



An Empirical Investigation of External Debt, Domestic Investment and Economic Growth in Pakistan

ABSTRACT

The current analysis focuses on how external debt and domestic investment affect economic growth by employing annual data for Pakistan from 1973 to 2022. The study also revisits the “Debt Overhang” effect in Pakistan. Data for all variables have been extracted from World Development Indicators (WDI), International Financial Statistics (IFS) and Pakistan Economic Survey (various issues). The ARDL (Auto Regressive Distributive Lag) Technique developed by Pesaran and Shin (1999) has been used for estimation after checking the stationarity of data using the ADF and PP unit root tests developed by Phillips and Perron (1988) to prevent spurious results. Results indicate that external debt has an unfavorable and statistically significant impact on economic growth confirming the presence of the “Debt Overhang” effect. Domestic investment affects economic growth positively and this relation is statistically significant. Exports of goods and services affect positively whereas the population is negatively related to economic growth. It is suggested that the government should use foreign debt for productive purposes and investments in the real segment of the economy like manufacturing, infrastructure, agriculture etc. should be prioritized by the government.

Keywords

External Debt, Domestic Investment, Economic Growth, ARDL, Pakistan

JEL Classification

F43, E2, H6

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1. INTRODUCTION

High economic growth is the main goal of developing economies. Sustainable growth in the country is essential for all economies, especially for developing countries like Pakistan. Pakistan faces different challenges including external debt, as compared to developed economies to lower its burden of debt (Atique & Malik, 2012).

External debt is very important in developing countries as it is suitable for the government to meet the monetary needs in the form of a deficit to overcome the financial gap between investment and savings. Moreover, it is also a major source of financing the resources for development. Debt can be divided into external and domestic debt. The portion of a nation's debt that is owed to international creditors, such as commercial banks, states, or international institutions, is referred to as its external debt whereas the domestic debt is funded by the lenders resident in the same country. The favourable and unfavourable impacts of foreign debt on the development of the economies have gained more concentration in economic literature (Jarju et al., 2016).

Foreign debt affects economic growth through different channels, including investment (Aziz et al., 2019). The "Debt Overhang Hypothesis" states that as debt levels increase, there is a rising trend in future taxes, which has unfavourable impacts on the investment and consumption of any nation and ultimately results in low economic growth (Jebran et al., 2016). However, for the last 50 years, foreign debt has been a major challenge for developing nations including Pakistan. Foreign debt has been the primary factor in reducing investment and growth in many countries, this relationship has been discovered during the last three decades. It is an unpleasant tax on the coming generation which they have to pay for nothing (Malik et al., 2010).

Whenever an economy faces a shortfall in saving at the domestic level, it raises the problem of current account deficit and to fill this gap of fiscal deficit economies go for loans (Riffat & Munir, 2015). Developing economies go for external loans due to the saving-investment gap. Reasons for a large amount of foreign debt are deterioration of terms of trade, the current account balance of payment deficit, uncertain political environment, poor planning, mismanagement of foreign capital (external debt), non-developmental expenditures, the high-interest rate on loans and instability in earnings of exports (Domar, 1944; Eicher et al., 2008).

Furthermore, the association between foreign debt and economic growth has been a debated topic among economists since the arrival of the debt crisis in the 1980s. Debt crises increased due to the following reasons. Firstly, the over-borrowing of developing economies and careless lending by international financial banks in the 1970s. Secondly, a rapid increase in lending rates at the international level in 1982. Thirdly, in the early 1980s, the fall down of world commodity prices especially petroleum prices (Iyoha, 1999).

Investment means an increase in capital spending and it is an essential part of total demand and the main cause of the development of any economy (Riaz & Riaz, 2017). In addition, it is an important issue of macroeconomic theory and also contributes significantly to economic growth as it promotes production methods and increases the productive capacity of the country (Saghir & Khan, 2012). Investment can be divided into domestic and foreign direct investment (Ahmad & Qayyum, 2008). Domestic investment means an investment in products and companies of someone's own country whereas the FDI is funded by anyone in different countries rather than their own country.

