Theoretical and Practical Research in Economic Fields

Special Issue

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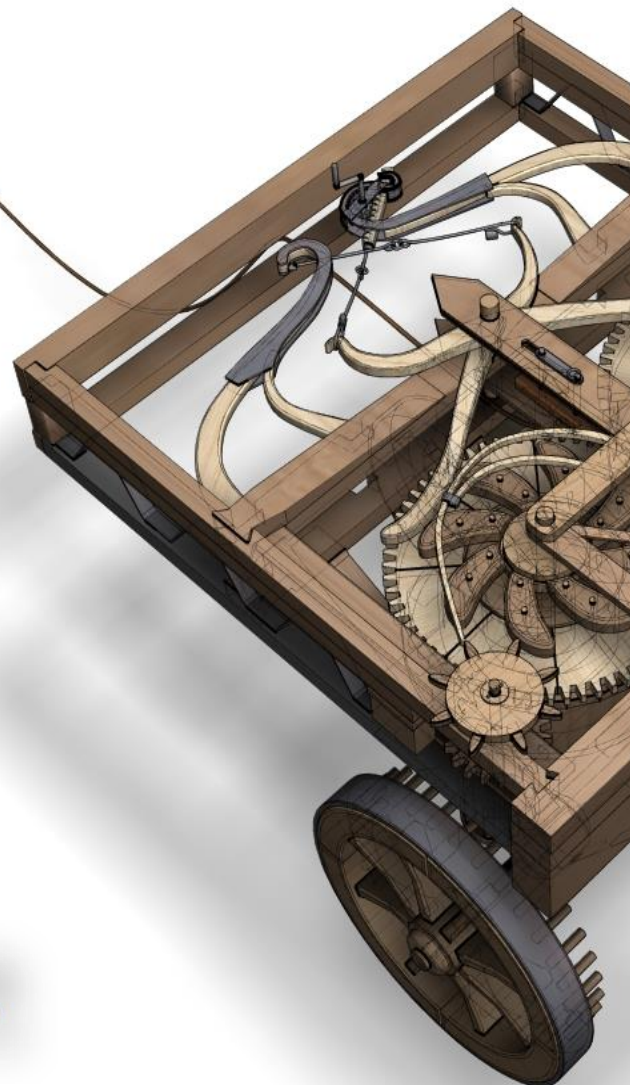
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We would like to express our endless thank to our colleagues, scholars from Ukraine who are working amid the war on topics that are important for all. Also, we thank all our international authors for their valuable contributions to this Issue.

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The Impact of Political Instability on Financial Development, Economic Growth, Economic Growth Volatility and Financial Stability in Developing Countries

Wasim ULLAH
Faculty of Business, Economics and Social Development
Universiti Malaysia Terengganu, Malaysia
ORCID: 0000-0002-6942-2178
p4616@pps.umt.edu.my

Ahmad Shauqi Mohamad ZUBIR
Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, Malaysia
ORCID: 0000-0002-3492-8988
corresponding author: shauqi@umt.edu.my

Akmalia Mohamad ARIFF
Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, Malaysia
ORCID: 0000-0001-6854-554X
akmalia.ariff@umt.edu.my

Abstract: Political instability is usually attributed to the disruption of policy continuity following regime changes. Moreover, it is not solely the tangible effect but also the perceived risk among investors and other stakeholders that will result in policy alterations. Furthermore, the frequency and the manner in which regime changes occur play a crucial role in shaping the economic repercussions. This study fills in the gap in the literature by exploring the impact of political stability (PS) on financial development (FD), economic growth (EG), economic growth volatility (EGV) and financial stability (FS). This study uses the PCSE estimation method with a robustness check of GMM on data for 33 developing countries from 1980-2020. Results are useful for macro-prudential and macroeconomic policymakers. First, the relationship of PS with FD is linear for both financial institutions and financial markets. However, financial market efficiency (FME) reduces with increased PS. Therefore, policymakers need to focus on regulating FME related practices in politically stable environments. Second, PS positively affects EG in developing countries. Third, PS reduces EGV in developed countries, yet it increases economic growth volatility for developing countries. The policymakers in developing countries should not only be focused on financialization but they must also ensure that the reforms in enabling environment are also keeping pace with the growth of financialization. Fourth, PS increases FS for developing countries. Hence, economic growth volatility and financial stability cannot be used synonymously as these are measured differently and FS is a sub-set of economic stability. Therefore, the policy makers need to formulate the policies related to each of them according to the market and institutional realities pertaining to each of them.

1. Introduction

Political instability is a propensity of a regime collapse either because of rampant competition among political parties or political conflicts amongst them (Hussain 2014). There has been growing evidence of regime changes impacting the financial development and economic growth. One of the reasons that pinned up to this phenomenon is the impact of regime change on policy continuity. It's not only the actual impact but also the perception amongst the investors and other stakeholders that regime change shall lead to policy changes. Added to this is the frequency and method of regime change. In countries with frequent regime changes, one hardly identifies sustained economic growth but the high economic growth volatility. Today's Pakistan is a glaring example of how frequent regime

changes through unconstitutional means can lead to unprecedented economic collapse. On the other hand, there are autocratic regimes like Vietnam or in other Asian countries where political stability is high but that is not translated into high economic growth. As a result, there are dichotomous research findings on the impact of political stability on economic growth and volatility in various developing and low-income countries. Some recent researchers have also pointed out this dichotomy. Effect of political stability over economic growth is controversial not only in theory but also in empirical work (Ayessa and Hakizimana 2021).

The concept of political stability has gained growing interest in economic growth literature due to its potentially profound financial and economic consequences. Both policy makers and academic scholars have shown keen interest in exploring various aspects of economic growth in recent times. Although there are numerous research studies on exploring the relationship between political stability and economic growth, yet the impact of political instability on financial development has hardly been explored in the literature. Added to that, are the efforts to explore the relationship between political instability, financial stability and economic growth volatility, as these are also scanty. The rank of financial development as an established channel of transmission for economic growth and economic growth volatility makes it crucial to look into this neglected area of exploration. Though there are some papers observing the relationship of political instability with stock exchange returns and prices yet there are no research efforts towards exploring the relationship with financial development at component level in a systematic manner. Therefore, this study explores the impact of political instability on financial institutions development and financial markets development on three dimensions of financial depth, financial access, and financial efficiency of both financial institution's development and financial markets development.

