
Do Political Instability and Size of Government Impact Economic Growth in Pakistan: New Insights from Tada and Yamamoto Causality

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ABSTRACT

Present research explores the role of the size of government in economic development. The research endeavors to investigate the impact of political instability, size of the Government on economic growth in Pakistan. The data on political instability is collected from Integrated Network for Societal Conflict Research and the indicator for these variables is Polity II. Data for the size of the Government is taken from the Economic Freedom of the World Annual Report (2019). The annual time series data covering the period of 1976 to 2018 for empirical analysis. ARDL and the Granger non-causality Toda-Yamamoto estimation techniques have been used for empirical estimation. It was concluded that political instability has an inverse impact on economic growth. The size of the government as measured by index and reduction in political instability have a positive impact on economic growth. It was suggested to enhance the role of the government to promote economic growth that further led to economic growth.

Key words: Size of Government, Index, Economic Freedom, Toda-Yamamoto, political instability

Introduction

Government intervention is less important in most of capitalist developed economies while for a developing economy, a government holds a key role in the allocation and distribution of resources especially in infrastructure, education, defense, and health sectors (Nyasha and Odhiambo, 2019). The measurement of the size dimension is public investment, has been combined in the work of Easterly and Rebelo (1993). Economic development of any country is also dependent on the political conditions as well. The political stability can encourage economic growth as there would be less uncertainty in these conditions. Furthermore, an unbalanced and unsound

political system might dangerously obstruct the way to economic growth. A government is considered to be incompetent if policy objectives differ over a short period of time. The association among political unpredictability and financial progress might be examined in two traditions.

Firstly, politically unstable environment creates uncertainty and volatility which diminishes confidence in investment most important to reduce in development. Secondly, political improbability transforms the environment of investment and affects the demand of factors and change the example of spending which has straight effect on economic growth to a certain extent than impact on investment (Asteriou and Price, 2001).

It is criticized that aid and financial supports rather increasing investment, may escort to relatively high public and private consumption, mostly in consumption-oriented economies, could lead

to increased public and private consumption rather than investment, and could have contributed less to growth.

Ample of the studies explored that when an economy is in its initial stage of growth, an increase in the size of public expenditure leads to give an incentive for private investors to contribute to the process of industrialization. To find out the different threshold points three government size indicators are employed. The research concludes that non-linear relationship, in which the threshold effect is equivalent to total government expenditure share in gross domestic production (GDP), government consumption expenditure share in GDP, and government investment expenditure share in GDP.

LITERATURE REVIEW

Bergh and Henrekson (2011) investigated measuring government size and found a negative correlation among size of the govt and economic growth. Cooray (2009) examined the role of the government in economic growth and found that both are significantly related to each other. Cuaresma and Oberhofer (2010) utilizing dataset on 106 dictators though the size of country. Populated countries experience a longer Log-time to failure to enhance economic growth. Gurgul et al. (2011) explored the correlation between budgetary expenditure and economic growth in Poland with aggregate and disaggregated data for the period Q1 2000 to Q3 2008. The results showed that the health care expenditure found have significant for economic growth as expenditures on education. Hajamini et al. (2014) explored the association among government consumption expenditure in low and low-middle income countries. Using data of 21 developing countries and 11 low-middle income countries from 1981 to 2007 it was concluded that share of government consumption has an impact on economic growth.

Kumbers and Birch (2006) explored public sector institutions are basic to the achievement of the Scottish economy foundations, human and technological resources. Lin and Liu (2000) examined the impact of fiscal decentralization on economic growth. The

research concluded that fiscal decentralization has a positive role in the process of economic growth.