Moreover, investment can influence economic growth in two ways. Firstly, as investment increases, it enhances the production of goods which leads to rising economic growth. Secondly, the formation of

capital raises the productive capacity of the country which enables the economy to produce more which results in more rapid growth of the economy (Rehman & Ferdaus, 2019).

Numerous studies have been done on investment, external debt and economic growth (Maitra, 2021; Aziz et al., 2019; Adamu & Rasiyah, 2017; Forgha et al., 2014) on the international level. In Pakistan lot of the research has been done on foreign debt and public investment (Din et al., 2020), Inflows of foreign capital and domestic investment in South Asian Countries (Hameed et al., 2020), Foreign debt, FDI and growth of the economy (Chaudhry et al., 2017), Foreign debt and domestic investment (Ali, 2013), Effects of foreign debt on investment and savings (Chaudhry et al., 2009), Foreign borrowings and economic growth (Awan & Qasim, 2020); (Rauf & Khan, 2017); (Ali & Mustafa, 2012) and (Malik et al., 2010). To the best of my knowledge, among all these studies, no study has explored the combined association between external debt, domestic investment and economic growth in the case of Pakistan. The primary objective of the present study is to explore the relationship between external debt, domestic investment and economic growth in Pakistan. It also tries to re-visit the validity of the Debt Overhang effect in Pakistan.

The remainder of this paper is organized as follows: Section two is about the literature review. Section three consists of a model. Data and methodology, and the description of variables. Section four presents the results and discussions whereas the conclusion and policy suggestions are given in section five.

2. LITERATURE REVIEW

The relationship between external debt, domestic investment and economic growth has been investigated both theoretically and empirically. The following paragraphs present an overview of previous studies carried out in this area.

Kolawole (2024) investigated the relationship between external debt and economic growth for the period from 1981 to 2021 in the Nigerian economy. The study used the ARDL estimation technique. Findings reveal that external debt has a significant and negative impact on economic growth whereas trade openness and domestic investment have a positive effect on economic growth in the short run as well as in the long run. Real interest rate negatively affects economic growth. It is suggested that the government should borrow at zero interest rates and also borrow for investment purposes.

Ibrahim (2023) explored the impact of foreign direct investment (FDI), exchange rate and external debt on economic growth in Somalia by employing annual data from 1991 to 2020. The study used the OLS (Ordinary Least Square) technique for estimation. Findings revealed that FDI has a significant positive effect on economic growth while the external debt and exchange rate harm economic growth in Somalia. It is recommended that government should provide a suitable environment for FDI.

Dinga et al. (2023) examined the effect of external debt and domestic investment on the economic development of Sub-Saharan African (SSA) countries by employing cross-panel data from 1995 to 2018 of 35 economies. The study used the Kraay and Driscoll fixed-effect and DCCE (Dynamic Common Correlation) techniques. Results indicated that domestic investment positively affects economic development whereas foreign debt harms economic development in SSA economies. It is recommended that government should develop appropriate policies to reduce corruption and bureaucratic requirements to enhance domestic investment. It is also suggested that foreign debt should be used in productive things like infrastructure etc.

Aiyedogbon et al. (2022) investigated the effect of public debt on economic growth in Nigeria by employing the ARDL estimation technique and annual data from 1990-2020. Results explain that external

debt and external debt servicing are negatively related to economic growth. However, economic growth is positively related to domestic debt and exchange rates in the Nigerian economy. It is suggested that the government should consider more domestic borrowing for foreign debt.

[Dawood et al. \(2021\)](#) explored the factors that affected foreign debt in 32 transitioning and Asian developing countries from 1995 to 2019 and applied the Generalized Method of Moments (GMM) methodology. The study utilized external debt as a dependent variable whereas exchange rate, economic growth, inflation, trade openness, government expenditures and investment as independent variables. Findings showed that economic development, investment and inflation reduced foreign debt whereas trade openness, government expenditures and exchange rate increased external debt.

Later, [Awan and Qsim \(2020\)](#) explained the association between foreign borrowings and economic growth by utilizing the yearly data for the period 1980-2017. The ARDL (Auto Regressive Distributive Lag) estimation technique was used in the study. Findings revealed that the foreign borrowings, imports and servicing of loans had unfavourable impacts on economic expansion while the exports, formation of gross capital and labour force had positive effects on the economic growth of the country. The study explained that Pakistan must generate the resources by improving the productivity of exports raising revenue through tax and reducing the external debt.