Previous studies on the relationship between political stability (PS) and economic growth (EG) have not focused on economic growth volatility (EGV) and financial stability (FS). The relationship between PS, EGV and FS is a crucial one, in order to determine what kind of impact is exerted by political instability to EGV and FS. Studying this relationship is also important from the standpoint of future research, that is to explore the contribution of financial development and political stability towards the introduction of growth volatility in the economic system. The previous works in existing literature is either single country based or for specific regions. Previous research have largely focused on OECD countries where institutional systems are in a relatively highly stable shape. However, in the case of developing countries, the institutional systems are relatively less structured and in a state of evolution. Therefore, the potential effect of political stability on financial development and economic growth for developing countries is still posing an empirical paradox.

2. Literature Review

Political stability is one of the major factors that can explain volatility in economic growth (Ndokang and Tsambou 2019). This phenomenon also has the potential for reasonably frequent disruptions in political regimes, thereby leading to inconsistencies of macroeconomic policies. Adding to this malaise is the scale of pervasiveness of political instability which makes it rather more important to explore various dimensions of its relationship with economic growth and its volatility. Findings by Souffargi and Boubaker (2024) indicate that, in Tunisia, political confrontations have a greater detrimental impact compared to terrorist acts. Further, the democratic transition has a beneficial impact on the stock market. Nevertheless, this reaction is not particularly noticeable. The events pertaining to the creation of the constitution have exerted a substantial and beneficial impact. Although there may not be a notable immediate response, the declaration of the election outcomes typically results in a favourable market reaction. The successful conclusion of this political process has delivered encouraging and favourable indications, reinstating the trust of both domestic and international investors by offering them improved clarity on market and national performance. They also suggest that investors must take into account political events to manage the influence on capital flows, international trade, and the overall economy. Huntington (1965) shows if social modernization is not synchronized with institutional modernization, then it leads to disorder and chaos. This is the phenomenon defined by him as 'Political Decay'. Therefore, political stability in the context of economic growth generally points out the political stability characterized by rule of law, efficient bureaucracy, strengthened institutions instead of strengthened personalities, lower corruption, and investment friendly business climate.

On the other hand, there are a number of arguments in political economy literature that suggest political stability should boost economic growth. Pioneering works of Levine (2005) have emphasized the need to look at the relationship between economic growth and political forces to determine the impact of later forces on the former variable. The functionality determinants of financial system and economic development leads to the need for evaluation of regulatory, legal, political and miscellaneous policy determinants of financial growth (Levine, 2005). Levine (2005) treats political, regulatory, legal and other determinants of policy in perfunctory mannerism. In the United States of America, the firms' corporate structure has heavily been influenced by political forces and hence

not purely an outcome related to market forces. Moreover, almost everywhere, these are the political forces which have been shaping the financial systems' operations and financial-sector policies (Levine, 2005).

Hussain (2014) observes that political stability and economic growth are interconnected as the latter is impacted negatively in the case of higher uncertainty surrounding political situation. The reasons attributed by him are the investors becoming cautious and holding their investment in an economy which has political uncertainty thereby decreasing or slowing down the economic growth. Aisen and Veiga (2013) observed negative lower GDP growth rates on higher levels of political volatility. It affects through transmission of lowered productivity growth rate. They also explored that ethnic homogeneity and economic freedom are positively related to economic growth. They observed higher levels of economic growth volatility at political instability of higher degrees. Ben and Chaibi (2022) observe that political risk adds to volatility in developed markets more than in developing markets.

Białkowski *et al.* (2008) explored the relationship of policy level uncertainty in financial markets and concluded that less experienced capital markets are greatly impacted by such volatility as compared to the economies having greater capital market experience. Devereux and Wen (1998) show that government spending as proportion of GDP is higher in unstable political environments. This may be because in such environments, investor's confidence is eroded and the governments tend to use the fiscal policy to stimulate the economy. Fatas and Mihov (2013) also observe that political volatility consistently brings negative effects for financial investment and economic growth. Attila (2022) explores that political instability leads to enhanced instability of bank deposits. Siddiqui *et al.* (2022) show that a negative relationship exists between political unpredictability and financial markets *i.e.*, foreign exchange, interbank, and capital market.

Talbi *et al.* (2021) analyzes the impact of financial crises and political instability on stock prices volatility in MENA countries. They show that the negative impact of political events on stock market volatility is more significant than financial crises. Lukasz (2021) summarized the conclusions of empirical and theoretical research work on political stability-induced economic implications. This extensive review affirms the detrimental impact of political instability on investment, inflation, public debt, fiscal deficits, and financial markets. The temptation to embezzle funds from state funds, fail to fulfil state contracts, or reject debts when a leader's time is limited is real (Przeworski *et al.* 2000). Economic dealings with the public sector may contract as a result of a loss of faith in the state's capacity to fulfil its promises due to instability. Canes-Wrone and Park (2012, 2014) and others have argued that when there is a likelihood of leadership succession, some industries may delay making permanent investments. This is because the performance of these investments is highly dependent on government policies, which could be altered by the incoming administration. Companies in crony capitalist systems often use their political ties to get special treatment from the government and shield themselves from the economic rivalry that threatens to cut into their profits. When there's a good chance the incumbent will stay in office, these companies tend to cut back on investments.

Existing research on the topic has provided ample evidence that political instability has a negative effect on macroeconomic growth. Recent work by Rathnayake (2022) establishes a link between political instability and both long- and short-term economic growth. Results show that political instability has a little impact on economic growth in South Asian nations in the latter term. On the other hand, the nations demonstrate a strong inverse correlation between political unrest and long-term economic expansion. It is also shown that civil liberties and regulatory quality being the moderating variables in this relationship. Abaidoo and Agyapong (2021) observe a negative association between political instability and macro-level economic policies. They show that the rule of law is a significant moderator for the negative effect of macroeconomic volatility on political atmosphere. Irshad (2017) explored that political volatility negatively affects stock prices. She also observed that although enhanced exports and industrial growth relate positively with prices of stock yet increase in inflation is negatively associated with prices of stocks. Political stability impacts the investor confidence as the long-term planning can be made and risk premium is on lower side, and this would positively impact the economic growth by letting the stock markets grow.

