Foreign Debt, Financial Stability, Exchange Rate Volatility and Economic Growth in South Asian Countries

Ali, Amjad

European School of Administration and Management (ESAM), France: Lahore School of Accountancy and Finance, University of Lahore, Pakistan

2022

Foreign Debt, Financial Stability, Exchange Rate Volatility and Economic Growth in South Asian Countries

Amjad Ali[1]

ABSTRACT

The current study has examined the link between exchange rate volatility, financial stability, foreign debt, and economic growth in a few South Asian nations from 1985 to 2020. The findings show that labor force participation has a positive and significant link with economic growth. Financial stability has a positive and significant influence on economic growth. Physical capital has a positive and significant relationship with economic growth because South Asian countries have labor as a larger factor of production. Foreign debt has a negative and insignificant influence on the level of growth, whereas, exchange rate volatility has a positive and significant relationship with economic growth. The overall results conclude that exchange rate volatility, financial stability, foreign debt, physical capital availability, and labor force participation are playing important roles in determining economic growth in the case of selected South Asian countries.

Keywords: Economic growth, Exchange rate volatility, Foreign debt, Financial stability

JEL Codes: F34, G01, O24, O40

1. INTRODUCTION

The basic aim of every economy is to extend economic progress. Ricardo (1891) refers to the total goods and services produced by a country as economic progress. The economy is like a machine that transforms inputs into outputs and the number of inputs determines the number of outputs. After the 2nd World War, most of the countries adopted aggressive economic policies to improve the growth rate of real gross domestic product (Crafts, 2000). Exogenous technological progress and the accumulation of factors of production are considered the main determinants of economic

[1] European School of Administration and Management (ESAM), France: Lahore School of Accountancy and Finance, University of Lahore, Pakistan

growth. Solow (1957) explains that with physical inputs there are some nonphysical (skill, knowledge) factors for determining steady-state economic growth. Nelson and Phelps (1966) point out that it is the size and capability of labor that absorb new technology which is discovered elsewhere. But the last decade of the 20th century changed the research direction about economic growth when Lucas (1988), Romer (1990), and Grossman and Helpman (1991) developed an endogenous growth theory. The policymakers are much interested in a sustainable level of economic growth and much worried about downward economic growth. Barro (1991), Baker and Schmitt (1998), and Caballero (2007) mention that internal and external factors are responsible for unstable economic growth. There are two main sources of unstable economic growth in developing countries like Pakistan. First, big exogenous shocks come from financial markets and terms of trade. Second, less developed nations experience domestic shocks due to intrinsic instability and self-inflicted policy faults (Kharroubi, 2006).

Since the 1950s developed countries and international institutions are providing loans, aid, and debt to developing countries to boost their economic growth. Foreign borrowing is also a key element for the current expenditures of a country and plays role in determining the level of economic growth (Junior, 2011; Ali & Ahmad, 2014; Ali & Audi, 2016; Ali & Bibi, 2017). But external debt and its repayments raise some other issues for developing countries. In the last three decades, external debt is becoming the biggest cause of lower investment and economic growth in many developing countries. External debt is becoming an unfavorable and unbearable tax on future generations, which they have to pay for nothing (Nguyen and Faff, 2006; Ali & Naeem, 2017; Ali 2015; Ali, 2018). Ferraro and Rosser (1994) mention that foreign debt is more responsible for a lower level of economic growth in the case of third-world countries. There is a direct relationship between economic growth and exchange rate volatility. Exchange rate volatility stands as

fluctuations in the exchange rates over time (Mordi, 2006). The effect of exchange rate volatility on growth has both micro and macroeconomic aspects. The exchange rate volatility impacts the day-to-day or week-to-week transaction costs if the unpredictability is high and hedging foreign exchange risk is high-priced which diminished the process of economic growth. The fixed exchange rates amplify international price transparency, as consumers can differentiate prices in contrasting countries easily. If exchange rate volatility is abolished, international arbitrage increases efficiency, productivity, and comfort. These advantages of exchange rate stabilization have been witnessed in the European (monetary) integration process (European Commission, 1990). Ghosh (2012) mentions that exchange rate stability influences economic growth positively or negatively.

Being the main target of every economy, identifying the sources of economic growth has remained a topic of discussion among policymakers (Easterly et al., 2006; Hausmann et al., 2006; Berg et al., 2012; Ali & Rehman, 2015; Ali & Audi, 2018; Ali & Senturk, 2019). Denison (1962) points out that economic growth is attached to the rise and fall of real GDP per capita. The variability of economic growth has a direct impact on socioeconomic and human well-being; thus, one cannot ignore the study of economic growth at all. Several studies examine the determinants of economic growth (Hsu et al., 2014; Pece et al., 2015; Inekwe, 2015; Bujari and Martínez, 2016; Ali et al., 2016; Bara and Mudzingiri, 2016; Bongini et al., 2017; Ali & Zulfiqar, 2018; Gault, 2018; Dey Tareque, 2020; Fatbardha et al., 2020; Sulehri & Ali, 2020; Audi et al., 2021; Ahmad et al., 2022).

