

The Fiscal Insertions with External Debt, Poverty and Economic Presentation: The Nexus Study of Pakistan

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Abstract: Contemporary analysis aims to inspect the bearing of exterior debt and poverty on Pakistan's economic progression by exhausting almanac time-series statistics from 1981 to 2020. To analyze the results ARDL model is used. The ARDL estimates found that the variables GFCF, and FDI are positively and ominously connected with the economic progress although the regress and regression external debt and poverty are negatively and significantly related with the economic progress in Pakistan. Grounded on the findings it is suggested that domestic sources of revenue should be increased by increasing the tax base while employment opportunities for the poor should also increase to eradicate the level of poverty in Pakistan.

Key Words: Pakistan, Economic Progression, External Debt, Poverty.

JEL Code: F43, F34, I30

1. Overview of study

The main objective of the majority of developing nations is to achieve rapid economic growth and development by investing in workable growth-accelerating initiatives using a variety of funding sources, including foreign borrowing. All governments face a significant difficulty in achieving sustainable economic development, but this is especially true for developing nations. These nations frequently experience growing fiscal deficits as a result of rising debt payments, particularly those for foreign debt services, and expanding current account deficits (Reinhart et al., 2012). The foremost issue is perhaps or not exterior borrowing boosts economic progress in emerging realms. Investment and labor productivity are two ways that peripheral debt has consequence on the frugality. An upsurge in gross outward debt should reassure venture and capital formation, leading to intensification in GDP probable because the primary justification for taking out foreign loans is a shortage of offered reserves to fund investment ventures. Instead of long-term investment projects, external debt is frequently used for short-term purposes to offset growing economic deficits (Iftçiolu & Sokhanvar, 2018).

According to neoclassical growth theories, foreign debt boosts economic expansion. Additionally, they emphasised that borrowing is one method of funding investments and has the ability to increase economic progression. On the further prospect, proponents of the alternative hypothesis contend that a nation's ability to grow economically is constantly hampered by debt (Iftçiolu & Sokhanvar, 2018). The majority of developing economies heavily rely on outside possessions to mark their nation-states developed and wealthy. Interest-bearing loans, assistance, FDI, expert workers, and the transmission of technological know-how are all examples of foreign assistance. This type of "aid" is now viewed as a separate component of production for developing nations. It is still up for debate, though, whether this aid helps or hurts the standard of living for common citizens in developing countries, especially in terms of foreign debt and liabilities. Additionally, there is broad consensus that international resource flows improve economic efficiency and wellbeing in both wealthy and unindustrialized nations. In the face of faults in the capital market, it is customary to expect that the resources transmission takes place from developed nations towards developing on commercial terms will be advantageous to both emergent and advanced countries (Krueger, 1986). On the contrary, policymakers have long given attention to the issue of poverty. It limits people's access to necessities including food, shelter, and clothing. It takes away from them the fundamental freedom to act and make decisions that they would have otherwise had if they weren't homeless. Poor people usually lack political influence and have little say in issues that directly affect their life. They are additional susceptible to economic shockwaves such variations in inflation and pecuniary progress at previously unheard-of levels (Chani et al., 2011).

Pakistan has faced significant economic challenges at both the micro and macro levels since gaining independence. Among these challenges, the issues of debt and poverty have become prominent in economic planning and budget management activities (Chaudhry et al., 2009). In March 2021, public debt stood at Rs

38,006 billion in Pakistan by representing a rise in fiscal year of 1,607 billion (Rs) for the first nine months' period. This increase was lower compared to the Rs 2,499 billion increase observed during the same period in the previous year. Additionally, in the end of March 2021, the peripheral public debt grasped US\$ 81.6.