2.1. Political Uncertainty Leads to Negative Financial Market

The channels through which political uncertainty leads to negative financial market outcomes thereby dampening economic growth have been a constant focus of many studies. There are two such distinct, yet interconnected channels identified through which the effects of political volatility are transmitted towards financial development and economic growth. These channels are the monetary policy volatility impacting the capital markets and the channel of overall policy and regime related volatility. There is an ever-growing literature referring to monetary policy, which can be changed according to the political policy preferences, as one of the major transmission channels through which political circles impact the economic growth volatility or stock market returns (Rigobon and Sack 2003; Thorbecke1997). The monetary policy volatility channel of transmission of volatility in stock returns (Bernanke and Gertler 2012; Rigobon and Sack 2003) and asset returns (Thorbecke 1997) has relatively been a greater focus in

literature. Hsing and Hsieh (2012) observe growth in M2 component of money supply directly contributing to stock exchange volatility.

Papadamou *et al.* (2014) explored the way political instability causes the lack of level of independence of central banks which in turn leads to the stock exchange volatility. In Poland, growth of M2 directly contributed to stock returns' volatility (Hsing and Hsieh, 2012). The literature has extended itself towards finding out the relationship of drivers leading to monetary policy related volatility. Aisen and Vega (2013) observing that there is significant relationship between inflation volatility and political volatility. Political instability is observed to impact the independence of monetary policy authorities or central banks as the fragile polity may want such steps from the central banks which in turn leads to higher inflationary pressures (Carmignani 2003). Compromise of independence of monetary authorities/central banks impacts the stock returns'/markets' volatility (Papadamou *et al.* 2014).

The second channel of transmission is overall policy and regime related volatility. Hartwell (2018) observes that it is formal political instability generated by volatility in formal political institutions that causes higher level of financial volatility. This volatility is higher even than the one caused by monetary policy changes. The work of political scientists has largely been revolving around the second channel of transmission of volatility and that are political news and regime changes (Beaulieu *et al.* 2005). Election week has been attributed to major variability in index returns which possibly can be doubled in such a week. Białkowski *et al.* (2008) and Goodell and Vähämaa (2013) show election events as a driver of equity related variance around the date of election event. They presume that public and market expectation of probable future macroeconomic policy direction of specific election winner drives this election surrounding political volatility. Not only the expected election results but also an unexpected election outcome also increases the uncertainty (Castells and Trillas 2013) or even an influential politician switching parties may exert significant abnormal impact on economic/financial volatility (Jayachandran 2006).

Dutt and Mitra (2008) observe that political sector unrest generates frequent policy switches which negatively affect economic outcomes. McKibbin and Fernando (2020) show that frequent political changes lead to sub-optimal economic decisions due to lack of sufficient deliberations amongst the stakeholders before finalizing such policies. Lack of parliamentary regime autonomy, characterized by influentially dominant economic classes, leads to lack of will to reform the economy (Prasad 2012). Naqvi *et al.* (2017) in a country level study of Pakistan observe that political instability has a significant negative impact on FD. Khisa (2015) shows two parts or categories of political instability viz elite and communal political instabilities. While elite political instability is caused by the circumstances where an individual from elite holding on to the national leadership if removed by force, communal political instability is a regime change operation carried out by a coalition with a foreign country's help. Pakistan has recently witnessed such communal political instability in which the regime change operation has impacted the economy in worst ways (GDP growth rate falling from around 6% to 1% and inflation turned into hyperinflation from 12% to 47%) in a period of only one year from April 2022 to April 2023.

Murad and Alshyab (2019) observe a negative relationship between internal political instability on economic growth while a positive relationship between external political instability in border countries. Pasha (2020) has however, observed an insignificant relationship between riots, terrorism, or political associations with real GDP growth. He, however, observed a significant positive effect on real GDP rates of growth with change of Head of State. Baklouti and Boujelbene (2020) observe that political instability negatively affects productive activity and also increases the transaction costs thereby hampering the economic growth of a country. Gurgul and Lach (2013) observe that policy volatility aspect of the political instability caused by regime fragilities lead to dampening the economic growth. A relatively more direct channel through which the political volatility impacts the economic growth and economic growth volatility is the uncertainties surrounding the continuity of economic policies. Certain things like terrorism or disruption of economic policies perceived for multiyear plans is more volatile for the countries having less developed capital markets (Białkowski *et al.* 2008). An imminent change in political regime negatively impacts the investments by harming property rights' formation. Constitutional changes, the variable used as a measure of political volatility, are negatively related with growth (Brunetti 1997).

While studying the impact of legal and policy institutions' instability in rich and low-income countries, Berggren *et al.* (2012) observed that volatility in social institutions negatively affects the economic growth both in rich and low-income countries. Brunetti (1997) conducted a comprehensive survey summarizing the major political variables impacting the economic growth. He concluded that policy instability as a subjective political perception is the most exploratory variable while democracy is less successful in explaining this relationship. However, on the other hand many researches have empirically observed a significant relationship between the form of governance and economic performance (Ghardallou and Sridi 2020; Yu and Jong-A-Pin 2020, among others). Alesina and Perotti (1996) found that periods in which propensity of the collapse of government is high are characterized by significantly lower economic growth. Chen and Feng (1996) observe a negative relationship of political polarization,

government repression, and instable regimes with economic growth. Jong-A-Pin (2009) evaluates the association of various (25 in number) political indicators with economic growth. The most critical impact noticed by him is of political regime instability of higher degrees on economic growth. Alesina and Perotti (1996) show a negative impact of socio-political instability with private investment. They, however, observe a positive association between socio-political instability and macro-economic risks. Weaker judicial systems and political instability are also inimical to the growth of investment (Anyanwu2017; Papaioannou 2009; Wanjiru and Prime 2020).

