



Link Between Political and Economic Stability: A Case Study of Pakistan

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ABSTRACT

Present research aims at investigating the relationship between political and economic stability in Pakistan. Using secondary data over the period of 1987 to 2022, ARDL bound testing technique is employed to obtain short-run and long-run estimates of the regression model. It is found that political stability and economic stability have a positive and significant relationship. The study also establishes that increase in labor force, trade openness and real discount rate help to achieve economic stability while government expenditure negatively impact economic stability. Based on these conclusions, study proposes important policy recommendations including prudent fiscal management, labor market policies for workforce growth, efforts to promote political stability, cautious monetary policy management, and continued promotion of trade openness to foster stability in economic growth.



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1. Introduction

Political stability (PS) is considered a prerequisite for the sustainable development of a country, as it has a significant positive impact on the economic environment (Feng, 1997; Shahabadi & Bahari, 2014). PS is essential to community stability and trust in the government and also helps to reduce uncertainty that results in higher investment and country's economic growth (EG) (Baillie et al., 2021; Singha & Singh, 2022). In addition, PS leads to rational and efficient policy decisions by the government, which in turn promotes transparency and accountability (Ali, 2001). Political unrest affects economic performance for two reasons. Primarily, it prevents society from building up physical capital and secondly, creates

uncertainty about future returns on investments made by businesses and private individuals. Further, political unrest directly impacts productivity because it affects how the market works (Drazen, 2002).

Policy-making institutions globally recognize the significance of the relationship between PS and EG, especially in developing economies with low GDP per capita. In this regard Barro (1991) conducted a comprehensive study to check how EG rates and PS are correlated in 98 nations of the world. The results confirmed the existence of a correlation between EG and PS. Extensive literature is available showing a two-way cause-and-effect relationship between EG and PS (Dirks & Schmidt, 2023; Husain, 2009; Paldam, 1998; Zablotsky, 1996). Unstable economic growth affects the country's investment environment as people move capital out of the country, negatively affecting a nation's economic health. It affects domestic and foreign investment, which, in turn, slows down a country's growth rate (Gyimah-Brempong & Traynor, 1999; Qadri, Shah, & Nadeem Qureshi, 2020).

The political uncertainty in Pakistan negatively affects the EG rate (Memon, Memon, Shaikh, & Memon, 2011). According to Zeeshan, Rehman, Ullah, Hussain, and Afridi (2022), political uncertainty has been an unfortunate reality in Pakistan for the last many decades, causing a slower economic growth rate in the country. The political destabilization and discontinuity of the investment and tax policies discourage investment in Pakistan's industrial sector, leading to economic backwardness. The politically unstable environment creates many problems for the EG of Pakistan. The political dynamics and EG relationship are exemplary in the case of Pakistan, where no elected prime minister has completed their five-year tenure (Mufti, 2023). According to Haider, ud Din, and Ghani (2011), the potential for a higher growth rate in the case of Pakistan is immense, but it needs consistent policies and the trust of the stakeholders in the state policies. Political uncertainty is one of the major reasons for low economic development in Pakistan (Gill, 2010; Husain, 2009).

If we look at the history of Pakistan, the political uncertainty and bad economic conditions including inflation, unemployment, and poverty paved the way for the non-democratic forces to intervene and rule. Pakistan has been governed for almost 33 years under dictatorship (Gill, 2010; Mufti, 2023; Sallahuddin & Awan, 2017). Governance in Pakistan has always remained an issue because political parties coming into power feel insecure and work only for their survival and create an unstable economic environment. The long-term policies are not formed for the country. It is also evident that the EG rate of Pakistan has remained high during dictatorship and low during political regimes (Akram, 2023). As a developing nation, Pakistan struggles with the complexity of its political environment, which is shaped by various domestic and external factors, further highlighting the fragility of its PS. The prevailing corruption during political chaos contributes to a decline in the country's economic progress. The weak political system and government institutions can not control the rampant political tensions within the nation. Such situation impedes EG in Pakistan (Easterly, 2001). Husain (2009) critically questions the historical stability of Pakistan's political landscape, tracing its impact on economic fluctuations. Accordingly, it is assumed that political problems is one of the reasons why the country is still classified as a lower-middle-income country (Bank, 2017).