Murshed et al. (2021) analyzed the indispensable role of government expenditure to explain the economic growth performances in any economy may not be ignored. The research concluded that threshold levels of government expenditure. Ogundipe (2013) considered uncorrelated level of economic growth and checked its association with budgetary expenditure in Nigeria. The effect of government capital expenditure on economic growth was found positive. They have used 1970 to 2009 data. It reveals that capital have significant and positive effect on economic growth. Shen et al. (2018) examined that government spending and illustrate that it found a vital role of policy instrument of LICs, both to counteract business cycles and to promote growth. connection between GS and EG has a significant relationship. Stephen (2012) investigated public expenditures for economic growth with Ordinary Least Square (OLS) multiple regression model. The enlistment of public expenditures does not achieve the growth.

Data and methodology

Data sources

The research endeavors to investigate the impact of political instability, size of the Government and the economic growth in Pakistan. The data on political instability is collected from Integrated Network for Societal Conflict Research and the indicator for these variables is Polity II. Data for the size of the Government is taken from the Economic Freedom of the World Annual Report (2019). Data for trade openness, school enrollment, interest rate, was collected from World Development Indicator (WDI) and the data on Labor Force participation and population growth is taken from economic survey of Pakistan. The data for the foreign direct investment is collected from State Bank of Pakistan. The annual time series data covering the period of 1976 to 2018 for is utilized for the empirical analysis.

Theoretical Construction of the Model

Following details of the model on theoretical basis are presented here. ARDL and the Granger non-causality (Total Yamamoto version) are the theoretical models of the model selected on the basis of the characteristics of the data.

Auto-Regressive Distributed Lag Model and Error Correction Mechanism

Auto Regressive Distributed Lag technique established by Pesaran et al. (1996) is employed to estimate the parameters. ARDL is a combination of both autoregressive and distributed lag versions of the variables. This model helps to solve the problem of certain lag length and this problem will be solved with the help of AIC (Chetty, 2018). Furthermore the "Error correction model (ECM)" proposed by Engle and Granger (1987) describes that any disequilibrium in short run will be approached towards the long run equilibrium in a co-integrated series. ECM's are useful for estimating short run and long run effects of one time series on another time series. If y_t and x_t are co-integrated then we recurrent the connection among y_t and x_t with a ECM measurement as:

$$\Delta Y_t = a_0 + b_1 \Delta X_t - \pi(1 - \rho) + \epsilon_t \text{ where } a_0 = \text{intercept,}$$

$b_1 = \text{impact multiplier (determines the impact of any change in } x_t \text{ and it brings a change in } y_t. \pi = \text{is an adjustment coefficient.}$

The ECM model is convenient for measuring the correction from disequilibrium. In case of no Cointegration of time series, therefore, ECM will serve as an estimate of spurious regression that was introduced by the Yule (1926) and Granger and Newbold (1974) as this problem compromise the validity of conventional theory and consider that other types of Wald test in ECMs are asymptotically valid chi-square test (Toda and Phillips, 1994). To avoid these problems Toda and Yamamoto (1995) illustrate a process that is utilized to approximate unrestricted VAR by using a modified Wald test (Hamdi, 2013).

Toda-Yamamoto Version of Granger Causality

The Granger causality technique, first proposed by Granger (1969) it illustrates that the one time series is determined by the direction of change in the other series. It was argued that the Granger causality is the form of "predictive causality" (Diebold, 2001). Toda and Yamamoto (1995) version of Granger causality test the direction of causality among the two variables (Frimpong and Aayie, 2006). If size of government, political instability and economic growth have a common stochastic trend then there is a chance to have a causal association. Toda and Yamamoto consider the order of integration for each of the variable. When the order of integration is different than we get the maximum (dmax) which is based on VAR (k+dmax) model with k equals to optimal lag length and dmax signifies the maximum integrated order of variables in VAR model.