Theoretical and empirical literature shows that three main factors play an important role in deciding the level of economic growth i.e. land, labor, and capital. The developing countries have less physical capital to keep the desired pace of economic growth, and they rely on foreign assistance, among them foreign debt is the most famous. There is mixed evidence that foreign debt

increases or decreases economic growth i.e. at the initial level the inflow of foreign debt provides ease in fiscal deficit, but continuous fiscal deficit puts developing countries into the trap of debt servicing (Kharas, 1984). Fluctuations in exchange rates impact real activities and directly change the import prices and producer's prices, consequently, this impact delivers towards purchasing power of the masses. Under the flexible exchange rate system, any variation in the exchange rate impacts the economy as a whole. Due to the fear of possible negative shocks of exchange rate volatility, economic agents, especially firms can highly be opposed to the exchange rate risk. Additionally, the trader's response to exchange rate risk relates to the risk attitude. More specifically, the risk-averse trader would avoid trading in response to an increase in exchange rate fluctuations (Côté, 1994). Thus, volatility of exchange rates, foreign debt, and financial instability are the main issues to hinder economic growth.

The relationship between economic growth and financial stability is widely discussed in the existing literature. Schumpeterian point out that entrepreneurs need credit to finance their innovations, whereas, banks and financial markets are viewed as their supporters, so, finance seems to respond to economic growth. With rising economic growth, firms and households are demanding more financial services. Hence, financial instability impacts macroeconomic growth adversely (Creel and Hubert, 2015). Financial stability links to different aspects of financial services, i.e. the market system (a huge strength of concentration reinforces the contagion risks from one bank to another bank) and financial institutions themselves (depending on whether their business system needs high or low risk) intrude on financial stability (Schinasi, 2004). Financial stability also functions in the payment structure of the economy. i.e. funds handled by central banks, admin authorities, and private firms that assure the functioning of the structure of payments among the financial institutions. Failures in any of the functions cause financial instability, there

are some cumulative prudential ratios such as the ratio of non-performing loans to gross loans, which relates to the warning signal for systemic banking insolvency (Cihak and Schaeck, 2010; Omojimite and Oriavwote, 2012; Aliyu, 2009; Rodrik 2008; Mosley and Smith, 1988). This study has examined the relationship between exchange rate volatility, financial stability, foreign debt, and economic growth in the case of South Asian countries. There is hardly any such type of relationship in existing literature, so, this study is novel and it is a healthy contribution to the respective literature.

2. THE MODEL

The theoretical foundations of economic growth go back to the days of Adam Smith, the father of modern economics. There are a variety of factors that may responsible for the process of economic growth which may change over time. In 1957, Solow demonstrates that capital, labor, and technical progress play an important role in economic growth (Solow, 1957). Sala-i-Martín points out that the accumulation of physical capital, human capital, education, diversity of institutions, free movement of capital, technology, ideas, foreign investment, and the free flow of information are the main deciders of economic growth (Sala-i-Martin, 2001). In this study, we are following the neo-classical model of economic growth. The neo-growth model begins with Solow (1957), this model has three basic components for measuring economic growth, i.e. labor (L) capital (K), and technology (A).

$$Y=AK^{\alpha}L^{(1-\alpha)} \qquad (1)$$

Y=Economic growth

Romer (1986) and Lucas (1988) extended the Solow (1957) model by including human capital; as they believe that human capital can lead to captivate technology and stimulate economic growth. This form of economic growth is modeled as:

$Y=K^{\alpha}(AH)^{1-\alpha}$ (2)

H=Human Capital

Since the endogenous growth model allows us to include some additional variables for the determination of economic growth. The variations in exchange rate impact economic activities, and the impact of exchange rate pass-through the economy by purchasing power. The exchange rate directly changes the import prices and producer's price, consequently, this impact delivers towards purchasing power of the masses. Under the flexible exchange rate system, any variation in the exchange rate impacts the economy as a whole. Due to the fear of possible negative shocks of exchange rate volatility, economic agents, especially, firms can highly be opposed to exchanging rate risk. Additionally, the trader's response to exchange rate risk relates to the risk attitude. More specifically, the risk-averse trader would avoid trading in response to an increase in exchange rate fluctuations (Côté, 1994). Higher economic growth is the predominant concern of all economies, but developing countries face a burgeoning fiscal deficit to meet their current expenditures which are necessary for higher economic growth. For smooth expenditures, developing countries depend upon external debt (Rajan & Zingales, 2003). The liquidity constraint hypothesis and debt overhang theory are two main theories that discuss the relationship between foreign debt and economic growth. At the initial level, the inflow of foreign debt provides ease in fiscal deficit, but higher fiscal deficit, resources, inadequate use, rescheduling of external debt, the less domestic inflow of capital, inelastic import, and rising debt-servicing raise new issues for the developing countries (Kharas, 1984). Following the extensive literature review (Hsu et al., 2014; Pece et al., 2015; Inekwe, 2015; Bujari and Martínez, 2016; Ali et al., 2016; Bara and Mudzingiri, 2016; Bongini et al., 2017; Gault, 2018; Dey Tareque, 2020; Fatbardha et al., 2020; Audi et al.,