On methodological grounds, [Aziz et al. \(2019\)](#) explored the effect of external borrowings and the growth of GDP on investment in low-income nations by using the Seemingly Unrelated Regression (SUR) model using an annual dataset over the period 2000-2017. The study employed a sample of 23 low-income nations, dividing them into more indebted nations (11) and less indebted nations (12). Results exposed that foreign debt considerably reduced the investment as well as the growth of the economy for both subsamples and the total sample. The study also looked at the association between trade openness and economic development and found that trade openness considerably increased economic growth in low-income nations.

[Omoniyi et al. \(2019\)](#) analyzed the relationship between foreign borrowings, FDI and growth in the Nigerian economy. The study used an annual dataset from 1980 to 2016 and the Vector Autoregressive (VAR) technique to explore the relationship between FDI and economic growth. The findings of the study revealed that only FDI and economic growth had a positive interaction. Results show that there was a unidirectional causal association between FDI and the extension of the economy.

Foreign borrowings and domestic investment can have varying effects on the growth of the economy. In a study, [Adamu & Rasiah \(2017\)](#) explored the impact of foreign borrowings and domestic investment on the growth of the economy of Nigeria. The study used the yearly data from 1970 to 2013. Findings revealed that there was the existence of both bidirectional and unidirectional causal relationships among independent variables. The findings also showed that in Nigeria, FDI and foreign debt both had favourable effects on economic intensification and sparked it through local investment channels. Findings concluded that domestic investment boosted Nigeria's economic growth through foreign debt.

Later in a different study, [Imran et al. \(2016\)](#) tested the Debt Overhang Hypothesis in Pakistan over the period 1964 to 2007. The study employed the OLS estimation methodology to investigate the empirical behaviour of servicing of external debt, employed labour force and investment economic development of the economy. Findings revealed that the servicing of debt had negative impacts on the efficiency of capital and labour that led to harmfully affecting the growth of Pakistan revealing the existence of the "Debt Overhang" hypothesis. Results indicated that in the long run an increase in output would be drained away in the form of debt service payments as external debt is an unfavourable tax on output. The study suggested that capital and labour are affected by the burden of external debt in Pakistan.

Riffat and Munir (2015) explored the non-linear association between foreign borrowing and the growth of the economy. The study also explained the channel via which foreign debt affected economic growth in South Asian economies. The study used a panel dataset on four South Asian countries from 1991 to 2013. Results showed that non-linear relationship existed between foreign debt and development in these countries. The factor productivity and public-private investment were also found significant channels via which foreign debt affected economic development.

Forgha et al. (2014) examined the effects of foreign debt and domestic investment on economic growth in Cameroon by using an annual dataset for 34 years from 1980-2013. The study used the Two Stage Least Square (2SLS) methods for data analysis. Results explained that the external debt retarded economic growth whereas domestic investment raised the economic growth in Cameroon indicating the presence of the “Debt Overhang” effect. The study also recommended that foreign debt should be used in productive activities for its positive consequence on economic growth.

Ejigayehu & Persson (2013) investigated the effects of foreign debt on growth in African economies from 1991 to 2010. The study used a Panel dataset. Estimated results revealed that the debt “Crowding-Out” effects, instead of debt overhang affected economic growth. Additionally, the data exposed that the selected countries were not paying to service of debt more than 95 % of their total debt in an attempt to distinguish debt servicing histories.

Atique and Malik (2012) analyzed an association between domestic debt, external debt, and growth in Pakistan. The study used the yearly data from 1980 to 2010. Ordinary Least Square methodology was adopted for estimation. Results explained a negative association between foreign debt and economic growth and also between domestic debt and the growth of the economy. Study suggested that foreign debt had more negative effects on economic growth as compared to domestic borrowing.