Empirical model construction

Model 1: Political Instability and Economic Growth

$$GDPGR = b_0 + b_1(LFPR) + b_2(GTI) + b_3(M2) + b_4(POLITY2) + b_5(FTR) + e$$

Model 2: Size of Government and Economic Growth

$$GDPGR = a_0 + a_1(LFPR) + a_2(GTI) + a_3(M2) + b_4(GSIZE) + b_5(PHCR) + b_6(TO) + u$$

Model 3: Political Instability, Size of Government and Economic Growth

$$GDPGR = \gamma_0 + \gamma_1(LFPR) + \gamma_2(GTI) + \gamma_3(GSIZE) + \gamma_4(PHCR) + \gamma_5(TO) + \gamma_6(FTRI) + \gamma_7(POLITY2) + \gamma_8(SDI) + u$$

GDPGR	=	GDP Growth Rate
LFPR	=	Labour Force Participation Rate
GTI	=	Gross Total Investment
M2	=	Money Supply
POLITY2	=	Political Instability Index
FTR	=	Freedom to Trade Internationally
GSIZE	=	Size of The Government index ¹
PHCR	=	Poverty Head Count Ratio
TO	=	Trade Openness

¹ Size of the Government Index is made from the following indicators. 1. size of government 2. transfers and subsidies 3. government investment 4. top marginal income tax rate 5. top marginal income and payroll tax rate 6. top marginal tax rate 7. state ownership of assets

Table1: descriptive analysis of the data

	Mean	Median	Maximum	Minimum	Std.Dev.
LFPR	30.19	29.61	32.98	27.46	1.86
M2	14.81	14.70	29.30	4.30	4.94
GSIIZE	6.53	6.96	9.90	4.62	1.37
PHCR	24.25	23.39	34.60	17.30	3.45
TO	0.31	0.30	0.37	0.26	0.03
FTRI	4.64	4.14	6.39	2.20	1.31
POLITY2	1.24	5.00	8.00	-7.00	6.47
SDI	107.22	106.36	199.73	18.74	57.64
GDPG	4.77	4.35	8.70	1.20	1.95

Source: Author's Estimations with E-views 9.5.

Table 1 states descriptive of the data used in research. It shows the Mean, Median, Maximum, Minimum and Std. Dev for LFPR, M2, GSIIZE, PHCR, TO, FTRI, POLITY2, SDI and GDPG.

Table2: Correlation Analysis of data

	LFPR	GTI	M2	GSIIZE	PHCR	TO	FTRI	POLIT Y2	SDI
LFPR	1.0000								
GTI	0.3618	1.0000							
M2	-0.1783	-0.0886	1.0000						
GSIIZE	0.4569	0.1842	-0.1662	1.0000					
PHCR	-0.0665	-0.1068	-0.1873	0.3103	1.0000				
TO	-0.5423	-0.7264	0.2388	-0.4785	-0.1288	1.0000			
FTRI	0.6359	0.4476	0.0106	0.2205	-0.0590	-0.6608	1.0000		
POLITY 2	0.1327	0.4084	0.0954	0.1922	-0.3567	0.1336	0.2102	1.0000	
SDI	0.6769	0.4379	-0.0723	0.8534	0.0027	-0.6273	0.3461	0.4388	1.0000

Source: Author's Estimations with E-views 9.5.

Table 2 shows positive correlation between GTI and LFPR of 0.3618. M2 has negative correlation with LFPR and GTI of 0.1783 and 0.0886 respectively. Govt size is positively correlated with LFPR and GTI by 0.4569 and 0.1842 while it has negative correlation of 0.1662 with M2. PHCR is negatively correlated with LFPR, GTI and M2 with values of 0.0665, 0.1086 and 0.1873 respectively, while it is positively correlated to

govt size by 0.3103. TO is negatively correlated with LFPR, GTI, GOVT SIZE and PHCR with 0.5423, 0.7264, 0.4785 and 0.1288 correlation; it is positively correlated with M2 with 0.2388 correlation. Freedom to trade is positively correlated to LFPR, GTI, M2 and GOVT SIZE with 0.6359, 0.4476, 0.0106 and 0.2205 and it is negatively correlated to PHCR and TO by 0.0590 and 0.6608. POLITY is positively correlated to LFPR, GTI, M2, GOVT SIZE, TO and FREEDOM TO TRADE by correlation of 0.1327, 0.4084, 0.0954, 0.1922, 0.013336 and 0.2102, it is negatively correlated to PHCR by negative correlation of 0.3567. SDI is positively correlated with LFPR, GTI, GOVT SIZE, PHCR and POLITICAL INSTABILITY by values of 0.6769, 0.4379, 0.8534, 0.0027, 0.3461 and 0.4388, it is negatively correlated to M2 and TO by 0.0723 and 0.6273.