Dirks and Schmidt (2023) show that political instability leads to post-shock reduction of 4-7% in GDP of developed countries after 5 years. According to their conclusion, the negative effect is channelized through decrease in consumption and investment. Hasan *et al.* (2023) observe positive relationship between political variables like democracy and economic growth for developing countries. They, however, find a negative relationship between economic freedom and economic growth.

Schumpeter (1911) stressed that economic growth is crucial for financial development, and this has been supported by Miller (1998). This can be seen through the channels of risk reduction, lowering of financial transactions' cost, mobilization of household funds, subsequent allocation of these funds towards productive sectors of the economy, and reduction in external financing cost (Muhammad *et al.* 2014; Rajan and Zingales 1998). Financial development positively impacts agriculture and services sectors of the economy (Ustarz and Fanta 2021) and fosters economic growth (Ewubare and Ogbuagul 2017; Tang and Abosedra 2020). Financial development also reduces financial and economic volatility (Kapingura *et al.* 2022).

A wide range of related macroeconomic variables which have been explored by various researchers as dependent variables in this relationship include private investment, GDP growth per capita, private investment, public expenditures, public investment, taxation, inflation, and debt. However, there is hardly any literature available systematically exploring the relationship between political instability and financial development on component level analysis.

2.2. Theoretical Framework and Hypothesis

This study focuses on observing the impact of political instability on financial development and economic growth by approximating political stability with index provided by World Governance Index. Financial development (FD) is approximated through two composite indices *i.e.*, financial markets development (FM) and financial institutions development (FI). Three sub-measures for each of the index are financial depth, financial access, and financial efficiency. Nine measures identifying the different aspects of financial markets and institutions are used in this study. Figure 1 provides the hypothesized model.

Figure 1. Theoretical Model
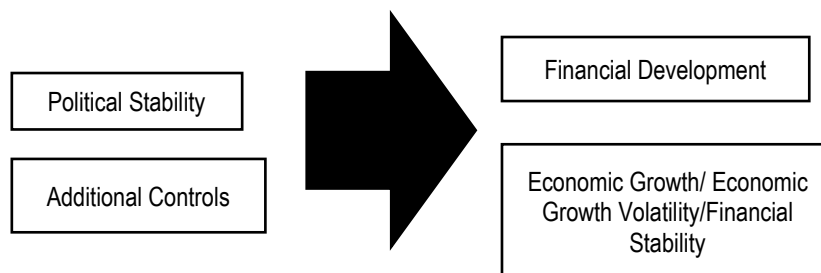
2.2.1 Hypotheses

Based on the literature review, the hypotheses for this study are:

H1: Political stability has a positive relationship with financial development in developing countries.

H2: Political stability has a positive relationship with economic growth in developing countries.

H3: Political stability has a positive relationship with economic stability in developing countries.

H4: Political stability has a positive relationship with financial stability in developing countries.

3. Materials and Methods

3.1. Data Sources

The research relies on panel data for 33 developing nations covering the years 1980–2020. The data was sourced from Global Economy.com, Worldwide Governance Indicators, and the World Bank's World Development Indicators (GDI). The panel data was analyzed using Stata SE 15.

3.2. Measurement of Variables

The independent variable for this study is political stability (PS). The study of its impact on dependent variables; financial development (FD), economic growth (EG), economic growth volatility (EGV) and financial stability (FS) is amongst the objectives of this research. The study employs an index of political stability from Worldwide Governance Indicators (WGI) to explore this effect. These governance indicators are compiled on six governance dimensions. Political stability index is one of the dimensions of WGI. These aggregates are compiled from 30 different data sources of variety of think tanks, survey institutes, NGOs, and international organizations. Representative factors taken by sources to form the Political Stability Index include government stability, internal conflict, ethnic tensions, external conflict, social unrest, intensity of social conflicts (excluding the conflicts of land), intensity of internal conflicts, underground political organizations, intensity of social conflicts (excluding the conflicts of land), non-state armed conflict, military strikes to change the governments.

FD is our main dependent variable. The measurement for FD has long been and is still being debated especially in academia as pointed out by Edwards (1996) and Levine (2021). As a proxy for financial development, most of the earlier studies used private sector lending as percentage of the GDP for banking sector financial development (Al-Jarrah *et al.* 2012; Hussain and Chakraborty, 2012; Hassan *et al.* 2011; Inoubli and Khallouli, 2011; King and Levine, 1993). For measuring the financial development caused by financial markets, stock (market capitalizations) to GDP ratio has been used as proxy by various studies (Masoud and Hardaker, 2012; and Sahoo and Sethi, 2013). However, later literature suggests that financial development is a multidimensional phenomenon, and hence requires a move from the usage of single indicator proxies to measure it (Čihák *et al.* 2012; Aizenman *et al.* 2015).

Table 1. Assessment of financial depth, access and efficiency

	Depth	Access	Efficiency
Financial Institutions	Private Sector Credit (% of GDP)	Branches (Commercial Banks) per 100,000 adults	Net Interest Margin
	Pension Fund Assets (% of GDP)	ATMs per 100,000 adults	Lending-Deposits Spread
	Mutual Fund Assets (% of GDP)		None-Interest Income to Total Income
	Insurance Premiums (% of GDP)		Return on Assets / Return on Equity
Financial Markets	Stock Market Capitalization to GDP	Percent of market capitalization outside of top 10 largest companies	Stock market turnover ratio (stocks traded/capitalization)
	Stock Traded to GDP	Total number of issuers of debt (domestic and external, nonfinancial corporations, and financial corporations	
	International Debt Securities (% of GDP)		
	Total Debt Securities of Nonfinancial Corporations (% of GDP)		
	Total Debt Securities of Financial Corporations (% of GDP)		

Adopted from: Sahay *et al.* (2015)

Our study shall provide policy makers with such inputs which are based on the systematic and detailed analysis of various facets of financial development viz-a-viz its relationship with economic growth, economic growth volatility, financial volatility, political stability by employing both financial markets and financial institutions aspects of financial sector on three dimensions of financial access, financial depth, and financial efficiency. In this backdrop, this study

relates to that of Sahay *et al.* (2015), Svirydzenka (2016), Fernández *et al.* (2016), and Jiang *et al.* (2020) who used extensive indices for measurement of FD.