2. Literature Assessment

Approximately 49% of Pakistan's external debt is comprised of multilateral loans, while bilateral loans make up 31%, commercial loans account for 13%, and Eurobonds and Sukuk contribute to 7% of the total debt (Pakistan Economic Survey, 2020-21A). During the periods of 2015-16, 24.3% the population which is estimated beneath the poverty streak, with an additional 19% at risk of falling into poverty. However, in the duration of pandemic fiscal, approximately 44 percent of the inhabitants is now possibly susceptible and may require financial assistance (Pakistan Economic Survey, 2020-21B). Considering the substantial impact of external debt and poverty on Pakistan's economic growth, study aims to investigate their influence. In this section, the literature review includes various studies that have examined the influence of debt (external) and poverty on economic progression. For example, Omodero & Alpheaus (2019) conducted a study, consuming yearly time-variants data of Nigeria inclosing period of 1997-2017. Their findings revealed a negative affiliation amongst foreign debt and economic progression, indicating that foreign debt had a detrimental effect. However, they also initiate an optimistic connection amongst foreign debt servicing and economic progression. The study additionally determined negative influence of inflation over economic growth, although it was not statistically significant. The study demonstrated nexus between external liabilities (bet) and economic expansion using data from 1990-2015 in Oman. Through ARDL (Autoregressive Distributed Lag) estimates, the study found a long-term connotation flanked by real GDP growth, debt to GDP ratio, GCF, inflation, and human capital. The effects from error correction tool signposted that in short period, economic progression was significantly and inversely related to the debt to GDP ratio, while GCF had a positive influence on economic development (Kharusi and Ada, 2018).

Okon and Monday (2017) conducted a study on Nigeria, utilizing data from 1986-2016, with the purpose of exploratory the affiliation between poverty, external debt, and economic growth. The fall outs exploration specified that foreign debt exerted a significant adverse impact on economic progression. Additionally, a positive but negligible association was found amongst external debt servicing and economic growth. The analysis also revealed direct linkage between the currency rate and foreign debt. Furthermore, the findings demonstrated a favorable connection between per capita income and economic growth in Nigeria. A higher per capita income was associated with increased

economic growth and reduced poverty levels. Rauf and Khan (2017) conducted a study to investigate the foreign debt impact on Pakistan's economic expansion, utilizing data from 1972 to 2013. The effects of analysis exhibited an inverse and substantial association concerning foreign debt and the economic progression of Pakistan. Additionally, the study has significant and +ve connotation between human and physical capital and economic development.

Senadza et al. (2017) conducted a study on Sub-Saharan Africa, examining the exterior debt influence on economic progression. In Sub-Saharan nations, this study applied statistics from 1990-2013 and originate that exterior debt demonstrated negative influence on economic progression of states. On the other hand, variables such as investment and exports were positively associated with economic growth.

In a separate study, inspected the association between foreign debt and poverty in emerging nations. Their study utilized data from 2000 to 2015 (Zaghdoudi and Hakimi, 2017).

Naeem and Sherbaz (2016) conducted an investigation into the influence of ineptness on poverty in Pakistan, utilizing data spanning from 1973 to 2013. The study revealed a direct association between both internal and external debt and poverty. These results specify that increasing levels of debt contribute to the escalation of poverty in Pakistan. Moreover, the study highlighted that domestic debt had a more pronounced impact on poverty levels. The outcomes of the study conducted by Naeem and Sherbaz (2016) investigating the impact of ineptness on poverty in Pakistan indicated a significant optimistic relationship between poverty and foreign debt. The verdicts also shown an inverse relationship flanked by poverty, health, and infrastructure. Moreover, the causality test conducted in both the short-long term demonstrated bidirectional causality concerning poverty and foreign debt.