Sundell & Lemdal (2011) tested the Debt Overhang Hypothesis in developing and developed countries. The study covered the 5 indebted developed economies and 15 severely indebted developing countries during two different crises, the LDCs debt crisis in the 1980s and the Debt crisis in developed economies of the late 2000s by employing the GMM estimation technique. The findings of the study revealed that foreign borrowings harm investment and revealed the presence of a “Debt Overhang” effect in developing nations whereas in developed countries only Portugal and Greece showed a negative association between external borrowing and the development of an economy.

Malik et al. (2010) examined the relationship between foreign borrowing and growth of the economy of Pakistan. Annual data over the period 1997-2005 have been used. The study employed the OLS technique to estimate the results. The study’s findings explained that foreign debt had an unfavourable significant influence on the growth of GDP. Services of debt had also unpleasant effects on the development of the economy of Pakistan. As the service of the debt increases then there would be fewer opportunities for growth of the economy.

Ayadi and Ayadi (2008) explored the influence of foreign borrowings on the economic growth of Nigeria and South Africa. Study used the annual dataset from 1994 to 2007. GLS (Generalized Least Square) and OLS (Ordinary Least Square) methodologies were applied. Results indicated that the foreign debt and foreign debt servicing harmed economic extension in both economies. The study explained effects of foreign debt on economic growth were favourable in the Nigerian economy at an optimal level after that its impact became negative reflecting a Non-linear relationship.

3. METHODOLOGY

3.1 Model

Following Forgha et al. (2014), the present study proposed the following econometric model to evaluate the impact of external debt and domestic investment on economic growth:

$$\text{LnGDP}_t = \beta_1 + \beta_2 \text{LnED}_t + \beta_3 \text{LnGDI}_t + \beta_4 \text{LnPOP}_t + \beta_5 \text{LnX}_t + \mu_{t1} \quad (1)$$

where,

LnGDP = Log of GDP Per Capita

LnED = Log of External Debt

LnDI = Log of Gross Domestic Investment

LnPOP = log of Population

LnX = Log of Exports of Goods and Services

μ_{t1} = Error Term

Equation indicates that GDP per capita is a dependent variable whereas external debt, domestic investment, exports and population were taken as independent variables. β_1 is the intercept term and β_2 , β_3 , β_4 , and β_5 are the elasticities of external debt, domestic investment, population and exports of goods and services, respectively.

3.2 Data

The current study used an annual dataset from 1973-2022 to evaluate the effects of external debt and domestic investment on economic growth. GDP per capita is used as a dependent variable (a proxy of economic growth). Data for GDP per capita, and external debt (million US\$) were obtained from World Development Indicators while data on Gross Fixed Capital Formation (GFCF) as a proxy to compute domestic investment and exports of goods and services (million US\$) were extracted from International Financial Statistics. Data for the population (Million) were obtained from Pakistan's Economics Survey (various issues).

3.3 Methodological Framework

Current analysis applied the ARDL bound testing method to analyze the effects of external debt and domestic investment on economic growth. Over the earlier techniques, this technique has several advantages. It is utilized in particular for small sample sizes. Another benefit of adopting ARDL is that it can be used regardless of the order of integration of the series—order one, order 0 or a mixed order whereas the traditional co-integration techniques can only be utilized if the integration order is the same. These techniques become invalid if the series has a mixed order of integration. ARDL approach is divided into three stages. First of all, the OLS method is used to estimate the Error Correction Model (ECM) version of Auto Regressive Distributive Lag.

The general form of the model is presented below:

$$\begin{aligned} \Delta \text{LnGDP}_t = & \alpha_0 + \sum_{i=1}^a \alpha_1 \Delta \text{LnGDP}_{t-i} + \sum_{i=1}^b \alpha_2 \Delta \text{LnED}_{t-i} + \sum_{i=1}^c \alpha_3 \Delta \text{LnGDI}_{t-i} + \\ & \sum_{i=1}^d \alpha_4 \Delta \text{LnPOP}_{t-i} + \sum_{i=1}^e \alpha_5 \Delta \text{LnX}_{t-i} + \beta_1 \text{LnGDP}_{t-1} + \beta_2 \text{LnED}_{t-1} + \\ & \beta_3 \text{LnGDI}_{t-1} + \beta_4 \text{LnPOP}_{t-1} + \beta_5 \text{LnX}_{t-1} + \mu_{t1} \end{aligned} \quad (2)$$

where Δ are the first difference operator and α_0 indicates intercept. β_i denotes the long-run coefficient. α_i represents the estimated coefficients of a short run. The numbers of lag for each variable are symbolized by a, b, c, d, and e.