The expansion and improvement of financial markets and financial institutions are both part of the financial sector's development. Therefore, the development of financial markets and institutions should both be included in an index that measures financial development. There are three main criteria used to assess financial markets and institutions: depth, accessibility, and efficiency. Using the criteria presented in Table 1, we assess the three dimensions of financial depth, financial access, and financial efficiency.

As a first step in building the indices, 6 sub-indices Financial Institutions Depth (FID), Financial Institutions Access (FIA), Financial Institutions Efficiency (FIE), Financial Markets Depth (FMD), Financial Markets Access (FMA) and Financial Markets Efficiency (FME) are built. Each sub-index involves specific variables, e.g., Financial Institutions Depth (FID), a composite indicator, includes pension fund assets, private sector credit, insurance premiums (life and non-life) and mutual fund assets. A principal component analysis (PCA) is held to determine the weight for each variable of composite index. On second step, indices FI and FM get constructed through PCA on the basis of those sub-indices. In the final stage, FI and FM are used to build FD index.

The standard deviation of GDP growth is used to measure EGV. The banking Z-score at country level is used to measure FS, while for EG, the average of GDP per capita growth is used (Arcand *et al.* 2015; Beck and Levine 2004, among others). Following the work of Beck and Levine (2004) and Sahay *et al.* (2015), this study incorporates a number of variables at the national level to account for panel heterogeneity. Investments from outside the country (FDI), inflation (Inf), education level (Edu), public consumption (Consum), trade openness (TO), and gross capital inflow are all used as control variables (GCF).

3.3 Data Analysis

Heteroscedasticity, autocorrelation, and cross-sectional dependence were all factors that prompted us to choose a Panel Corrected Standard Error (PCSE) regression model, supplemented with GMM testing to ensure the results are robust.

3.3.1. Panel Corrected Standard Error (PCSE)

The presence of cross-sectional dependence may lead to invalid inferences or inefficient estimation in case standard techniques of estimation are used. Beck and Katz (1995) were the pioneers to suggest that in cases when the data exhibits heteroscedasticity, cross-sectional dependence (CSD), and autocorrelation, the Panel Corrected Standard Error (PCSE) estimate technique outperforms its alternatives. It's an enhanced version of inefficient OLS with two steps. One noteworthy benefit of PCSE is that it addresses serial correlation, contemporaneous correlation, and heteroscedasticity all at once (Sundjo and Aziseh 2018). PCSE estimator is observed to give efficient and robust outcomes.

PCSE estimator is not supported by some researchers to be that accurate in estimation when cross-sectional aspect of N is larger than time period T as it estimates complete N X N cross-section covariance matrix. However, Hoechle (2007) believes that PCSE works particularly well for large N and small T. Since we have cross-section of 33 developing countries tested for 40 years data from1980-2020, the issue of N being larger than time period T does not come into play. The characteristics of PCSE estimation technique described above and the issues of heteroscedasticity, autocorrelation, and cross-sectional interdependence related to our data leads us to use PCSE model of regression instead of random, common, or fixed effect models. Some recent studies have considered the use of PCSE estimator due to it providing good fit for the data characterized by issues like autocorrelation and heteroscedasticity (Pais-Magalhaes *et al.* 2022). According to Anton and Nucu (2020), 'panels corrected standard errors model' is beneficial to decrease the existence of autocorrelation, cross sectional dependence and heteroskedastic in the panel data. The study has run a technique of PCSE model to overcome all of these problems and for the accuracy of the final results (Haralayya and Aithal, 2021).

3.3.2. Additional Testing-GMM

The GMM estimator developed by Arellano and Bover (1995), building on the work of Levine *et al.* (2000), has gained popularity in finance-growth literature for its ability to tackle problems related to endogeneity and bias caused by omitted variables. According to Levine *et al.* (2000), the external part of the development of financial intermediaries has a significant and favourable effect on economic growth. Beck and Levine (2004) also validated this finding. According to Roodman (2006), the GMM difference estimator put out by Arellano and Bond (1991) and the GMM system estimator put out by Arellano and Bover (1995) and Blundell and Bond (1998) perform better when the number of nations is more than the time period. The two estimators mentioned are specifically designed

for analysing micro-panel datasets (Eberhardt 2012). A diverse body of recent studies has utilised these methods to analyse macro-panel data for examining the connections between financial development (FD) and economic growth (EG) (Beck and Levine 2004; Arcand *et al.* 2012; Sahay *et al.* 2015; Abdul Bahri *et al.* 2018). Conducting GMM testing will enable us to address the potential problem of endogeneity. The 2-step Generalised Method of Moments (GMM) approach can effectively address the issue of temporal correlation in errors. Additionally, it has the ability to regulate heteroscedasticity among different countries. We employ the xtabond2 command to implement a 2-step generalised method of moments (GMM) system, as described by Roodman (2009).

3.3.3. Empirical Model

$$FD \text{ or } EGV \text{ or } FS \text{ or } EG_{j,t} = \gamma_0 + \gamma_1 PS_{j,t} + \delta_m \sum_{m=1}^{n} X_{m,j,t} + \epsilon_{j,t} \quad (1)$$

where, financial development (FD), economic growth (EG), economic growth volatility (EGV) and financial stability (FS) are dependent variables for country 'j' at time 't', political stability (PS) is independent variable for country 'j' at time 't'. Other symbols are interpreted as follows: γ_0 is the country fixed effect, γ_1 is the coefficient on relevant political stability indicators, δ is control of X variable country 'j' at time 't' and ϵ is the error term of the model. Equation (1) estimates the role of political stability on financial development, economic growth volatility, financial stability and economic growth (hypothesis 1 - 4). A positive coefficient (γ_1) on PS will signify an encouraging role of political stability on financial development and economic growth. Owing to panel structure of data, the choice of econometric model has been made based on diagnostic testing through BPLM test, the Hausman test, and the test for cross-sectional interdependence. Since the diagnostic testing shows multicollinearity, cross-sectional dependence and heteroscedasticity, we use Panel Corrected Standard Error model with additional testing of GMM as a check for robustness and to deal with possible endogeneity.