Shahzad et al. (2014) conducted an analysis of external debt influence on the economic evolution of Pakistan, utilizing data extracted till 1980 to 2013. The study examined data from 1980 to 2013 the debt-growth nexus of Pakistan (Shahzad et al. 2014). The findings of the study indicated an inverse association between exterior debt and the economic growth of Pakistan, with external debt being the core variable of interest. Additionally, the study revealed that other variables such as foreign direct investment, exports, and savings had a positive effect on economic progression, indicating that they contributed to its enhancement. The variables analyzed in the study by Ramzan and Ahmad (2014) were found to have a statistically substantial effect. The study inspected the influence of exterior debt on Pakistan's economic progression, from time period of 1970 to 2007. The verdicts exposed that inflation, exterior debt, and debt servicing had adverse but significant effect on economic progression, both in the short-long run. In contrast, trade openness and human capital were turn out to have a positive and significant influence on economic growth. Tchereni (2013) analysis the association link of

foreign debt and growth of economic in Malawi, utilizing data from 1975 to 2013. Additionally, the study revealed a positive interlink between inflation and economic progress. Moreover, trade openness was found with positive influence on the economic expansion of Malawi. In a separate study, Shabbir (2013) assessed the debt- growth connection in developing nations, using data from 1976-2011. The outcomes of Shabbir's (2013) study demonstrated a negative connotation of external debt with economic growing in developing economies. On the other hand, a significant and positive connections trade openness and FDI showed with economic growth. Inflation rate and the exchange rate, however, were originated to have a negative link with economic growth. The analysis also revealed that external shocks affected the terms of trade, which in turn adversely influenced private investment. Ayyoub et al. (2012) conducted a study to observe the influence of debt on the GDP of Pakistan, utilizing data from 1989 to 2010. The findings of their analysis demonstrated a positive affiliation amongst external debt and liabilities to GDP ratio with both GDP growth and manufacturing growth in the economy. However, the study also revealed that expenditures on debt servicing were the cause of low productivity and an increasing unemployment rate.

Daud et al. (2011) conducted an assessment of external debt influence on economic progression in developing nations, utilizing time period of 1970-2005. Estimations revealed significant and negative linkage between external debt and economic growth. This negative impact was observed in regions such as Pacific, East Asia, Caribbean, Sub-Saharan Africa, and Latin America. However, an insignificant association was observed amongst external debt and economic growth in the North Africa and Middle East regions. In conclusion, the study proposed that external debt exerted detrimental influence on the economic expansion of developing countries. The study conducted by Paudel et al. (2009) in Sri Lanka revealed that according to the estimates of the Johansen co-integration test external debt, liberalizing trade, and labor force, had a favorable effect on the economic progression. Trade openness and the size of the labor force were identified as strong and significant factors that added to the growth of the country's gross domestic product. Adegbite et al. (2008) analyzed the affiliation amid economic growth and external debt in Nigeria, utilizing data extracted 1975 to 2005. Findings designated that foreign debt contributed adverse impact on economic progress. It was observed initially, variables are positively correlated as external debt and economic growth, but beyond an assured fact, its impact turned inversely. The authors concluded that excessive external debt leads to a decline in a country's economic performance, characterized by exchange rate depreciation, intensification in fiscal debit, and imbalances in balance of payments.

3. The data and methodology

Contemporary study aimed to analyze the impression of exterior debt over economic progression in Pakistan.

Time series data (on annual bases generated from 1981-2020 collected from the data source is World Data base (WDI). The several variables employed in study, including dependent variable, which is the GDP progression rate, and explanatory variables such as gross FCF (fixed capital formation, % of GDP), participation Rate of labor force (LFPR), external debt (GNI %), poverty (PV), and foreign direct investment (% of GDP).

To evaluate the variables stationarity level, the study on the go of ADF (Augmented Dickey-Fuller test). Furthermore, to estimate the long-run parameters applied the ARDL bound test and models. The stated econometric approach of the model is presented as below:

$$EC_i = \beta_0 + \beta_1 GFCF_i + \beta_2 LFPR_i + \beta_3 EDBT_i + \beta_4 PV_i + \beta_5 FDI_i + u_i$$

Where;

EC = Economic Evolution

GFCF = Gross Fixed Capital Formation

LFPR = Rate of Participation of Labor force

PV = Poverty

FDI = Foreign direct investment

u_i = Disturbance term

β = Intercept, Coefficient.