The significance of the present study lies in unraveling the intricate relationship between political and economic stability in Pakistan, a country that witnessed unstable economic and political situation over decades (Khan, Zahra, & Khan, 2024). Pakistan has experienced frequent transitions from democratic to dictator regimes, political upheavals, and fluctuating macroeconomic indicators over decades, all of these reasons make this country an ideal case for studying the relationship between political and economic stability. Furthermore, given the strategic location of Pakistan, any instability in political and economic scenario has global implications. Understanding the political and economic linkage in this country is therefore crucial from diplomatic perspective.

2. Literature Review

The political system in developing countries and its built-in instability have greatly affected developing countries. According to Alesina and Perotti (1996), it is observed that a country where governments are changed frequently experiences lower EG rates. Numerous other researchers have confirmed that political instability hurts EG. Countries with robust PS mechanisms have lower levels of uncertainty and fewer citizens demanding greater transparency and accountability. They can better use financial information to promote transparency and accountability (Hollyer, Rosendorff, & Vreeland, 2019; Martinez, 2022). An uncertain political climate inhibits private investment, which harms the economy (Devereux & Wen, 1995; Moscona & Seck, 2021). Campos and Karanasos (2008) conducted an empirical study on Argentina using an extensive data set from 1896 to 2000. The authors check the effect of PS on the country's EG. Political instability is divided into two parts: informal instability, measured through assassinations and strikes in the country, and constitutional and legislative changes, measured as formal instability. The authors concluded the study on a note that both types of instability negatively affect the country's economic performance. In addition, the authors concluded that the long-run (LR) effect of formal instability on the country's economic performance is significant.

Aisen and Veiga (2013) conducted an empirical study by taking a sample of 169 countries and data from 1960 to 20004 to check the effect of PS on per capita income growth. In another study, Younis, Anquetin, and Thielen (2008) conducted a panel data study of 93 countries using data from 1960 to 1990 to check the impact of PS and EG. The results of the study showed a strong relationship between PS and EG. Loss of investor confidence, which produces a reduction in business activity, a decline in aggregate demand, and eventually a recession of all economic activity, is one of the factors contributing to weaker EG in politically unstable conditions (Aisen & Veiga, 2013; Marks, 2022; Pin, Eldridge, & Galea, 2009; Smith, 1987). Long-term EG is impeded by high borrowing due to unstable political leaders' short-term (SR) fiscal policies (Edwards & Tabellini, 1991; Nguyen et al., 2022).

There are several ways that PS might influence ES, such as trade, government spending, and consumption, which tend to fall substantially in developing nations experiencing prolonged political crisis (Aisen & Veiga, 2013; Azeem, Awan, Jadoon, & Sair, 2015). According to a study of forty-eight Sub-Saharan African countries from 1985–2012, more robust political institutions tend to increase the labor force participation rate (LFPR), which in turn helps a nation's EG. In other words, PS may influence growth through a variety of channels, including the creation of an environment that is conducive to business expansion, the attraction of domestic and foreign investment, the creation of employment opportunities, and migration toward urban areas that boost aggregate demand and promote EG (Cooray, Dutta, & Mallick, 2017; Maloney, 2003; Miljkovic & Rimal, 2008).

Since independence, Pakistan has been dealing with political unrest in both the political and economic spheres. Noonari and Dashnyam (2022) conducted an empirical study to check the effect of PIS and the socioeconomic situation of Sindh by taking data from 1988 to 2008. The results concluded that peace and PS are essential for the country's social and political development. Pakistan's dismal performance was primarily due to the elected government's inefficient economic policies, which were put in place after prolonged periods of unstable political scenario. Pakistan has never experienced a seamless power transfer between governments (Zaidi, 2005). This political uncertainty and instability have resulted in a decline in EG (Akhtari, Moreira, & Trucco, 2022; Tabassam, Hashmi, & Rehman, 2016). The major causes of poor economic performance and lower investment have been non-economic factors such as corruption, numerous regime shifts, governance crises, energy crises, and political rivalries between parties and institutions. These non-economic aspects rendered the state in precarious and uncertain conditions. Domestic investors withdrew their investments from

Pakistan because of the risk and volatility and invested in neighboring states in the quest for higher returns. This capital mobility has come to be blamed for Pakistan's subpar EG.

