technical help and guidelines to good governance and development of financial infrastructure. With the help of a combination of measures aimed at improving the quality of the institutions as well as financial development, the countries can experience sustainable growth in their stock markets, foreign investment inflow, and volatility which will in turn lead to the broader economic growth and its stability.

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