2022; Senturk & Ali, 2022; Ali et al., 2022; Audi et al., 2022), the functional form of the model becomes as:

$$ECOG_{it} = F(ERV_{it}, FINS_{it}, FD_{it}, X_{it},) \quad (3)$$

ECOG=Economic Growth (measured with the help of GDP growth rate)

ERV=exchange rate volatility (with the help of ARCH, and GARCH, volatility in the exchange rate will be measured)

FINS=financial stability (measured with the help of stock return)

FD= foreign debt (inflow of foreign debt as a percentage of GDP)

X= set of control variables (labor force participation, human capital, political stability, etc.)

i= the country (Pakistan, India, Bangladesh, Sri Lanka)

t= time-period (1980 to 2020)

For checking the responsiveness of the dependent variable to explanatory variables, the equation can be written as:

$$ECOG_{it} = ERV^{\beta 1}_{it}\, FINS^{\beta 2}_{it}\, FD^{\beta 3}_{it}\, X^{\beta 4}_{it}\, U_{it} \quad (4)$$

The econometric model of the study becomes as:

$$ECOG_{it} = A+\beta_1 ERV_{it}+\beta_2 FINS_{it}+\beta_3 FD_{it}+\beta_4 X_{it} + U_{it} \quad (5)$$

All the variables explained above except A and U,

A= constant intercept

U= Error term (supposed to be white noise)

Data of selected variables have been taken from World Development Indicators (WDI), online databases maintained by the World Bank.

3. ESTIMATED RESULTS AND DISCUSSIONS

Table 1 presents the descriptive statistic of the selected variables of the model. The results reveal that financial stability, physical capital, and exchange rate volatility are positively skewed, with positive Kurtosis. Whereas, labor force participation and external debt are negatively skewed with positive Kurtosis. The value of skewness and Kurtosis show that all the variables are statistically insignificant which reveals that the variables are normally distributed. The estimated values of the Jarque-Bera show that all the variables have zero mean and finite covariance, which also approves that all the variables are normally distributed.

Table-1: Descriptive Statistic

	ECOG	LF	STAB	PC	ED	EX
Mean	5.507461	16.56205	0.077824	28.33563	22.76133	0.030586
Median	5.208280	16.77936	0.012917	25.82872	23.20312	0.021427
Maximum	28.69627	20.01858	1.414214	69.52741	27.05127	0.127179
Minimum	-2.977406	12.21221	0.008284	14.12063	12.67579	0.005596
Std. Dev.	2.934321	2.232202	0.219540	11.33237	2.467608	0.025428
Skewness	2.392676	-0.541964	4.112966	1.389926	-1.266495	1.750875
Kurtosis	20.02930	2.667035	19.80013	4.835882	5.632470	5.573144
Jarque-Bera	3128.966	12.85765	3499.103	110.9804	133.4593	188.8333
Sum	1321.791	3974.891	18.67776	6800.551	5462.720	7.340609
Sum Sq. Dev.	2057.847	1190.871	11.51927	30692.98	1455.293	0.154530
Observations	240	240	240	240	240	240

The estimated results of the correlation have been given in table 2. The results of the correlation matrix explain that most of the explanatory have a significant correlation with each other. But this mutual correlation is not so high which creates the issue of multicollinearity among the selected explanatory variables. Thus, there is no issue of multicollinearity among the selected explanatory variables of the model.

Table-2: Correlation Matrix

Variables	ECOG	LF	STAB	PC	ED	EX
ECOG	1.000000					
LF	-0.17555***	1.000000				
STAB	0.101555	0.433083***	1.000000			
PC	0.301579***	-0.51892***	0.134633**	1.000000		
ED	-0.190640**	0.862260***	0.438384***	-0.32978***	1.000000	
EX	0.195302***	-0.108898*	-0.152605**	-0.156312**	-0.42829***	1.000000
Note: The asterisks ***, ** and * denote the significant at 1%, 5% and 10% levels, respectively						

For checking the unit root issue in the selected panel series Levin, Lin & Chu t*, ADF - Fisher Chi-square, Im, Pesaran and Shin W-stat, and PP Fisher Chi-square unit root tests have been applied. Table 3 presents the unit root test outcomes. The results of Levin, Lin & Chu t*, Im, Pesaran and Shin W-stat, ADF - Fisher Chi-square and PP Fisher Chi-square unit root tests indicate that the level of economic growth, volatility in the exchange rate, and external debt are stationary I(0). The calculated outcomes of Levin, Lin & Chu t*, Im, Pesaran and Shin W-stat, ADF - Fisher Chi-square and PP Fisher Chi-square unit root tests reveal that labor force participation, final stability, and physical capital are not stationary I(0). The estimated results reveal that all the variables of the model are stationary I(1). This indicates that all the selected variables of the model have a mixed order of integration, this is the most appropriate condition for applying the panel ARDL co-integration approach.