The next step is to determine the long-run coefficients. AIC criteria have been used to choose the lag length. The study's long-run model is as stated below:

$$\text{LnGDP}_t = \beta_1 + \beta_2 \sum_{i=1}^a \text{LnGDP}_{t-i} + \beta_3 \sum_{i=0}^b \Delta \text{LnED}_{t-i} + \beta_4 \sum_{i=0}^c \Delta \text{LnGDI}_{t-i} + \beta_5 \sum_{i=0}^d \text{LnPOP}_{t-i} + \beta_6 \sum_{i=0}^e \text{LnX}_{t-i} + \mu_{t1} \quad (3)$$

To evaluate the short-run results, following ECM model is used:

$$\Delta \text{LnGDP}_t = \alpha_0 + \eta_0 (\text{ECM}_{t-1}) \sum_{i=1}^a \alpha_1 \Delta \text{LnGDP}_{t-i} + \sum_{i=0}^b \alpha_2 \Delta \text{LnED}_{t-i} \sum_{i=0}^c \alpha_3 \Delta \text{LnGDI}_{t-i} + \sum_{i=0}^d \alpha_4 \Delta \text{LnPOP}_{t-i} + \sum_{i=0}^e \alpha_5 \Delta \text{LnX}_{t-i} + \mu_{t1} \quad (4)$$

ECM illustrates the dynamic rate of change from the previous year's disequilibrium to the current year's equilibrium. With a negative sign, it should be statistically significant.

4. RESULTS AND DISCUSSION

Before the estimation of regression coefficients first, we check the stationarity of data whose mean and variance do not change over time. Without checking the stationarity of data we cannot run regression otherwise results will be spurious. The present study uses time series data from 1973-2022. Time series properties of data have been checked through ADF and PP tests. Results of ADF test and PP test are reported in Table 1 and Table 2, respectively. The results of ADF and PP tests indicated that GDP, and GDI, are stationary at a level whereas ED, X and POP are stationary at the first difference I (1). Results of both tests show that variables are integrated in mixed order. When a model has a mixture of integration i.e. I(1) and I(0), so the most appropriate estimation technique is ARDL bound testing technique for long as well as short-run analysis.

Table 1: Results of ADF Test

Variables	At Level	At First Difference
LnGDP	-3.93*	---
LnGDI	-4.64*	---
LnED	-3.0	-5.11*
LnX	-2.40	-6.15*
Lnpop	-1.17	-7.23*

Note: *, ** and *** show 1%, 5% and 10% levels of significance, respectively.

Table 2: Results of PP test

Variables	At Level	At First Difference
LnGDP	-3.85**	---
LnED	-2.65	-3.88**
LnGDI	4.64*	---
LnX	-2.47	-6.14*
Lnpop	-0.99	-7.63*

Note: *, ** and *** show 1%, 5% and 10% levels of significance, respectively.

Table 3 reports the results of the Bound Test. Results show that the F-statistics value is 7.17, which is higher than the upper bound critical value and indicates that there is co-integration among variables. As a next step, the ARDL bound testing approach is applied to estimate the long-run and short-run coefficients. The AIC (Akaike Information Criterion) is used for lag length criteria.

Table 3: Bound Test Results

F-Statistics	Critical Values		Significant	Conclusion
7.17***	3.03	4.06	10%	Cointegration
	3.47	4.57	5%	

Note: *, ** and *** show 1%, 5% and 10% levels of significance, respectively.

Table 4: ARDL (1, 2, 0, 2, 0) Long Run Coefficients

The Dependent Variable is LnGDP Per Capita				
Variables	Coefficients	Standard Errors	T-Statistics[P-values]	
LnED	-0.66	0.82	-3.31* [0.00]	
LnGDI	0.73	0.41	1.77*** [0.08]	
LnX	0.30	0.10	2.81* [0.00]	
LnPOP	-2.16	1.11	-2.61* [0.01]	

Note: *, ** and *** show 1%, 5% and 10% levels of significance, respectively.