Table 1: Depiction of Variables

Variable	Explanation of Variables	
Dependent Variable		
EC	Growth of Economics measure by GDP growth rate	Annual
Independent Variables		
GFCF	Gross fixed capital formation	% GDP
LFPR	Labor Force Participation Rate	Rate
EDBT	External debt	Percentage of GNI
PV	Poverty	Headcount Ratio
FDI	Foreign Direct Investment	% of GDP

4. Analysis

This section presents the analysis of the external debt influence and poverty on the Economic growth of Pakistan. The analysis is presented as follows:

Descriptive Exploration

Table 2, offerings the evocative statistics of the variables rummage-sale in estimation process. The mean level of economic growth in Pakistan from 1981-2020 is calculated as 4.560. The maximum level of economic growth observed during this period is 7.921, despite the fact the -0.935 is minimum level. The standardizes variation of the Economic growth variable is calculated as 2.095, indicating the degree of variability in the data. The skewness value of -0.447 suggests that the distribution of the data is negatively skewed, indicating a longer left tail.

The kurtosis value of 2.764 indicates that the distribution is platykurtic, which means it has thinner tails compared to a normal distribution.

Similarly, the individualities of remaining concerned variables can be examined from Table 2, providing insights into their SD, skewness, mean, maximum, minimum, and kurtosis values.

Table 2: Evocative Statistics

Variables	EC	GFCF	LFPR	EDBT	PV	FDI
Mean	4.560	15.894	49.867	40.406	32.198	0.913
Median	4.840	16.233	50.265	41.144	26.927	0.681
Maximum	7.921	19.112	52.110	55.901	64.300	3.668
Minimum	-0.935	12.521	32.200	25.793	17.320	0.103
Std. Dev.	2.095	1.656	3.022	9.470	12.165	0.786
Skewness	-0.447	-0.246	-5.141	-0.046	1.113	2.240
Kurtosis	2.764	2.052	30.748	1.673	3.170	7.636
Jarque-Bera	1.424	1.901	1459.457	2.948	8.307	69.286
Probability	0.491	0.387	0.000	0.229	0.016	0.000

Source: Author's Generated.

Analysis of Parameters Correlation estimation

According to assess the strength of the association amongst variables, a correlation coefficient is commonly used. Table 3, expressing the parameters correlation analysis. Results of this table, predicted that the variable "Economic Growth" exhibits a positive correlation with GFCF (0.322), indicating a moderate affirmative relationship amid these two variables. Similarly, a positive correlation is observed between "economic growth"

and "labor force participation rate" (0.055), as well as FDI (0.170), though the strength of these correlations is relatively weaker. On the other hand, "economic growth" shows a negative correlation with "external debt" (-0.072) and "poverty" (-0.130). This implies that the level of External Debt (ED) and poverty rises, the economic growth tends to decrease. However, it is important to note that these correlations are relatively weak. Overall, the correlation analysis provides insights into the trend and métier of the relationships concerning variables under consideration.

Table 3: Correlation Matrix

	EC	GFCF	LFPR	EDBT	PV	FDI
EC	1.000					
GFCF	0.322	1.000				
LFPR	0.055	-0.317	1.000			
EDBT	-0.072	0.464	-0.326	1.000		
PV	-0.130	-0.217	0.205	-0.318	1.000	
FDI	0.170	0.192	0.081	-0.341	0.380	1.000

Source: Author's Calculations

Unit Root Test

In table 4, estimation valuations predict that the test for assess the stationarity of the variables Augmented Dickey-Fuller (ADF) is applied. The test outcomes indicate that at the level the variables "Economic growth" and "Foreign Direct Investment" are stationary, as evidenced by their respective t-statistics of -3.076 and -3.082, with associated probabilities of 0.037. On the other hand, the variables GFCF, "labor force participation rate," "External Debt," and "poverty" are found to be stationary at the first difference. This is indicated by the t-statistics and probability values: "gross fixed capital formation" (t-stat. = -1.733, P.val = 0.408), "Labor Force Participation rate" (t-stat. = -1.530, P.val = 0.506), "external debt" (t-stat. = -1.351, P.val = 0.596), and "poverty" (t-stat. = -2.201, Prob. = 0.209). These findings suggest that all variables exhibit mixed orders of integration. Consequently, the ARDL model is deemed appropriate for estimating the long-run parameters, considering the varying levels of stationary observed amid the variables.