Table-3: Panel Unit Root Test

	LLC		IPSW		ADF-FC		PP-FC	
Variable	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
ECOG	-3.5135***	-11.379***	-6.2533***	-16.324***	69.7057***	175.98***	122.085***	150.049***
LF	-0.88793	-4.7023***	1.97228	-5.4620***	6.50096	56.7247***	22.5309**	106.035***
STAB	5.72183	-3.6781***	5.44601	-6.2470***	3.40972	67.1323***	3.36351	114.704***
PC	2.01734	-3.5094***	1.53112	-7.0955***	10.7175	72.3942***	12.2085	153.663***
ED	-2.9438***	-5.5133***	-0.53180	-5.7966***	23.7866**	57.5868***	33.8126***	65.8216***
EX	-12.10***	-6.759***	-9.656***	-6.2471***	102.151***	66.0436***	198.712***	76.4369***

Note: The asterisks ***, **, and * denote the significance at 1%, 5%, and 10% levels, respectively. Levin, Lin & Chu t* (LLC), Im, Pesaran and Shin W-stat (IPSW), ADF - Fisher Chi-square (ADF-FC), PP - Fisher Chi-square (PP-FC)

The estimated long-run results have been given in table 4. The coefficient of labor force participation shows that labor force participation has a positive and significant impact on economic growth over the selected period. A 1 percent increase in labor force participation brings (3.871499) percent increase in economic growth for selected countries. Following the traditional Solow (1957) model, labor force participation is the main determinant of economic growth, the higher the number of working people, the higher will be overall economic growth of the economy. Lucas (1988), Romer (1986), Fischer 1992; Knight et al., (1993), Easterly and Levine (1997), Chen and Feng (2000), Radelet et al., (2001), Freire-Seren (2002), Bayraktar (2006), Anyanwu (2014) and Gomwz-Puig and Sosvilla-Rivero (2018) mention that human capital has a positive and significant role in deciding economic growth. There are some studies (Hamilton and Monteagudo, 1998; Benos and Zotou, 2014) that highlight labor force participation has a negative and significant impact on economic growth. South Asia is the most populous part of the world, but the still-rising labor force has a positive influence on economic growth.

The estimated results show that financial stability has a positive and significant impact on the economic growth of selected countries. The results reveal that a 1 percent increase in financial stability brings (3.082092) percent increase in economic growth. Previous literature (Kindleberger, 2013; Minskey, 1991; Manu et al., 2011) considers financial stability an important indicator of economic growth. Our estimated results are consistent with Goldsmith (1959), King and Levine (1993), Levine and Zervos (1998), Beck et al., (2000), and Beck and Levine (2004), when they claim that financial stability is positively contributing to the economic growth of the country. Rioja and Valev (2004) mention that financial stability hurts economic growth in the case of some African countries. Our results also explain the positive link between economic growth and financial stability.

The estimated results show that the availability of physical capital has a positive and significant impact on economic growth. The value of the coefficient reveals that a 1 percent increase in physical capital brings (0.076122) percent increase in the economic growth of selected South Asian countries. Our estimated results are consistent with the findings of Bleaney et al., (2001), Freire-Seren (2002), Anaman (2004), Acikgoz and Mert (2010), Bayraktar (2006), Asheghian (2009) and Checherita-Westphal and Rother (2012). Empirical studies (Barro, 2001; Barro & Sala-i-Martin, 2004; Eaton & Kortum, 2001; Keller, 2006; Kumar, 2013; Kim & Lau, 1994, Lau & Park, 2003) also highlight that it is the availability of physical capital which decides the level of economic growth convergence among the nations. Thus, it is approved that the availability of physical capital is positively and significantly impacting the economic growth of the selected South Asian countries.

The estimated results explain that external debt has a negative but insignificant impact on economic growth in the case of selected Asian countries. Chenery and MacEwan (1966) and

Presbitero (2012) point out that due to the number of internal and external instabilities, external debt is playing an insignificant role in deciding the economic growth of developing countries. Our findings are consistent with the findings of Hussin et al., (2012), Chikuba (2003), Calderon and Fuentes (2013), and Babu et al., (2015). Our outcomes show that external debt is not playing a significant role in deciding the economic growth among South Asian countries.

The estimated results reveal that exchange rate volatility has a positive and significant impact on economic growth. The results show that a 1 percent increase in exchange rate volatility brings (3.68971) percent increase in the economic growth of selected Asian countries. The existing literature highlights mixed consensus about the relationship between exchange rate and economic growth e.g., Samuelson (1964), Balassa (1964), Fischer (1992), Dollar (1992), and Rodrik (2008) find a negative relationship between exchange rate and economic growth. Whereas, Sala-i-Martin et al., (2004) and Ciccone and Jarocinski (2010) find a positive relationship between exchange rate and economic growth in the case of developing countries. Our results are consistent with these findings. Our results approve that exchange rate volatility is positively and significantly impacting the economic growth of the selected South Asian countries.

After analyzing the long-run estimates, now with the help of the panel error correction model, we can examine the short-run relationship among the variables of the model. The results reveal that labor force participation, financial stability, external debt, and exchange rate volatility have an insignificant impact on economic growth during the short run. These findings are opposite to the long-run outcomes. Physical capital has a positive and significant impact on economic growth in the short and these findings are consistent with the long-run findings. The short-run show that a 1 percent increase in physical capital, brings (0.341115) percent short-run rise in the economic growth of the selected Asian countries. This reveals that during the short run South Asian countries

perform efficiently in the presence of sufficient physical capital. The value of ECT is theoretically correct i.e., negative and significant. This shows that short deviations in the level of growth of South Asian countries need around one year and one month to converge in the long run. This also reveals that 95 percent short-run deviations in economic growth are corrected very next year in the case of South Asian countries.