4. Results and Discussions

4.1 Political Stability and Financial Development

Table 2. Results for Political Stability and Financial Development

Variables	FD	FI	FM	FID	FIA	FIE	FMD	FMA	FME
PS	0.0560***	0.0415***	-0.0301***	0.0918***	0.0221***	0.0419***	0.0111***	0.0717***	-0.0307***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Inf	-0.3255***	-0.4012***	-0.2511***	-0.0664***	-0.0517***	-0.1930***	-0.1615***	-0.1112***	-0.0568***
	(0.000)	(0.004)	(0.000)	(0.000)	(0.000)	(0.000)	0.005	(0.000)	0.002
GCF	0.0081**	0.0107	-0.0025	-0.0101	0.0154**	-0.1642***	-0.0157	0.0096	0.0187
	(0.031)	(0.085)	(0.142)	(0.111)	(0.022)	(0.000)	(0.169)	(0.051)	(0.178)
FDI	-0.0116**	-0.0022***	0.0149	0.1475	0.0514	-0.0243**	0.0555***	-0.0082***	-0.0312***
	(0.020)	(0.002)	(0.112)	(0.147)	(0.089)	(0.035)	(0.001)	(0.005)	(0.000)
Edu	-0.1012***	-0.1352***	-0.0504***	-0.2121***	-0.0901***	0.0741***	-0.2179***	-0.0986***	-0.2175***
	(0.000)	(0.006)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Consum	-0.0869***	0.0567***	-0.3557***	0.0333***	0.0413***	-0.4176***	-0.5249***	-0.1814***	-0.4411***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	0.005	0.006	(0.000)	(0.000)
TO	0.0835***	0.0361***	0.0103***	0.1162***	0.0934***	0.0191***	0.0222***	0.9105***	-0.7156***
	(0.000)	(0.000)	(0.000)	0.001	(0.000)	(0.000)	(0.000)	0.010	(0.000)
Cons	0.4528***	0.4122***	0.1675***	0.0809***	0.1247***	0.2142***	0.8680***	0.0644***	0.0734**
	(0.000)	0.005	0.001	0.001	(0.000)	(0.000)	(0.000)	(0.000)	0.026
No. of Groups	33	33	33	33	33	33	33	33	33
No. of Obs	764	764	764	764	764	764	764	764	764
R^2	0.1614	0.1216	0.2215	0.2678	0.2570	0.1725	0.1198	0.2626	0.1946

Note: ***, **, * represent the 1%, 5%., and 10% significance level respectively.

Table 2 shows the results between these two variables for 33 developing countries. It also shows that an increase in political stability increases financial development. The result is significant with p-value of 0.000. It reflects that in the case of increase in political stability, financial development will also increase. The results are in line with Khan *et al.* (2022). There is a positive significant relationship on component level with financial institutions depth, financial institutions access, and financial institutions efficiency. It also holds good for the development of financial markets. There is a positive significant relationship on component level with financial markets depth and financial markets access. The results are consistent with Kacho and Dahmardeh (2017). Lalvani (2003) also

concludes the same. However, he does not have pointed out any components of financial development impacted by political instability. An increase in political stability leads to an increase in financial development. Component level figures show that financial institutions' development increases with increased political stability. This necessarily means that bank-led financial development is positively correlated with political stability. A further probe reveals that all the sub-components of financial institutions' development *i.e.* financial institutions depth, access, and efficiency have a positive relationship with political stability. This means that increased political stability positively affects the financial institutions' depth, access, and efficiency. However, for financial markets efficiency, we observe a negative impact of political stability. This finding is also in line with Fagbemi and Omowumi (2020) for Nigeria who observe insignificant impact of institutional factors on FD. However, their overall conclusion deviates from what our results suggest. This is possible that their results are limited in applicability because of just focusing on efficiency and scale of credit as a measure of FD. The financial market development and its dimensions of access and efficiency are totally ignored by them. The only dimension they cater is the financial depth. Our approach to measure FD is based on much elaborate and advanced indices suggested by Sahay *et al.* (2015).

4.2 Political Stability and Economic Growth

Table 3. Results for Political Stability and Economic Growth

Economic Growth	Coefficient	P-value
PS	0.0240***	0.005
Inf	0.09473***	0.000
Gcf	-0.0348***	0.000
Fdi	0.0267***	0.000
Edu	0.0969***	0.000
Con	-0.0209***	0.000
TO	-0.0926***	0.000
Cons	0.0337***	0.000
No of Groups	33	
No. of observations	632	
R-squared	0.0845	

Note: ***, **, * represent the 1%, 5%., and 10% significance level respectively.

The results of significant and positive relationship between PS and EG also holds for 33 developing countries with p-value 0.05 (Table 3). Robustness check of GMM estimation also corroborates this result (Table 4). These results are in line with previous studies by Khan *et al.* (2022), Hussain (2014), Fatas and Mihov (2013), Gür and Akbulut (2012) and Siddiqui *et al.* (2022). Arslan *et al.* (2013) also shows the same relationship for country-level study in Turkey.

Table 4. GMM Results: Political Stability and Economic Growth

Economic Growth	Coefficient	P-value
PS	.0469***	.010
Inf	-.1365***	.019
Gcf	.2667***	.005
Fdi	.0423***	.011
Edu	.0717***	.027
Con	-.1122***	.007
TO	-.0188***	.001
Cons	.1067***	.006
No of Groups	33	
No. of observations	1476	

Note: ***, **, * represent the 1%, 5%., and 10% significance level respectively.