Table 3: Unit Root Analysis of Data

Variables	Intercept	Trend and intercept	Remarks
<i>GDP</i>	-3.8831(0.0051)		
ΔGDP			Stationary at level
<i>LFPR</i>	-5.7980(0.0000)		
$\Delta LFPR$			Stationary at level
<i>TO</i>	-1.9831(0.2926)		
ΔTO	-8.5529(0.0000)		Stationary at 1 st difference
<i>PHCR</i>	-2.4644(0.1328)		
$\Delta PHCR$			Stationary at 1 st difference
<i>POLITY2</i>	-1.6337(0.4557)		
$\Delta POLITY2$	-5.6003(0.0000)		Stationary at 1 st difference
<i>GTI</i>	-0.3188(0.9124)		
ΔGTI	-6.5187(0.0000)		Stationary at 1 st difference
<i>GOVT SIZE</i>		-4.4686(0.0056)	
$\Delta GOVT SIZE$			Stationary at level
<i>SDI</i>	-		
ΔSDI	5.4361 (0.0001)		Stationary at level
<i>FTRI</i>		-1.74635 (0.7100)	
$\Delta FTRI$		-5.33747 (0.0006)	Stationary at 1 st difference
<i>GTI</i>		-	
ΔGTI		2.58052(0.2908)	Stationary at 1 st difference
		-4.7655(0.0049)	

Source: Author's Estimations with E-views 9.5.

Table

3

presented results drawn from the Augmented Dickey Full test. Augmented Dickey full test show that GDP, Labor force participation rate, Trade Openness, Polity 2, money supply, poverty head count ratio and the

freedom to trade internationally, GTI is presented in the table above. GDPR, LFPR, SDI gov. size are stationary at level. Trade Openness, Polity 2, GTI, PHCR, M2, freedom to trade are integrated of order I(1) or stationary at first difference or intercept.

Co-integration analysis

Table 4: Model Bound Test for 1

Null Hypothesis: No long-run relationships exist							
Model 1		Model 2			Model 3		
F-statistic	6.006562	F-statistic	6.316513	F-statistic	4.470566		
Critical Value Bounds							
Significance	Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound	Upper Bound	
	10%	2.26	3.35	2.12	3.23	1.88	2.99
	5%	2.62	3.79	2.45	3.61	2.14	3.3
	2.50%	2.96	4.18	2.75	3.99	2.37	3.6
	1%	3.41	4.68	3.15	4.43	2.65	3.97
Result	Cointegration Exists		Cointegration Exists		Cointegration Exists		

Source: Author's Estimations with E-views 9.5.

Empirical Analysis

Autoregressive distributed lag model is process of inspection short run and long run coordination among variables. This shift will be satisfactory to calculate presently one equation. Recommendation of ARDL can be justified through following type. ARDL hold mixture of both type of variables which are stationary at level and 1st difference and most helpful approach in case of small size of sample.