TABLE-4: ARDL Outcomes

Dependent variable: ECOG ARDL (1, 1, 1, 1, 1, 1) Time Period 1980-2020				
Explanatory Variables	Long-Run Coefficients		Short-Run Coefficients	
	Coefficient	Std. Error	t-Statistic	Prob.*
LF	3.871499***	1.412241	9.089692	15.31954
STAB	3.082092*	1.717855	-739.7399	740.4056
PC	0.076122**	0.033341	0.341115***	0.123275
ED	-0.495138	0.485700	-1.177127	1.391810
EX	3.68971***	1.14044	251.1506	151.8908
ECT	-	-	-0.931639***	0.084305
Note: The asterisks ***, **, and * denote the significance at 1%, 5%, and 10% levels, respectively.				

4. CONCLUSIONS

Based on empirical results and discussions, we have concluded this study with some policy implications. The results show that labor force participation, financial stability, availability of physical capital, and exchange rate volatility have a positive and significant impact on the economic growth of South Asian countries. Whereas, external debt has a negative but insignificant impact on economic growth. Being the main indicator of economic growth labor force participation can help to attain the desired level of economic growth. The results find that with rising financial stability, a country can provide a sufficient amount of financial support to the industry to increase exports and overall economic growth. The availability of physical capital enables the country to manage the required needs for economic growth. The exchange rate

volatility has a positive and significant relationship with economic growth. This means that the stability in the exchange rate increases economic growth.

Based on empirical results and conclusions, there are some policy suggestions. As results find the positive and significant effect of labor force participation on economic growth, this indicates that with the help of labor force participation a threshold level of economic growth can be achieved. But for a higher level of economic growth, labor should be equipped with technical education and advanced methods of production. So, South Asian countries should adopt such a policy that enhances the efficiency of labor rather than only relying on labor force participation. Financial stability has a positive and significant impact on economic growth. This suggests that South Asian countries must stable their financial conditions for higher economic growth. For this, South Asian countries should adopt such a policy that raises the stability of net foreign assets and total reserves. Physical capital has a positive and significant influence on the level of growth. For increasing the availability of physical capital, South Asian countries should make investment more productive, as it is very necessary for a higher level of economic growth. External debt has a negative and insignificant impact on economic growth. This suggests that foreign debts are not properly utilized for assigned purposes. Thus, foreign debt has an insignificant impact on the economic growth of the selected countries. The exchange rate volatility has a positive and significant effect on the level of economic growth. So, stable exchange rate volatility raises the level of economic growth and a more volatile exchange rate creates business uncertainty, deteriorates competitiveness, lower productivity and profits as well as increases domestic prices. Our findings have welfare implications and should be the prime policy concern.

REFERENCES

Acikgoz, S., & Mert, M. (2010). The endogeneity of the natural rate of growth: An application to Turkey. *Panoeconomicus*, *57*(4), 447-469.

Ahmad, K., Ali, A., & Yang, M. (2022). The Effect of Trade Liberalization on Expenditure Structure of Pakistan. *Bulletin of Business and Economics (BBE)*, *11*(1), 73-84.

Ali, A. & Naeem, M.Z. (2017). Trade Liberalization and Fiscal Management of Pakistan: A Brief Overview. *Policy Brief-Department of Economics, PU, Lahore*. 2017 (1), 1-6.

Ali, A. (2015). *The impact of macroeconomic instability on social progress: an empirical analysis of Pakistan*. (Doctoral dissertation, National College of Business Administration & Economics Lahore).

Ali, A. (2018). Issue of Income Inequality Under the Perceptive of Macroeconomic Instability: An Empirical Analysis of Pakistan. *Pakistan Economic and Social Review*, 56(1), 121-155.

Ali, A. (2022). Determining Pakistan's Financial Dependency: The Role of Financial Globalization and Corruption. *Journal of Business and Economic Options*.

Ali, A. (2022). Financial Liberalization, Institutional Quality and Economic Growth Nexus: Panel Analysis of African Countries. *Bulletin of Business and Economics*, 11(3).

Ali, A. and Bibi, C. (2017). Determinants of Social Progress and its Scenarios under the role of Macroeconomic Instability: Empirics from Pakistan. *Pakistan Economic and Social Review* 55 (2), 505-540.

Ali, A., & Ahmad, K. (2014). The Impact of Socio-Economic Factors on Life Expectancy in Sultanate of Oman: An Empirical Analysis. *Middle-East Journal of Scientific Research*, 22(2), 218-224.

Ali, A., & Audi, M. (2016). The Impact of Income Inequality, Environmental Degradation and Globalization on Life Expectancy in Pakistan: An Empirical Analysis. *International Journal of Economics and Empirical Research*, 4 (4), 182-193.

Ali, A., & Audi, M. (2018). Macroeconomic Environment and Taxes Revenues in Pakistan: An Application of ARDL Approach. *Bulletin of Business and Economics* (BBE), 7(1), 30-39.