The government responds to social and political unrest on a political and economic level. To explore the connections between the type of political regime and PS, the researchers conducted quarterly analyses from January 1996 to December 2001. Annual data was also used to examine the dynamics of the economy and politics. Along with other findings, the researchers concluded that economic aspects were equally responsible for political developments as political events (Berthélemy, Kauffmann, Renard, & Wegner, 2002; Lowes & Montero, 2021).

From the review of existing literature, PS and ES have a strong relation in the context of developing and developed countries. For Pakistan, a few studies are available that fill the gap in the existing literature on this issue. However, a detailed analysis of the relationship between politics and ES using the latest datasets is still required to establish a robust connection between the two. Furthermore, it is crucial to identify the direction of causality, if any, between politics and ES. The present study aims to overcome this research gap.

3. Data and Methodology

3.1. Description of Data

The present study uses annual data from 1987-2022, obtained from various sources, including IMF publications, WDI, and World Governance Indicators (WGI). The included variables in the research and their definition are presented in Table 1.

Table 1
Variables Description

Variable	Definition
Economic stability (ES)	ES is measured through the GDP coefficient of variation. GDP coefficient of variation is a statistical tool to access the relative variability of GDP across time and regions. It shows the relative stability of the output of a country.
Political Stability Index (PS)	PS measures absence of conflicts in masses, terrorism, and violence in society. Data is obtained from WGI.
Government Expenditure (GE)	GE is measured through the government purchases of goods and services. Most national defence and security expenses are included (Afonso & Jalles, 2011). The data on GE is obtained from IMF publications.
Total Labor Force (TLF)	People 15 years old and older make up the total labor force and work within a given period to produce goods and services (Wachter, Gordon, Piore, & Hall, 1974). The data is measured in natural log and retrieved from WDI.
Physical Capital Formation (PCF)	PCF includes commercial and industrial buildings, hospitals, land improvements, machinery and equipment, offices, purchase of plants, railways, roads, and private residences (Afonso & Jalles, 2011). The data source for this variable is IMF publications.
Trade Openness (TO)	TO is measured through trade volume as a percentage of GDP, as used by (Tahir, 2014). Data is obtained from WDI.
Real Discount Rate (DR)	DR is the minimum interest rate (inflation-adjusted) set by a country's central bank for lending to other banks (Aliyu, 2009). The data is obtained from IFS.

3.2. Econometric Model

The econometric model of the study is as given below:

$$ES_t = \beta_0 + \beta_1 * PS_t + \beta_2 * GE_t + \beta_3 * TLF_t + \beta_4 * PCF_t + \beta_5 * TO_t + \beta_6 * DR_t + \varepsilon_t \quad (1)$$

All β s are the parameters, indicating each independent variable's intercept and corresponding coefficient, which needs to be estimated. Whereas the error term ε_t stands for random variations and factors not considered by the model.

3.3. Econometric Methodology

The methodology of this study consists of various pre-estimation, estimation, and post-estimation tests.

3.3.1. Unit Root Test

Augmented Dickey-Fuller (ADF) is used in this study to check the stationarity of the data. The equation of the ADF test is given as follows:

$$y_t = c + \beta_t + \alpha y_{t-1} + \varphi_1 \Delta Y_{t-1} + \varphi_2 \Delta Y_{t-2} + \dots + \varphi_p \Delta Y_{t-p} + \varepsilon_t \quad (2)$$

Where, β is time trend coefficient, p = the lag order. The null hypothesis of the test assumes presence of a unit root in a time series.

3.3.2. Lag Selection Criterion

The lag selection criterion is typically used to determine the appropriate lag length for time series variables in a model before estimating the parameters. Akaike Information Criterion (AIC), Hannan-Quinn (HQ) Criteria, and Schwarz Information Criterion (SIC) are the most commonly used lag selection criteria since AIC is the more precise criterion to measure the lags (Cavanaugh & Neath, 2019).

$$AIC = 2K - 2\ln(L) \quad (3)$$

$$SIC = k\log(n) - 2\log(L(\theta)) \quad (4)$$

Where k represents the number of parameters in the model. L represents the likelihood how well the model is fitted, and n represents the sample size.