The results of ARDL long-run coefficients are reported in Table 4. Findings reveal that external debt considerably decreases the economic growth of Pakistan. The co-efficient of foreign borrowings is -0.66 and significant at 1% which suggests that a 1% rise in foreign debt causes a 0.66% fall in GDP per capita. Domestic investment significantly and favorably affects economic growth. The coefficient value of domestic investment is 0.73, which means a 1% rise in domestic investment increases economic growth by 0.73%. The coefficient of exports is 0.30, indicating that as a result of a 1% increase in exports of goods and services, GDP per capita will rise by 0.30%. Exports are positively associated with the growth of the economy. The population has negative effects on growth of the economy and is significant at 1%. A one % rise in population growth will reduce economic growth by 2.16 %.

Table 5: Error Correction Mechanism (Short run Dynamics)

The Dependent Variable is LnGDP Per Capita				
Variables	Coefficients	Standard Errors	T-Statistics[P-Values]	
CONSTANT	5.18	0.81	6.27* [0.00]	
Trend	0.01	0.00	6.22* [0.00]	
D(LnED)	-0.13	0.07	-2.01** [0.05]	
D(LnED(-1))	0.20	0.06	3.20* [0.00]	
D(LnGDI)	0.33	0.10	3.27* [0.00]	
D(LnGDI(-1))	0.44	0.11	4.18* [0.00]	
ECM(-1)	-0.30	0.04	-6.32* [0.00]	
R-Square	0.65	Adjusted R-Square	0.60	
F-Statistics	19.65	DW-statistics	2.22	
Durbin-h	0.51			

Note: *, ** and *** show 1%, 5% and 10% levels of significance, respectively.

The results of the Error Correction Model are given in Table 5. According to short-term statistics, Pakistan's economic growth is favourably correlated with both foreign debt and domestic investment. The positive association between external borrowings and economic progress could be because, according to Keynesian theory in the short run borrowings of the government affect demand for government securities and the level of growth positively and hence it raises private investment which promotes economic growth (Jebran et al., 2016). ECM has a value of -0.30. Model convergence toward equilibrium is shown by a negative sign, while the value indicates the rate of convergence or speed of adjustment.

Table 6: Diagnostic Test Results

Test-Statistics	LM Version	F-Statistics [P-values]
Serial correlation	-0.80[0.37]	0.60[0.44]
Functional form	1.22[0.27]	1.10[0.26]
Normality	1.26[0.53]	Not applicable
Heteroskedasticity	7.07[0.71]	0.63[0.77]

Note: *, ** and *** show 1%, 5% and 10% levels of significance, respectively.

The speed of adjustment from the equilibrium of the previous year to the current year is 30%. The value of R-squared is 0.60, which signifies that 65 % of variations in the dependent variable (GDP) are accounted from independent variables. The value of F-statistics is 19.65 and it demonstrates that the model is good fit. The values of Durbin-h and Durbin-Watson indicate that there is no issue of autocorrelation.

Results of diagnostic test are given in Table 6. Findings demonstrate that there is no issue of autocorrelation, Heteroskedasticity, Normality and functional form and hence the selected model is a good fit and has been correctly specified.

To check the consistency of parameters, a stability test is conducted. The null Hypothesis is that the parameters are consistent over time whereas the alternative hypothesis is that the parameters are not consistent over time. Values of the sequence that are outside of the predicted range indicate the structural change in the model over time. Both Figure 1 and Figure 2 indicate that the statistics lie between critical bounds and hence it is concluded that the parameters are consistent and stable.