Table 7: Short Run-Error correction results

Variable	Model 1	Model 2	Model 1
D(GDPR(-1))		0.387733*** (0.0137)	
D(LFPR)	0.696020 (0.1729)	1.091788*** (0.0000)	0.296597 (0.1759)
D(GTI)	0.000000 (0.8864)	0.000011*** (0.0053)	0.000020*** (0.0001)
D(GTI(-1))	0.220446*** (0.0002)		-0.000010*** (0.0034)
D(M2)	-0.085645* (0.0908)	0.196587*** (0.0003)	0.181069*** (0.0002)
D(M2(-1))			0.049904 (0.2433)
D(GSIZE)	-0.743620	0.275648	0.915856**

	(0.3815)	(0.4038)	(0.0506)
	-0.968724	-0.044381	-0.001456
D(PHCR)	(0.2036)	(0.7532)	(0.9928)
D(TO)		-39.332964***	-9.637935
		(0.0017)	(0.4984)
D(TO(-1))			-15.885334
			(0.2123)
	-0.743620		-0.625363
D(FTRI)	(0.3815)		(0.3642)
D(FTRI(-1))	-0.968724		
	(0.2036)		
	0.027559		-0.071227
D(POLITY2)	(0.7002)		(0.3200)
D(POLITY2(-1))			-0.142838 *
			(0.0637)
D(SDI)			-0.134440***
			(0.0094)
D(SDI(-1))			0.115993***
			(0.0080)
CointEq(-1)	-1.075119***	-1.991515***	-1.652748***
	(0.0000)	(0.0000)	(0.0000)

Source: Author's Estimations with E-views 9.5.

Table 7 represents the short run results of the results. This error correction results are very useful in indicating mechanism for any disturbance and unstable change in time series of any concerned variables. For model 1 error correction term is negative and highly significant. Any disequilibria in the short run will restore the long run equilibrium as the value of the ECM is -1.075119. In model 2 error correction term is negative and highly significant indicating that any deviation from long run will be restored in the long run equilibrium as the value of the ECM is -1.99151. The error correction term is negative and highly significant. Any disequilibria in the short run will restore the long run equilibrium as the value of the ECM is -1.652748.

Table 8: Long Run Results

Variable	Model 1	Model 2	Model 3
LFPR	1.291831*** (0.0069)	0.548220*** (0.0000)	0.179457 (0.1715)
GTI	0.000005*** (0.0111)	0.000002*** (0.0000)	0.000001 (0.4255)

M2	0.183873*** (0.0169)	0.098712 (0.0005)	0.051953 (0.2241)
GSIZE		0.286740 (0.2381)	0.785809 (0.0753)
PHCR	1.244000 (0.1354)	-0.156234 (0.0110)	-0.088605 (0.1767)
TO	-38.225462*** (0.0144)	-19.750271*** (0.0023)	18.372261 (0.1082)
FTRI			0.063784 (0.8941)
POLITY2	-0.025633 (0.7017)		-0.131028*** (0.0132)
SDI			-0.009092 (0.5407)
c	0.000481 (0.6903)	0.060415 (0.5574)	0.081758 (0.1712)

Source: Author's Estimations with E-views 9.5.

Model 1 represents that Labour force participation rate has had positive and significant affiliation with real GDP. Labor force participation had in Lon Run with economic growth. Investment has also positive role to determine economic growth. It is an important instrument for movement of technology, imparting relatively more to growth apart from other measures. And also lends to economic growth only when enough absorptive capacity of advanced technologies is available in host economy. Investment and economic growth of Pakistan had positive correlation. Money supply had substantial positive impact on GDP and government should approve expansionary monetary policy to achieve money growth. Money supply and growth effects at high rates (Nasir and Saima 2010). POLITICAL INSTABILITY has its negative influence on economic growth. Freedom to trade internationally also has its positive impact on growth. Model 2 exhibits that Labour force participation rate had positive and significant affiliation with real