3.3.3. Auto Regressive Distributed Lag (ARDL)

It is the most widely used technique for checking the long-term relationship among variables. ARDL is a more suitable estimation method when a researcher wants to include lags of dependent and independent variables in the same model. ARDL is preferred over other regression estimation methods due to many reasons. One prominent reason for using ARDL is that it accommodates variables with mixed order of integration. Moreover, ARDL also provides the results of SR and LR relationships among variables.

$$Y_t = \beta_0 + \beta_1 Y_{t-1} + \dots + \beta_p Y_{t-m} + \alpha_0 X_t + \alpha_1 X_{t-1} + \alpha_2 X_{t-2} + \dots + \alpha_q X_{t-n} + \varepsilon_t \quad (5)$$

Where, Y_t = dependent variable and X_t = explanatory variables, β and α are coefficients. ε_t = vector of the error terms. The estimation equation for ARDL is presented as under:

$$\Delta ES_t = \beta_0 + \beta_1 ES_{t-1} + \beta_2 PS_{t-1} + \beta_3 GE_{t-1} + \beta_4 TLF_{t-1} + \beta_5 PCF_{t-1} + \beta_6 TO_{t-1} + \beta_7 DR_{t-1} + \sum_{i=1}^p \beta_{8i} \Delta ES_{t-i} + \sum_{i=1}^p \beta_{9i} \Delta PS_{t-i} + \sum_{i=1}^p \beta_{10i} \Delta GE_{t-i} + \sum_{i=1}^p \beta_{11i} \Delta TLF_{t-i} + \sum_{i=1}^p \beta_{12i} \Delta PCF_{t-i} + \sum_{i=1}^p \beta_{13i} \Delta TO_{t-i} + \sum_{i=1}^p \beta_{14i} \Delta DR_{t-i} + \varepsilon_t$$

(6)

3.3.4. Error Correction Method (ECM)

ECM is used to estimate the SR results and adjust if there is LR disequilibrium. Through ECM, we obtain the error correction term (ECT), which tells the annual rate of speed of adjustment from the SR to the LR of the estimated model.

$$\Delta ES_t = \beta_0 + \sum_{i=1}^p \beta_{1i} \Delta ES_{t-i} + \sum_{i=1}^p \beta_{2i} \Delta PS_{t-i} + \sum_{i=1}^p \beta_{3i} \Delta GE_{t-i} + \sum_{i=1}^p \beta_{4i} \Delta TLF_{t-i} + \sum_{i=1}^p \beta_{5i} \Delta PCF_{t-i} + \sum_{i=1}^p \beta_{6i} \Delta TO_{t-i} + \sum_{i=1}^p \beta_{7i} \Delta DR_{t-i} + \varepsilon_t \quad (7)$$

3.4. Diagnostic Tests

3.4.1. Test for Serial Correlation

Breusch-Godfrey test is applied to check the serial correlation in the model's error terms. The problem of autocorrelation arises when the error terms are correlated with each other in different periods. The equation of autocorrelation is given as:

$$LM = nR^2 \sim \chi^2(P) \quad (8)$$

Where n is the sample size, R^2 is coefficient of determination, χ^2 is the Chi-squared statistics, P is the number parameters. The null hypothesis of no serial correlation.

3.4.2. Test for Heteroscedasticity

Breusch-Pagan Godfrey test is used to check the problem of heteroscedasticity. The null hypothesis of the test states that the residuals are homoscedastic. The test statistic of this test follows a chi-square distribution.

3.4.3. Jarque-Bera Normality Test

The traditional Jarque-Bera test is used to check the normality of the distribution. The test results are based on kurtosis and skewness of the data. Jarque-Bera test checks whether kurtosis and skewness of the data follow the expected values for a normal distribution.

$$JB = n/6(S^2 + 1/4(K - 3)^2) \quad (9)$$

Where n is the total number of observations, S is skewness, and K is Kurtosis. The test's null hypothesis states that normality exists in the data.

3.4.4. Cumulative Sum (CUSUM) and Cumulative Sum of Squares (CUSUMSQ) Tests

CUSUM and CUSUMSQ are statistical techniques for detecting changes or shifts in a data series over time. This is required for stability analysis because unbalanced coefficients lead to unpredictable results.

4. Discussions & Findings

4.1. Descriptive Statistics

Table 2 summarizes the descriptive statistics of all the variables in the model.

Descriptive stats are computed for 36 observations, and the results are displayed in Table 2. Mean displays the mean values of the data set. The variable TO have a maximum

average value of 31.93417. ES has a minimum average value of 2.129067. The median displays the middle value of the data.