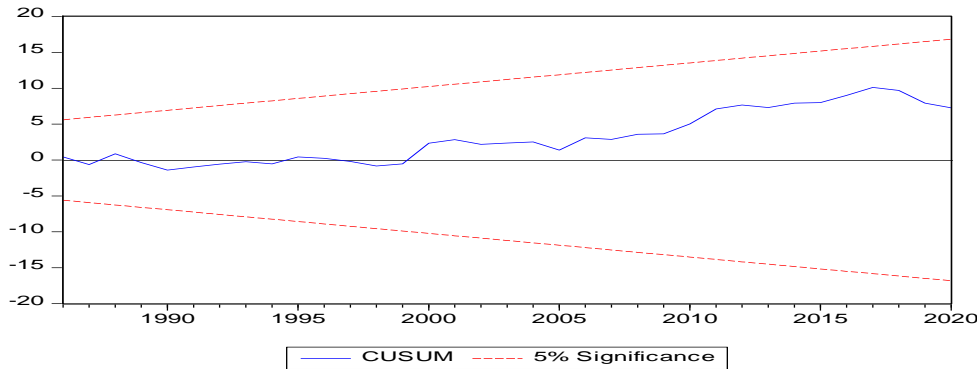


Figure 1: CUSUM (Cumulative Sum of Recursive Residuals)

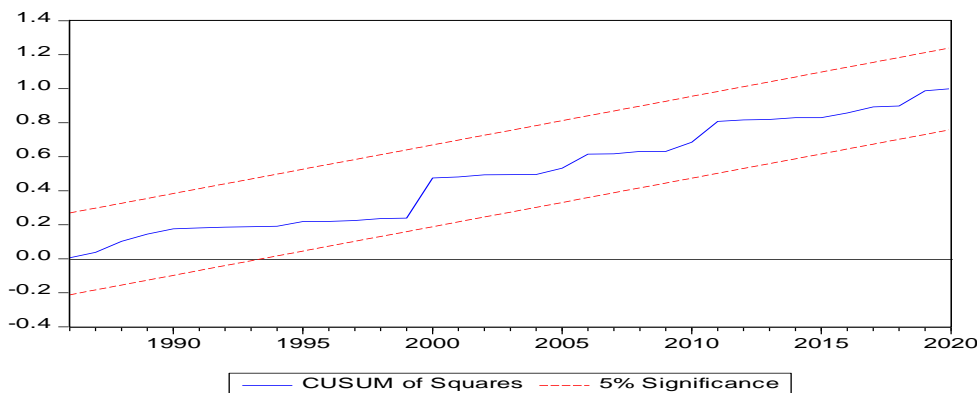


Figure 2: CUSUMSQ (Cumulative Sum of Squares of Recursive Residuals)

5. CONCLUSION AND POLICY IMPLICATIONS

Study's objective is to investigate the effects of external debt and domestic investment on economic growth in Pakistan by using annual data from 1973 to 2022. The present study also revisits the “Debt-Overhang” effect in Pakistan. After testing the stationarity properties of variables, ARDL estimation technique has been employed. Moreover, the consistency of parameters is also checked by employing CUSUM and CUSUMSQ tests in ARDL.

Findings demonstrate that external debt has a considerable negative effect on the economic growth of Pakistan as due to a one % change in external debt, there is a 0.66 % change in GDP per capita. These findings are consistent with the following other studies (see for example, [Maitra, 2021](#); [Din et al., 2020](#); [Awan and Qasim, 2020](#); [Forgha et al., 2014](#); [Umiarou et al., 2013](#); [Malik et al., 2010](#)). The adverse impact of foreign debt on economic growth reveals the presence of the “Debt Overhang” effect in Pakistan. Domestic investment exerts a significant positive effect on economic growth in Pakistan. These Results are in line with the findings of ([Maitra, 2021](#); [Aziz et al., 2019](#); [Adamu & Rasiah, 2017](#); [Forgha et al., 2014](#)). In addition, the effect of exports of goods and services is also positive on economic growth and findings are consistent with the following studies: ([Forgha et al., 2014](#); [Awan & Qasim, 2020](#)). Furthermore, the impact of the population is negative being significant to growth of the economy of Pakistan. These results are in line with the studies of [Forgha et al. \(2014\)](#) and [Aziz et al. \(2019\)](#). There are some limitations of recent study as there are many factors affecting economic growth but this study pays attention to some macroeconomic factors and all other factors like foreign direct investment, domestic debt, corruption, Income Inequality etc. are left incorporated due to the time limit and data constraints

Present study suggests that the government should use the external debt for productive purposes to generate adequate resources to pay back the loan quickly. Also recommends that government should rely more on domestic sources generated through an increased volume of trade and domestic savings.

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