GDP with great significance. Stability of economy lies on capability to sustain low unemployment rate and offer safe and secure workplace. Employment and economic growth are linked as employment confers to economic growth, and workers produced valued goods and services and sequentially received income which they spent on purchasing goods

produced and high employment means larger numbers of goods produced. Before industrial revolution, workers depend on what they might produce individually. Accessibility of electronics, sphere foods, clothing and other selling substances due fully to extension of employment prospects and talented workforce ready to produce these items. Model 3 represents that Govt. Size also has positive impact on the economic growth as the coefficient is 0.785809 with significant probability of 0.7. Poverty Head Count Ratio has negative impact on the economic growth as the coefficient is -0.088605 with insignificant impact. While the trade openness also has the positive insignificant impact on economic growth. Real gross domestic product has positive and significant relationship between trades. Relationship and impact of openness of trade on economic growth of Pakistan and there was a positive impact of trade openness on economic growth. Political instability is one of the factors that determine a negative and significant impact on economic growth. It has -0.131028 coefficient that describe that the it is insignificant. In last four decades, composition of Pakistan's GDP had experienced considerable change as share of services sector in GDP had enlarged. Government persisted committed in providing business friendly environment in order to fascinate foreign investment in country, China-Pakistan Economic Corridor (CPEC) is a milestone in this regard. Money supply have positive and significant relationship among trade. Financial repression had positive and significances for growth (Yakubu et al., 2018).

Table 9: Toda and Yamamoto Causality results

	LFPR	GTI	M2	GSIIZE	PHCR	TO	TFRI	POLITY2	SDI
		-0.35	-1.55	-0.42	-2.33	-3.89	-0.491	-0.68	-6.71
LFPR		[0.20]	[0.49]	[0.80]	[0.27]	[0.10]	[0.54]	[0.15]	[0.03]
	-0.74		-1.04	-0.34	-6.41	-1.05	-4.03	1.16	-10.13
GTI	[0.89]		[0.55]	[0.84]	[0.00]	[0.50]	[0.22]	[0.92]	[0.00]
	-6.83	-1.18		-0.60	-0.2	-0.73	-0.67	-0.41	-1.01
M2	[0.05]	[0.53]		[0.73]	[0.85]	[0.69]	[0.19]	[0.62]	[0.60]
	-1.87	-0.08	-0.77		-28.28	-1.35	-9.00	-2.41	-0.03
GSIIZE	[0.70]	[0.91]	[0.67]		[0.00]	[0.07]	[0.00]	[0.10]	[0.92]
	-0.19	-0.87	-0.02	-1.76		-1.41	-0.87	5.99	-0.06
PHCR	[0.33]	[0.66]	[0.98]	[0.41]		[0.92]	[0.66]	[0.07]	[0.92]
	-1.12	-8.07	-2.33	-2.94	-0.48		-1.72	-14.81	-2.41
TO	[0.93]	[0.08]	[0.31]	[0.29]	[0.71]		[0.79]	[0.00]	[0.28]
	-2.69	-0.01	-4.99	-1.41	-3.30	-4.33		-0.98	-4.67
TFRI	[0.76]	[0.94]	[0.08]	[0.43]	[0.19]	[0.09]		[0.07]	[0.09]
	-5.57	-1.12	-5.41	-2.49	-0.13	-0.91	-1.26		-1.63
POLITY2	[0.62]	[0.50]	[0.06]	[0.26]	[0.32]	[0.22]	[0.81]		[0.42]
	-6.05	-0.56	-0.07	-0.12	-1.64	-0.45	-2.90	-2.131	
SDI	[0.01]	[0.74]	[0.91]	[0.96]	[0.41]	[0.23]	[0.34]	[0.337]	

Source: Author's Estimations with E-views 9.5.

Diagnosticstheresearch

The validity of the models are confirms by diagnostic analysis. Present study utilizedtwodiagnosticteststheBreusch-

GodfreyserialcorrelationLMtest,andHetroskedasticitytestBreusch-Pagan-Godfrey.