Table 2
Descriptive Statistics

Variables	Mean	Median	Std Dev.	Maximum	Minimum	Observation
ES	2.129067	0.893414	3.066257	1.358076	9.230000	36
PS	1.645259	1.610278	0.770589	0.329660	2.810035	36
PCF	15.55861	15.58000	1.819953	19.11000	12.52000	36
GE	27.30085	26.94979	1.354835	29.54708	25.07331	36
TLF	17.71318	17.75130	0.307489	18.18381	17.16575	36
DR	0.497021	0.303038	0.830603	4.178571	0.552684	36
TO	31.93417	32.84000	3.902848	38.49000	24.70000	36

Source: Authors' Calculations

Meanwhile, standard deviation depicts how a variable deviates from the mean value. While TO exhibits the largest deviation, TLF exhibits the least. The maximum value for TO is 38.49000, and the minimum value for ES is 9.230000.

4.2. Unit Root Test

The results of ADF test are presented in Table 3.

Table 3
ADF Test

Variables	Level	First Difference
ES	0.550050 (0.9990)	8.941586 (0.0000)*
PS	1.668274 (0.4378)	3.801709 (0.0066)*
PCF	1.632702 (0.4557)	5.229536 (0.0001)*
GE	0.136873 (0.9374)	6.516491 (0.0000)*
TLF	2.038477 (0.2698)	4.742243 (0.0005)*
DR	6.171957 (0.0000)*	7.259731 (0.0000)*
TO	1.993605 (0.2882)	5.546137 (0.0001)*

Source: Authors' Calculations

Table 3 shows the estimated coefficients of the model while p-values are given in the parenthesis. The asterisk (*) shows that the variable is stationary at 1%. The results indicate that only one variable i.e. DR is stationary at a level while all the other variables are stationary at first difference.

4.3. Lag Selection Criterion

The results of both AIC and HQ tests exhibit that there should be a maximum of 3 lags, while the results of the SIC test show there should be one lag.

Table 4
Lag Length Selection Criterion

Lag	AIC	SIC	HQ
0	14.71	15.03	14.82
1	2.79	5.33*	3.65
2	1.58	6.35	3.19
3	0.29*	7.27	2.64*

* indicates lag order selected by the criterion

As discussed earlier, AIC is the most suitable criterion for lag selection as AIC offers more accurate and precise information. So, a maximum of 3 lags are selected. Table 4 shows the results of different tests conducted for lag selection.

4.4. ARDL Bound Testing Approach

ARDL bound test results are used to check the LR relationship among variables. The results of the test are presented in Table 5.

Table 5
Bound Tests

Test Statistics	Value	
F-statistics	10.28000	
	Critical Value Bounds	
Significance at	I(0)	I(1)
5%	2.27	3.28
1%	2.88	3.99

Source: Authors' Calculations

Value of F-statistics is 10.28, which is greater than the value of upper bound 3.99. This result provides the basis for applying the ARDL estimation approach in the next step. The estimated coefficients of the model are presented in Table 6.

Table 6
ARDL LR Coefficients

Variable	Coefficient
GE	-11.01576 (0.0000)*
TLF	43.71036 (0.0000)*
PCF	0.010613 (0.9692)
PS	2.352409 (0.0143)*
DR	2.682922 (0.0013)*
TO	0.566880 (0.0015)*
C	499.0290 (0.0000)*

Source: Authors' Calculations

4.5. Long Run Results

Table 6 shows that variables including GE, TLF, PS, DR, and TO are statistically significant at 1%, indicating a LR relationship with the dependent variable ES. PCF is not statistically significant, suggesting it does not have a LR impact on ES.

The present study finds a positive and significant relationship between PS and ES in Pakistan. 1 percent increase in PS leads to 2.35 percent increase in ES in the long run. Results of a study by Aisen and Veiga (2013) for 169 countries using data from 1960 to 2004, suggest that PS is positively associated with the economic performance of the countries. The authors conclude the study on a note that PS is the primary driver of the people's trust in government policies and brings certainty about the future that, in turn, increases the EG of a country. Another study by Alesina and Perotti (1996) also concludes that political crisis hinders EG. In case of Pakistan, Karamat, Muzaffar, and Shah (2019) also establish a negative and significant relationship between political problems and Pakistan's economic performance.