Ali, A., & Rehman, H. U. (2015). Macroeconomic instability and its impact on the gross domestic product: an empirical analysis of Pakistan. *Pakistan Economic and Social Review*, 285-316.

Ali, A., & Şenturk, I. (2019). Justifying the Impact of Economic Deprivation, Maternal Status and Health infrastructure on Under-Five Child Mortality in Pakistan: An Empirical Analysis. *Bulletin of Business and Economics*, 8(3), 140-154.

Ali, A., & Zulfiqar, K. (2018). An Assessment of Association between Natural Resources Agglomeration and Unemployment in Pakistan. *Pakistan Vision*, 19(1), 110-126.

Ali, A., Ahmed, F., & Rahman, F. U. (2016). Impact of Government Borrowing on Financial Development (A case study of Pakistan). *Bulletin of Business and Economics* (BBE), 5(3), 135-143.

Ali, A., Ehsan, R., Audi, M., & Hamadeh, H. F. (2022). Does Globalization Promote Financial Integration in South Asian Economies? Unveiling the Role of Monetary and Fiscal Performance in Internationalization.

Aliyu, S. U. R. (2009). Impact of oil price shock and exchange rate volatility on economic growth in Nigeria: An empirical investigation.

Anaman, K. A. (2004). Determinants of economic growth in Brunei Darussalam. *Journal of Asian Economics*, *15*(4), 777-796.

Anyanwu, J. C. (2014). Factors affecting economic growth in Africa: are there any lessons from China? *African Development Review*, *26*(3), 468-493.

Asheghian, P. (2009). Determinants of economic growth in Japan: The role of foreign direct investment. *Global Economy Journal*, *9*(3), 1850171.

Audi, M., & Ali, A. (2022). Public Policy and Economic Misery Nexus: A Comparative Analysis of Developed and Developing World.

Audi, M., Ali, A., & Hamadeh, H. F. (2022). Nexus Among Innovations, Financial Development and Economic Growth in Developing Countries. *Journal of Applied Economic Sciences*, *17*(4), 373-393.

Audi, M., Ali, A., & Roussel, Y. (2021). Measuring the Tax Buoyancy: Empirics from South Asian Association for Regional Cooperation (SAARC). *Empirical Economics Letters*, 20(12).

Babu, J. O., Kiprop, S., Kalio, A. M., & Gisore, M. (2015). Effect of domestic debt on economic growth in the east African community. *American Journal of Research Communication*, *3*(9), 73-95.

Baker, D., & Schmitt, J. (1998). The macroeconomic roots of high European unemployment: The impact of foreign growth. *Economic Policy Institute (October)*.

Balassa, B. (1964). The purchasing-power parity doctrine: a reappraisal. *Journal of political Economy*, *72*(6), 584-596.

Bara, A., & Mudzingiri, C. (2016). Financial innovation and economic growth: evidence from Zimbabwe. *Investment management and financial innovations*, (13, Iss. 2), 65-75.

Barro, R. J. (1991). Economic growth in a cross section of countries. *The quarterly journal of economics*, *106*(2), 407-443.

Barro, R. J. (2001). Human capital and growth. *American economic review*, *91*(2), 12-17.

Barro, R., & Sala-i-Martin, X. (2004). Economic growth second edition.

Bayraktar, B. (2006). Investigation on sources of growth for Turkey. *Canadian Journal of Development Studies/Revue canadienne d'études du développement*, *27*(1), 25-38.

Beck, T., & Levine, R. (2004). Stock markets, banks, and growth: Panel evidence. *Journal of Banking & Finance*, *28*(3), 423-442.

Beck, T., Levine, R., & Loayza, N. (2000). Finance and the Sources of Growth. *Journal of financial economics*, *58*(1-2), 261-300.

Benos, N., & Zotou, S. (2014). Education and economic growth: A meta-regression analysis. *World Development*, *64*, 669-689.

Berg, A., Ostry, J. D., & Zettelmeyer, J. (2012). What makes growth sustained?. *Journal of Development Economics*, *98*(2), 149-166.

Bleaney, M., Gemmell, N., & Kneller, R. (2001). Testing the endogenous growth model: public expenditure, taxation, and growth over the long run. *Canadian Journal of Economics/Revue canadienne d'économique*, *34*(1), 36-57.

Bongini, P., Iwanicz-Drozdowska, M., Smaga, P., & Witkowski, B. (2017). Financial development and economic growth: The role of foreign-owned banks in CESEE countries. *Sustainability*, *9*(3), 335.

Bujari, A. A., & Martínez, F. V. (2016). Technological innovation and economic growth in Latin America. *Revista Mexicana de Economía y Finanzas (REMEF): nueva época*, *11*(2), 77-89.

Caballero, B. (2007). The global epidemic of obesity: an overview. *Epidemiologic reviews*, *29*(1), 1-5.

Calderón, C., & Fuentes, J. R. (2013). *Government debt and economic growth* (No. IDB-WP-424). IDB Working Paper Series.

Checherita-Westphal, C., & Rother, P. (2012). The impact of high government debt on economic growth and its channels: An empirical investigation for the euro area. *European economic review*, *56*(7), 1392-1405.

Chen, B., & Feng, Y. (2000). Determinants of economic growth in China: Private enterprise, education, and openness. *China Economic Review*, *11*(1), 1-15.