Table 9: Diagnosticresults

Breusch-GodfreySerialCorrelationLM Test			
	Model 1	Model 2	Model 3
F-statistic	2.2699 (0.1281)	2.1797 (0.1296)	6.4188 (0.1142)
HeteroskedasticityTest:Breusch-Pagan-Godfrey			
F-statistic	1.1311 (0.3837)	1.0195 (0.4575)	0.7209 (0.5457)

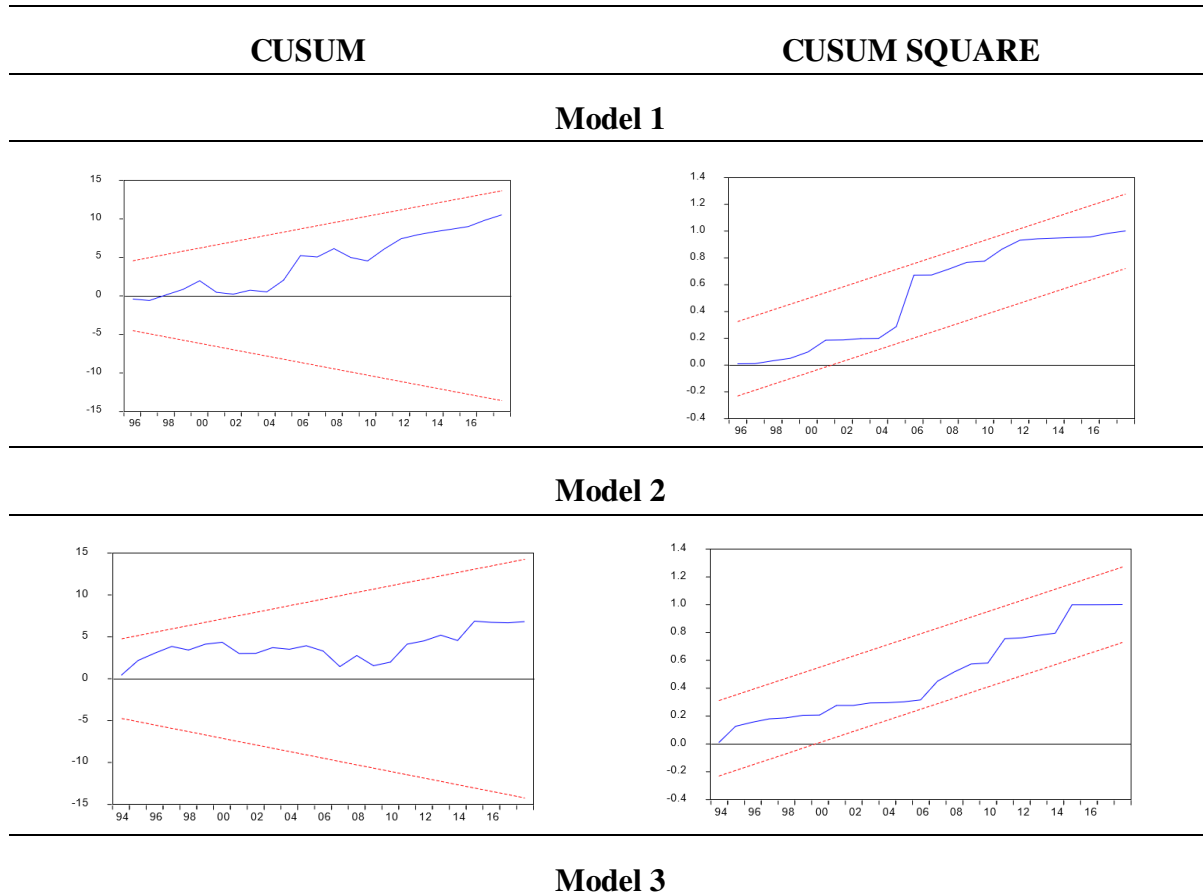
Source: Author’s Estimationswith E-views9.5.