Government expenditure is negatively related to ES in the LR. If government expenditure increases by 1 percent, ES decreases by 11 percent, on average, in the LR. Some other studies have also found a negative relationship between the two. The results coincide

with the study of Landau (1983), which has shown that government expenditure negatively affects national output for 96 countries. Another study by Fölster and Henrekson (2001) also finds a negative and significant effect of government expenditure on the economic stability of rich countries of the world. Higher consumption spending by the government decreases the availability of development funds necessary for forming social overhead capital, which reduces the economy's growth rate (Afonso & Jalles, 2011).

The total labor force is positively associated with ES. 1 percent increase in the total labor force increases ES by 43.7 percent in the LR because a higher labor force plays a vital role in the economy's growth. Neoclassical theory considers labor as an essential factor of production, helping to increase economic growth rates. A recent study carried out in Romania from 2013 to 2019 has also proven that the labor force significantly affects EG (Wijaya, Kasuma, & Darma, 2021). Physical capital formation has no significant impact on growth in the context of the present analysis.

The real discount rate is positively associated with ES. 1 percent increase in discount rate leads to a rise of 2.68 percent in ES in the LR. An increase in the actual discount rate increases ES because tighter monetary policy, in many instances, results in more excellent ES and less variation in GDP. An increase in real discount rate discourages excessive debt accumulation by raising the cost of borrowing. This can prevent asset bubbles and speculative activities leading to financial crises. In this way, it helps in maintaining a more stable financial system. Higher real interest rates provide a greater incentive for households to save rather than spend. Increased savings can lead to higher levels of capital accumulation, EG in the LR, and act as a buffer during economic downturns.

The results of the present study also show that TO positively and significantly affects Pakistan's ES in the LR. The results show a 1% increase in TO, which leads to the ES of Pakistan, which is 0.56 % in the LR. Many studies have advocated the positive effect of trade openness on ES. A study by Romer (1990) also proves the positive and significant relationship between TO and EG for the 90 countries. Romer (1990) propagates that TO is the primary source of improved technology and production, which leads to more EG in a country.

4.6. Vector Error Correction Model (VECM)

Table 7 includes the SR estimates calculated through VECM.

Table 7
VECM

Dependent Variable: DES			
Variable	Coefficient	Variable	Coefficient
D(GE)	0.947530 (0.1327)	D(PS)	0.470355 (0.2649)
D(GE(2))	1.675152* (0.0254)	D(PS(2))	3.023924* (0.0000)
D(GE(3))	1.98235 (0.6325)	D(PS(3))	2.632574** (0.06325)
D(TLF)	5.374153 (0.1533)	D(DR)	0.249792* (0.0030)
D(TLF(2))	1.32569 (0.08547)	D(DR(2))	0.03258 (0.56217)
D(TLF(3))	0.63254 (2.06854)	D(DR(3))	0.284668* (0.0004)
D(PCF)	0.250681* (0.0009)	D(TO)	0.051770** (0.0649)
D(PCF(2))	0.029625** (0.08521)	D(TO(2))	0.03251 (0.74125)
D(PCF(3))	0.039655 (0.98514)	D(TO(3))	0.00125 (0.96251)
ECT	-0.350963** (0.0000)	--	--
F-statistic	10.28000 (0.0085)	R-squared	0.879799

Source: Authors' Calculations

The error correction term (ECT) has been used to analyse the model's SR dynamics. The coefficient value of ECT is -0.351, which is highly significant at a 1% level. The value of ECT suggests that the annual speed of adjustment of the model from the short to the LR is approximately 0.351%. R² predicts that the model explains 87.97% of changes in dependent

variables through the independent variables. The value of the F-statistic is also significant at a 5% level, indicating that the overall model is significant.

4.7. Diagnostic Tests

For the robustness of the analysis, various diagnostic tests are carried out to check the presence of serial correlation, heteroscedasticity, and normal distribution of residuals in the model. The results confirm that there are no issues of autocorrelation and heteroscedasticity while errors are normally distributed.

Table 8
Diagnostic Tests

Test	F Statistic
Breusch-Godfrey Test	2.447082 F stat (3, 14): (0.1069)
Breusch-Pagan-Godfrey Test	1.499673 F stat (16, 17): (0.2077)
Jarque-Bera Normality Test	J.B statistic: 1.125274 (0.569705)

Source: Authors' Calculations

4.8. CUSUM and CUSUMSQ Test

Figures 1 and 2 show output of CUSUM and CUSUMSQ tests respectively. CUSUM and CUSUMSQ tests are used to check the structural breaks, if any, in the model. Red dotted lines show the critical region at a 5% significance level, and blue lines show the CUSUM and CUSUMSQ of the model. If the cumulative sum and cumulative sum of squares lie between the critical regions, then the model has no structural breaks and predicts policy implications well. It is clear that model is stable over time.