Chenery, H. B., & MacEwan, A. (1966). Optimal patterns of growth and aid the case of Pakistan. *The Pakistan Development Review*, *6*(2), 209-242.

Chikuba, S. M. (2003). The Impact of External Debt on Zambia's Economic Growth. *National*

Ciccone, A., & Jarociński, M. (2010). Determinants of economic growth: will data tell? *American Economic Journal: Macroeconomics*, *2*(4), 222-46.

Čihák, M., & Schaeck, K. (2010). How well do aggregate prudential ratios identify banking system problems? *Journal of Financial Stability*, *6*(3), 130-144.

Côté, A. (1994). *Exchange rate volatility and trade: A survey* (No. 1994-5). Bank of Canada.

Crafts, N. (2000). Globalization and growth in the twentieth century.

Creel, J., Hubert, P., & Labondance, F. (2015). Financial stability and economic performance. *Economic Modelling*, *48*, 25-40.

Denison, E. F. (1962). Education, economic growth, and gaps in information. *Journal of Political Economy*, *70*(5, Part 2), 124-128.

Dey, S.R. and Tareque, M. (2020). External debt and growth: role of stable macroeconomic policies. *Journal of Economics, Finance and Administrative Science*, 25(50), 185-204.

Dollar, D. (1992). Outward-oriented developing economies really do grow more rapidly: evidence from 95 LDCs, 1976-1985. *Economic development and cultural change*, *40*(3), 523-544.

Easterly, W., & Levine, R. (1997). Africa's growth tragedy: policies and ethnic divisions. *The quarterly journal of economics*, *112*(4), 1203-1250.

Easterly, W., Ritzen, J., & Woolcock, M. (2006). Social cohesion, institutions, and growth. *Center for Global Development Working Paper*, (94).

Eaton, J., & Kortum, S. (2001). Technology, trade, and growth: A unified framework. *European economic review*, *45*(4-6), 742-755.

European Commission. Directorate-General for Economic and Financial Affairs. (1990). *One market, one money: an evaluation of the potential benefits and costs of forming an economic and monetary union.* OPEC.

Fatbardha, M. Eglantina, H. Ugur, E. Mirela, P., and Marian, C. V. (2020). The Effect of Exchange Rate Volatility on Economic Growth: Case of the CEE Countries. J. Risk Financial Manag, 13, 177.

Ferraro, V., Rosser, M. (1994). Global Debt and Third World Development. in Klare, M., Thomas, D., eds., World Survey: Challenges for a New Century. New York: St. Martin's Press, pp. 332-355.

Fischer, S. (1992). Macroeconomic stability and growth. *Cuadernos de Economía*, *29*(87), 171-186.

Freire-Seren, M. J. (2002). On the relationship between human capital accumulation and economic growth. *Applied Economics Letters*, *9*(12), 805-808.

Gault, F. (2018). Defining and measuring innovation in all sectors of the economy. *Research policy*, *47*(3), 617-622.

Ghosh, M. (2012). Regional economic growth and inequality in India during the pre-and post-reform periods. *Oxford Development Studies*, *40*(2), 190-212.

Goldsmith, R. W. (1959). Financial structure and development as a subject for international comparative study. In *The comparative study of economic growth and structure* (pp. 114-123). NBER.

Gómez-Puig, M., & Sosvilla-Rivero, S. (2018). Public debt and economic growth: Further evidence for the Euro area. *Acta Oeconomica*, *68*(2), 209-229.

Grossman, G. M., & Helpman, E. (1991). Trade, knowledge spillovers, and growth. *European economic review*, *35*(2-3), 517-526.

Hamilton, J. D., & Monteagudo, J. (1998). The augmented Solow model and the productivity slowdown. *Journal of Monetary Economics*, *42*(3), 495-509.

Hausmann, R., Rodriguez, F. R., & Wagner, R. A. (2006). Growth collapses.

Hsu, P. H., Tian, X., & Xu, Y. (2014). Financial development and innovation: Cross-country evidence. *Journal of financial economics*, *112*(1), 116-135.

Hussin, M. Y. M., Muhammad, F., Hussin, M. F. A., & Razak, A. A. (2012). Education expenditure and economic growth: a causal analysis for Malaysia. *Journal of Economics and Sustainable Development*, *3*(7), 71-81.

Im, K. S., Pesaran, M. H., & Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal of econometrics*, *115*(1), 53-74.

Inekwe, J. N. (2015). The contribution of R&D expenditure to economic growth in developing economies. *Social indicators research*, *124*(3), 727-745.

Junior, J. L. R. (2011). Exchange rate exposure, foreign currency debt, and the use of derivatives: evidence from Brazil. *Emerging Markets Finance and Trade*, *47*(1), 67-89.

Keller, K. R. (2006). Investment in primary, secondary, and higher education and the effects on economic growth. *Contemporary Economic Policy*, *24*(1), 18-34.

Kharas, H. (1984). The long-run creditworthiness of developing countries: theory and practice. *The quarterly Journal of economics*, *99*(3), 415-439.

Kharroubi, E. (2006). The Growth and Welfare Effects of Macroeconomic Volatility.