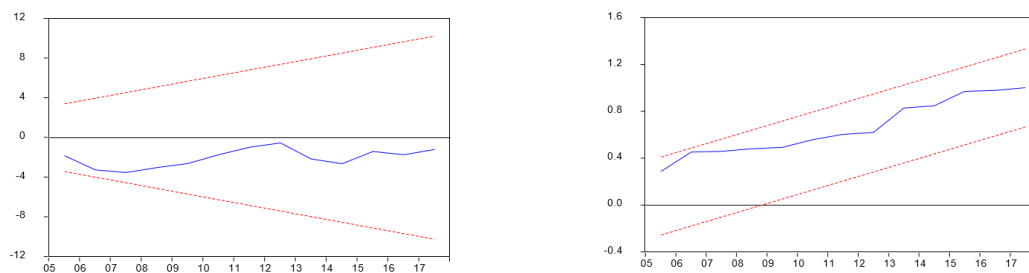
The table illustrates theresults ofdiagnostic analysis. LM test for model 1 indicates no serial correlation because

theprobabilityvalueis0.1281thatishigherthan0.05. Therefore,noserialcorrelationexistsinModel1

. Similarly, the Heteroskedasticityand autocorrelation are not present in model 2 and 3 as well.Stabilityanalysis

Figure 1: CUSUMandCUSUMSquare test





Source: Author's Estimations with E-views 9.5.

Figure 1 illustrates the results of stability analysis for regression models. It indicates that models used in research are stable because the CUSUM and CUSUM of squares lines exist between the 5% critical boundary lines.

Conclusion and Policy Recommendation

Research explored the role of the size of government in economic development. The research endeavors to investigate the impact of political instability, size of the Government and the economic growth in Pakistan. The data on political instability is collected from Integrated Network for Societal Conflict Research and the indicator for these variables is Polity II. ARDL and the Granger non-causality Toda-Yamamoto are used for empirical estimation. It was concluded that political instability has an inverse impact on economic growth. The size of the government as measured by index and reduction in political instability may have a positive impact on economic growth. It was suggested to enhance the role of the government to promote economic growth that further led to economic growth.

References

- Asteriou, D., & Price, S. (2001). Political instability and economic growth: UK time series evidence. *Scottish Journal of Political Economy*, 48(4), 383-399.
- Bergh, A., & Henrekson, M. (2011). Government size and growth: a survey and interpretation of the evidence. *Journal of Economic Surveys*, 25(5), 872-897.
- Burch, T., Gattringer, C., Glozman, L. Y., Hagen, C., Hierl, D., Lang, C. B., & Schäfer, A. (2006). Excited hadrons on the lattice: Baryons. *Physical Review D*, 74(1), 014504.
- Cooray, A. (2009). Government expenditure, governance and economic growth. *Comparative Economic Studies*, 51(3), 401-418.
- Cuaresma, J. C., Oberhofer, H., & Raschky, P. A. (2011). Oil and the duration of dictatorships. *Public Choice*, 148(3-4), 505-530.
- Easterly, W., & Rebelo, S. (1993). Fiscal policy and economic growth. *Journal of Monetary Economics*, 32(3), 417-458.
- Hajamini, M., & Falahi, M. A. (2014). The nonlinear impact of government consumption expenditure on economic growth: Evidence from low and low-middle income countries. *Cogent Economics & Finance*, 2(1), 948122.
- Lin, J. Y., & Liu, Z. (2000). Fiscal decentralization and economic growth in China. *Economic Development and Cultural Change*, 49(1), 1-21.
- Murshed, M., Rahman, M. A., Alam, M. S., Ahmad, P., & Dagar, V. (2021). The nexus between environmental regulations, economic growth, and environmental sustainability:

linking environmental patents to ecological footprint reduction in South Asia. *Environmental Science and Pollution Research*, 1-22.

Nyasha, S., & Odhiambo, N. M. (2019). Government size and economic growth: A review of international literature. *SAGE Open*, 9(3), 2158244019877200.

Ogundipe, A. A., & Apata, A. (2013). Electricity consumption and economic growth in Nigeria. *Journal of Business Management and Applied Economics*, 11(4).

Shen, N. (2018). Family business, transgenerational succession and diversification strategy: Implication from a dynamic socioemotional wealth model. *Cross Cultural & Strategic Management*.