There a are number of researchers who show that poor institutional infrastructure has contributed towards low economic growth in low- and medium-income countries (Aluko and Ibrahim, 2020; Bordo and Rousseau, 2006; Harper and McNulty, 2008; Kutan *et al.* 2017). There is a significant positive relationship between PS and EG in the long run (Rathnayake, 2022; and Abaidoo and Agyapong (2021). Many plausible explanations are there for this

relationship. Baklouti and Boujelbene (2020) observe that lack of PS negatively affects productive activity thereby decreasing EG. One of the plausible explanations for the negative relationship between political instability and EG is frequent policy changes (Dutt and Mitra, 2008; Berggren *et al.* 2012, Brunetti, 1997).

However, some researchers also provide the explanation that only political instability caused by regime changes impacts EG for example Pasha (2020) and Radu (2015). Another reason is that stability and smooth functionality of the financial sector is vital for economic growth. Such stability and smoothness of functionality is possible in a politically stable environment. Many researchers like Ehigiamusoe and Samsurijan (2020) have concluded their discussions in the same line of argument. Some researchers have reasoned that corruption leads to restraining the flow of FDI (Javorcik and Wei, 2009) and human capital development. Another reason for such results is that higher government spending in instable political environments impede the private sector development as also observed by Devereux and Wen (1998) and Utomo (2021). In such an environment, investor's confidence is eroded, and the governments tend to use the fiscal policy to stimulate the economy. The private sectors, therefore, may face crowding out effect in developing countries more than what they may see in the developed countries. The policy makers should investigate this aspect and try to create a more balanced approach for government and private spending to stimulate economic growth in developing countries.

4.3 Political Stability and Economic Growth Volatility

Table 5. Results for Political Stability and Economic Growth Volatility

Economic Growth Volatility	Coefficient	P-value
PS	0.0228***	0.001
Inflation	0.0137***	0.000
Gcf	-0.0322***	0.000
Fdi	0.0244**	0.012
Edu	0.0087***	0.000
Con	-0.0215***	0.000
TO	-0.0086***	0.000
Cons	0.0346***	0.000
No of Groups	33	
No. of observations	669	
R-squared	0.0812	

Note: ***, **, * represent the 1%, 5%., and 10% significance level respectively.

Table 5 shows a significant positive relationship between political stability and economic growth volatility. This means that political stability at higher levels leads to increase in economic growth volatility. This result seems to be surprising. However, there is a plausible explanation for the result of this study. Political stability may lead to rapid financial development by creating a conducive macroeconomic environment.

Table 6. Result of GMM: Political Stability and Economic Growth Volatility

Economic Growth Volatility	Coefficient	P-value
PS	-0.0247***	0.0013
Inflation	0.0547***	0.0150
Gcf	-0.0481***	0.0045
Fdi	0.0832***	0.0121
Edu	0.0248***	0.0017
Con	0.0852	0.0930
TO	-0.0555***	0.0029
Cons	0.03387	0.0970
No of Groups	33	
No. of observations	1476	

Note: ***, **, * represent the 1%, 5%., and 10% significance level respectively.

This may lead to rapid financial development. This rapid FD effect introduces economic growth volatility in developing countries. These countries have less developed institutional and regulatory infrastructure. We have already seen in our results of the relationship between FD and EV that at higher levels of FD there is an increase in EV. Pasha (2020) has also observed an insignificant relationship between riots, terrorism, or political associations with real GDP growth. Table 6 shows the results of our additional GMM testing for robustness. The results corroborate with PCSE estimation of relationship.

4.4 Political Stability and Financial Stability

Table 7. Results for Political Stability and Financial Stability

Financial Stability	Coefficient	P-value
PS	0.013**	0.028
Inflation	-0.056*	0.065
Gcf	0.0042	0.942
Fdi	-0.111**	0.025
Edu	0.246***	0.000
Con	-0.4399***	0.000
TO	-0.2039***	0.000
Cons	1.3227***	0.000
No of Groups	33	
No. of observations	669	
R-squared	0.1102	

Note: ***, **, * represent the 1%, 5%., and 10% significance level respectively.

Table 7 shows the results between political stability and financial stability for 33 developing countries. It shows that an increase in political stability increases financial stability. The result is significant with a p-value of 0.05. Our additional testing through GMM also confirms the positive association between political stability and financial stability (Table 8). Hartwell (2018) also observes that formal political stability reduces financial volatility.

Table 8. GMM Results: Political Stability and Financial Stability

Financial Stability	Coefficient	P-value
PS	0.0673***	0.000
Inflation	-0.1456***	0.002
Gcf	0.0116	0.831
Fdi	-0.4040***	0.001
Edu	0.0549***	0.000
Con	-0.1425***	0.019
TO	-0.0648***	0.000
Cons	0.0256***	0.000
No of Groups	33	
No. of observations	1474	

Note: ***, **, * represent the 1%, 5%., and 10% significance level respectively.

Conclusions and Recommendations

Political stability and financial development for developing countries is linear in relationship and this also holds for both financial institutions development and financial markets development. Also, all the dimensions of depth, access and efficiency are also showing the positive impact of political stability on financial development except for financial markets efficiency. Financial markets efficiency is reduced with the increase in political stability. Therefore, policy makers for developing countries need to focus on regulating the financial markets efficiency related practices in politically stable environments.

Our analysis for developing countries concludes that political stability positively impacts economic growth. The macro level policy makers need to understand that it is regime-change based political instability that leads to negative impact on economic growth (Pasha, 2020). Political instability caused by certain happenings like terrorist acts bears no statistically significant impact on economic growth from previous findings. It is therefore, recommended that in socio-economic environments characterized by regime-changed based political instability, the policy makers need to work on the perception of uncertainty and specifically the fear of macroeconomic policy changes in the wake of possible regime change. This would allow the consumption expenditure to normally move; both at capital goods and consumer goods level. Pakistan these days present a good case study for such regime change led political instability impacting the economy in a big way. Even IMF while negotiating for the bail-out package has asked for guarantee of policy continuity from former Prime Minister Imran Khan and his political party (Pakistan Tehreek-e-Insaf) because in case of nearer to free elections, there is every possibility that this party shall again come to power only after few years.