Table 4: Analysis of ADF (Unit Root Test)

Variables	Level		1st Difference		Outcomes
	t-statistic	Prob.	t-statistic	Prob.	
EC	-3.076	0.037	--	--	I(0)
GFCF	--	--	-1.733	0.408	I(1)
LFPR	--	--	-1.530	0.506	I(1)
EDBT	--	--	-1.351	0.596	I(1)
PV	--	--	-2.201	0.209	I(1)
FDI	-3.082	0.037	--	--	I(0)

Source: Author's Deviousness

Analysis of Bound Test with ARDL

The long run cointegration of the variables is assess in this model, bound test an ARDL approach was conducted. The results are interpreted with help of Table 5. Estimated values perceivedthe computed F-statistic value which ranges from 4.8949 and exceeds the superior and lower critical of bound values. Estimated verdicts indicate that a long-run cointegration exist ammo's variables of the model. Based on the F-statistic being greater than the critical bounds, it can be concluded that a long-run relationship of the variables experience which indicated that there can be estimated a long run. This suggests that there exists a stable equilibrium between the variables, suggesting that in the long run they can move together.

Table 5: Estimations of Bound Test

Null Hypothesis (H ₀):long-run relationships not occur		
Test Statistic	Values	K
F-static	4.9949	5
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.66	3.55
5%	2.52	3.89

2.5%	2.86	4.78
1%	3.71	4.86

Source: Author's Evaluations.

Long-Run Analysis with ARDL

This section presents the long-run estimates of the influence of External Debt and poverty on Economic Growth in Pakistan. Applying technique is the ARDL model. The results of conducted analysis are presented with Table 6. The Economic Growth is concerned dependent variable of the model is, while the leading independent variables contain Gross Fixed Capital Formation (GFCF), Labor Force Participation Rate (LFPR), External Debt (EDBT), Poverty (PV), and Foreign Direct Investment (FDI). The verdicts indicate in Pakistan economic growth is positively relate with variables GFCF, LFPR, and FDI. This means that an increase in GFCF, LFPR, and FDI is associated with higher economic growth. Although, the variables external debt and poverty exhibit an inverse relationship with EG. This implies that higher levels of External Debt and Poverty are related with lesser Economic Growth in Pakistan. The study findings insights long-run dynamics among External Debt, Poverty, and Economic Growth in Pakistan. It can suggest that addressing issues related to external debt management and poverty reduction can have a optimistic impression on promoting EG in the country. The variable GFCF is originate a positive and significant effect on Economic Growth. Which indicated that upshot positive value in GFCF leads to higher employment levels and income, which in turn contributes to Economic Growth. The estimated coefficient of GFCF variable proposes that a one-unit increase in GFCF indicated a 0.7802-unit upsurge in Economic Growth. This study results are justified with prior studies conducted by Shah (2020) and Ali (2015). Furthermore, External Debt is initiate to have a significant and negative association with Economic Growth in Pakistan. Prevailing economic site of Pakistan is pigeon-holed by extreme burden of debt, and a substantial portion of income is allocated towards servicing this debt. However, due to fiscal and trade deficits, Pakistan faces challenges in meeting its debt obligations. This situation has an adverse impact on economic growth. Overall, these findings highlight the importance of managing external debt effectively and addressing fiscal and trade deficits in order to promote sustainable Economic Growth in Pakistan. The estimated coefficient of External Debt (EDBT) indicates that EDBT growths by one unit, it generated a decline trend in Economic Growth by units of -0.1137. These findings are consistent with previous studies conducted by Malik et al. (2010), Kharusi & Ada (2018), and Rauf & Khan (2017). Poverty is identified as another important factor that negatively affects economic growth in Pakistan. The high levels of poverty in the country require the government to allocate a significant portion of income towards providing basic facilities to the population, leaving fewer resources available for investment projects. The coefficient value of poverty (PV) suggests that as variable of PV rises by one unit, it resulted to a decline in Economic Growth by -0.0602 units. These findings supported by studies conducted by Zhu (2022) and Saleem (2021).