Kim, J. I., & Lau, L. J. (1994). The sources of economic growth of the East Asian newly industrialized countries. *Journal of the Japanese and International Economies*, *8*(3), 235-271.

Kindleberger, C. P. (2013). Economic growth in France and Britain, 1851-1950. In *Economic Growth in France and Britain, 1851-1950*. Harvard University Press.

King, R. G., & Levine, R. (1993). *Financial intermediation and economic development* (Vol. 156189). Cambridge: Cambridge University Press.

Knight, M., Loayza, N., & Villanueva, D. (1993). Testing the neoclassical theory of economic growth: a panel data approach. *Staff papers*, *40*(3), 512-541.

Kumar, R. R. (2013). Remittances and economic growth: A study of Guyana. *Economic Systems*, *37*(3), 462-472.

Lau, L. J., & Park, J. (2003, September). The sources of East Asian economic growth revisited. In *Conference on International and Development Economics in Honor Henry Y. Wan, Jr., Cornell University, Ithaca*.

Levin, A., Lin, C. F., & Chu, C. S. J. (2002). Unit root tests in panel data: asymptotic and finite-sample properties. *Journal of econometrics*, *108*(1), 1-24.

Levine, R., & Zervos, S. (1998). Capital control liberalization and stock market development. *World development*, *26*(7), 1169-1183.

Lucas Jr, R. E. (1988). On the mechanics of economic development. *Journal of monetary economics*, *22*(1), 3-42.

Manu, L. P., Adjasi, C. K., Abor, J., & Harvey, S. K. (2011). Financial stability and economic growth: a cross-country study. *International Journal of Financial Services Management*, *5*(2), 121-138.

Minsky, H. P. (1991). Financial crises: Systemic or idiosyncratic growth in the EU: a panel data analysis. *Econ. Bus.* 29 (1), 5–11.

Mordi, C. N. (2006). Challenges of exchange rate volatility in economic management in Nigeria. *Research and statistics central bank of Nigeria*, 30(3), 17-25.

Mosley, P., & Smith, L. (1988). Structural Adjustment and Agricultural Performance in Sub-Saharan Africa, 1980–87.

Nelson, R. R., & Phelps, E. S. (1966). Investment in humans, technological diffusion, and economic growth. *The American economic review*, *56*(1/2), 69-75.

Nguyen, H., & Faff, R. (2006). Foreign debt and financial hedging: Evidence from Australia. *International Review of Economics & Finance*, *15*(2), 184-201.

Omojimite, O. B., & Oriavwote, E. V. (2012). Real Exchange Rate and Macroeconomic Performance. Testing for the Balassa-samoelson Hypothesis in Nigeria. *International Journal of Economic and Finance*, *4*(2), 127-134.

Pece, A. M., Simona, O. E. O., & Salisteanu, F. (2015). Innovation and economic growth: An empirical analysis for CEE countries. *Procedia Economics and Finance*, *26*, 461-467.

Presbitero, A. F. (2012). Total public debt and growth in developing countries. *The European Journal of Development Research*, *24*(4), 606-626.

Radelet, S., & Sachs, J. (2001). The East Asian Financial Crisis: Diagnosis, Remedies, Prospects. *Financial Markets Integration and International Capital Flows, Cheltenham, UK, Northhampton, USA, Elgar*, 219-295.

Rajan, R. G., & Zingales, L. (2003). The great reversals: the politics of financial development in the twentieth century. *Journal of financial economics*, *69*(1), 5-50.

Ricardo, D. (1891). *Principles of political economy and taxation*. G. Bell and sons.

Rioja, F., & Valev, N. (2004). Finance and the sources of growth at various stages of economic development. *Economic Inquiry*, *42*(1), 127-140.

Rodrik, D. (2008). The real exchange rate and economic growth. *Brookings papers on economic activity*, *2008*(2), 365-412.

Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of political economy*, *94*(5), 1002-1037.

Romer, P. M. (1990). Endogenous technological change. *Journal of political Economy*, *98*(5, Part 2), S71-S102.

Sala-i-Martin, X. (2001). Comment on' growth empirics and reality, 'by William A. Brock and Steven N. Durlauf.

Sala-i-Martin, X., Doppelhofer, G., & Miller, R. I. (2004). Determinants of long-term growth: A Bayesian averaging of classical estimates (BACE) approach. *American economic review*, 813-835.

Samuelson, P. A. (1964). Theoretical notes on trade problems. *The review of economics and statistics*, 145-154.

Schinasi, G. J. (2004). *Defining Financial Stability/Schinasi Garry*. IMF Working Paper Series – 2004–WP/04/187.–P. 1–16.

Şenturk, İ., & Ali, A. (2022). The Relationship between Institutional Quality and Welfare: Panel-SUR Analysis on BRICS-T Countries. *Journal of Policy Research*, *8*(1), 45-52.

Solow, R. M. (1957). Technical change and the aggregate production function. *The review of Economics and Statistics*, *39*(3), 312-320.

Sulehri, F. A., & Ali, A. (2020). Impact of political uncertainty on Pakistan stock exchange: An event study approach. *Journal of Advanced Studies in Finance*, *11*(2), 194-207.