Our empirical results for developing countries indicate that there is a positive relationship between political stability and economic growth volatility. The result is not that surprising when we see that even in the presence of well-functioning financial systems, the rapid growth may lead to an increase in volatility. We, therefore, recommend that the policy makers in the developing countries should not only be focused on financialization but they must also ensure that the reforms in enabling environment are also keeping pace with the growth of financialization. Also, 33 developing countries conclude that on all three levels political stability positively affects financial stability. This refers to political instability which negatively impacts financial stability. This is interesting to see that in the previous section we see that political stability increases economic growth volatility for developing countries. Whereas for this section we have reached the conclusion that political stability positively affects financial stability for developing countries. This leads us to the important conclusion that the terms economic growth volatility and financial stability cannot be used synonymously as these are measured differently and one *i.e.* financial stability is a sub-set of the other *i.e.* economic stability. Therefore, the policy makers need to formulate the policies related to each of them according to the market and institutional realities pertaining to each of them. First, issues of synchronization between institutional modernization and social modernization leads to political disorder and chaos. This possibly may be the reason for differences in results developed and developing countries. This study has not taken this factor in to account and further investigation is therefore, required in this direction. Second, this study employed panel data however, disaggregation to economic sector level data may provide the insights for sector-specific national policy making.

Limitations of the Study

There are two limitations that we would highlight in this study. First, the issues of synchronization between institutional modernization and social modernization leads to political disorder and chaos. This possibly may be the reason for differences in results for developed and developing countries. This study has not taken this factor into account and further investigation is therefore required in this direction. Secondly, panel data was used in this investigation. Nevertheless, national policymakers may gain useful insights for sector-specific initiatives by also investigating the economic sector level data.

Credit Authorship Contribution Statement

Wasim Ullah: Conceptualization, Methodology, Software, Formal analysis, Writing – original draft, Data curation.
Ahmad Shauqi Mohamad Zubir: Investigation, Methodology, Supervision, Validation, Writing – review and editing, Funding.
Akmalia Mohamad Ariff: Conceptualization, Project administration, Data curation, Validation, Writing – review and editing, Visualization.

Declaration of Competing Interest

The authors declare that there are no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Declaration of Use of Generative AI and AI-assisted Technologies

The authors declare that they have not used generative AI and AI-assisted technologies during the preparation of this work.

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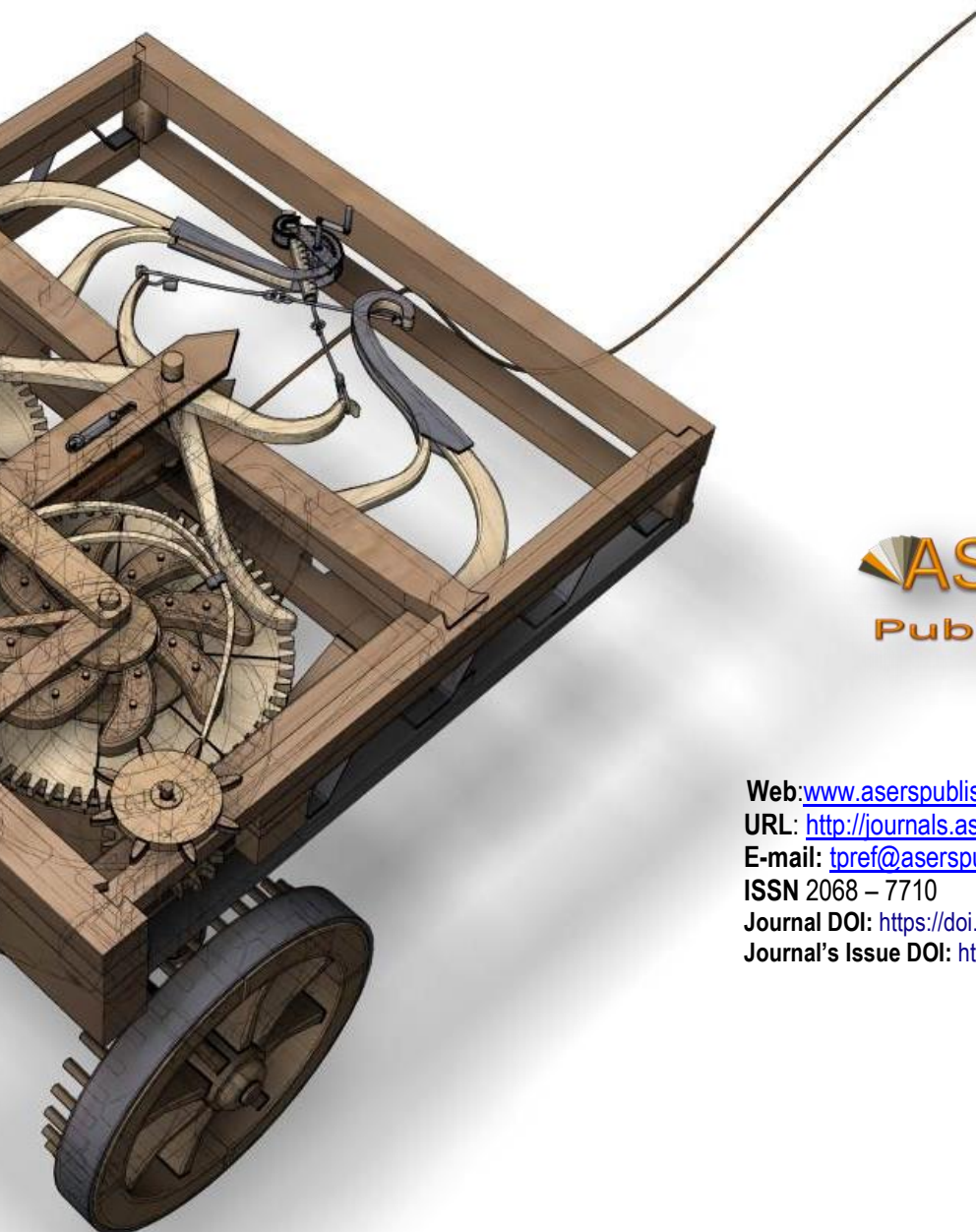
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