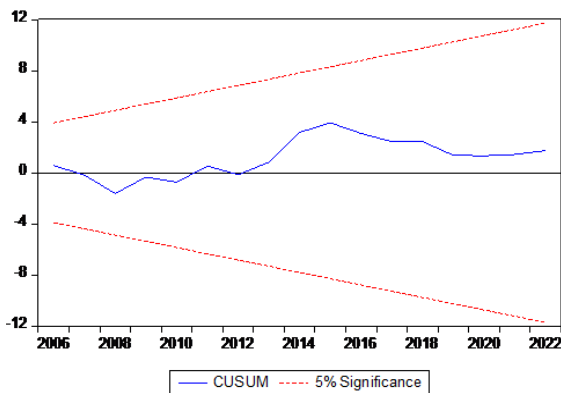


Figure 1: CUSUM TEST

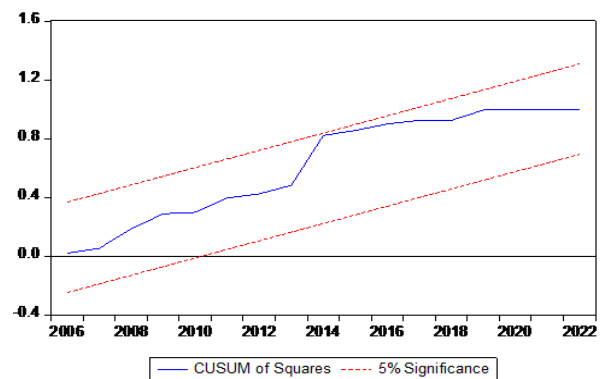


Figure 2: CUSUMSQ TEST

5. Conclusion

The study aims at investigating the link between political and economic stability in Pakistan using secondary data from 1987 to 2022. ADF unit root test declares the variables of the study having mixed order of integration. The ARDL model with a bound testing approach is applied for mixed-order variables, as proposed by (Pesaran, Shin, & Smith, 2001). Optimal lag-length is selected by AIC and HQ criteria. The LR coefficients of the regression model are estimated using the ARDL bound testing approach, while the VECM is used to estimate SR results. Different diagnostic tests are employed to test the heterogeneity, serial correlation, and model stability.

The results of the study show that PS is essential for ES. ES is also affected by other regressors in the model. The variables TLF, DR, and TO positively affect ES, while GE harms ES. CUSUM and CUSUMSQ tests are applied, which show the absence of structural breaks and suggests that the model is a good fit for policy recommendations. Diagnostic tests verify that errors are normally distributed and absence of any issues of heteroscedasticity and serial correlation in the model.

5.1. Policy Recommendation

ES is a multifaceted issue influenced by various factors. Policymakers need to adopt a comprehensive and coordinated approach to economic policy. This should include fiscal, monetary, and structural policies that aim to maintain macroeconomic stability, promote investment and productivity, and foster a favorable business environment. Given the negative relationship between government expenditure and ES, policymakers should consider prudent fiscal management and avoid excessive government spending. Reducing government expenditure could help stabilize the economy and minimize fluctuations in GDP. Since the total labor force increase is positively associated with economic stability, policymakers should focus on labor market policies that promote workforce growth and efficiency. The results highlighted that PS fosters EG and brings ES. The political system in Pakistan needs to be changed, and political parties should sit together to form a road map for the stability of the political system. The five-year term should be completed to have long-term stable policies and for people trust in the government. This will increase the country's investment. Policymakers should continue to promote trade openness and international economic integration. Encouraging international trade can lead to increased innovation, productivity, and growth, which may contribute to overall ES.

Author's Contribution:

Maria Faiq Javaid: Conceived the idea, and revised and approved the final version.

Amna Ibrahim: Conceived the idea, and revised and approved the final version.

Atif Khan Jadoon: Wrote proofread the draft.

Ismat Nasim: Retrieved the data set and conducted data analysis,

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