Moreover, foreign direct investment (FDI) is established to have a significant and positive influence on the Economic Growth of Pakistan. FDI plays a crucial role in creating employment opportunities and improving the infrastructure of a country, which in turn contributes to economic growth. Overall, these findings emphasize the need to address the challenges associated with high external debt and poverty, while promoting foreign direct investment to foster sustainable economic growth in Pakistan. The coefficient value of foreign direct investment (FDI) suggests that as FDI rises by one unit, it primes to an increase in economic growth by 1.5161 units. These findings are consistent with previous studies conducted by Saqib et al. (2013), Falki (2009), and Makki & Somwaru (2004).

To confirm the robustness of the model, tests of autocorrelation and heteroskedasticity were conducted. The outcomes of both tests indicate the absence of autocorrelation and heteroskedasticity in the model. This implies that the model adequately captures the relationships between the variables without any systematic errors due to autocorrelation or heteroskedasticity. The absence of autocorrelation indicates that there is no systematic pattern of residual errors in the model, suggesting that the model adequately represents the underlying data. Similarly, the absence of heteroskedasticity suggests that the variability of the residuals is constant across the range of values of the independent variables, indicating that the model's assumptions are met. These results provide further support for the reliability and validity of the estimated coefficients and the overall findings of the study.

Table 6: Long-Run Estimates of ARDL Model

Dependent Variable: Economic Growth				
Variable	Coefficient	Std. E	t-Static	Prob.
GFCF	0.7802	0.2359	3.3064	0.0024
LFPR	0.0178	0.1075	0.1664	0.8689
EDBT	-0.1137	0.0409	-1.7797	0.0092
PV	-0.0602	0.0275	-2.1860	0.0149
FDI	1.5161	0.5025	3.0168	0.0051
C	-2.9409	6.9516	-0.4230	0.6752
Breusch-Godfrey Serial Correlation LM Test				
F-statistic	1.0156		Prob. F(2,29)	0.3747
Obs*R-squared	2.5529		Prob. Chi-Square(2)	0.2790
Heteroskedasticity Test: Breusch-Pagan-Godfrey				
F-statistic	0.6256		Prob. F(7,31)	0.7308
Obs*R-squared	4.8277		Prob. Chi-Square(7)	0.6810

Source: Author's Generate

The Model of Short-Run Error Correction

In the short-run error correction model, the ECM (Error Correction Model) term plays an important role. The

coefficient of the ECM term should be deleterious and statistically significant. In Table 7, the results of the ECM analysis are presented. It is observed that the ECM term has a negative coefficient of -0.9650, demonstrating that any short-term deviations from the long-run equilibrium will be corrected at a rate of 96.50 % in the subsequent period. This suggests that in the long run the system has a strong tendency to restore equilibrium. Furthermore, the statistical significance of the ECM term is indicated by its associated p-value of 0.0006. This implies that the ECM term is statistically significant, reinforcing the notion that short-term disequilibria in the model are being corrected in a meaningful way. Overall, the presence of a negative and statistically significant ECM term confirms the being of a stable long-run association among the variables and supports the notion of an error correction mechanism that guides the adjustment process towards long-run equilibrium.

Table 7: Short-Run Error Correction Estimates

Dependent Variable: Economic Growth				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GFCF)	0.7529	0.3222	2.3366	0.0261
D(LFPR)	0.0172	0.1026	0.1682	0.8675
D(EDBT)	-0.1097	0.0518	-2.1166	0.0424
D(PV)	0.0038	0.0264	0.1470	0.8841
D(FDI)	0.0558	0.7154	0.0780	0.9383
ECM(-1)	-0.9650	0.2535	-3.8060	0.0006

Source: Author's Calculations

Normality Analysis

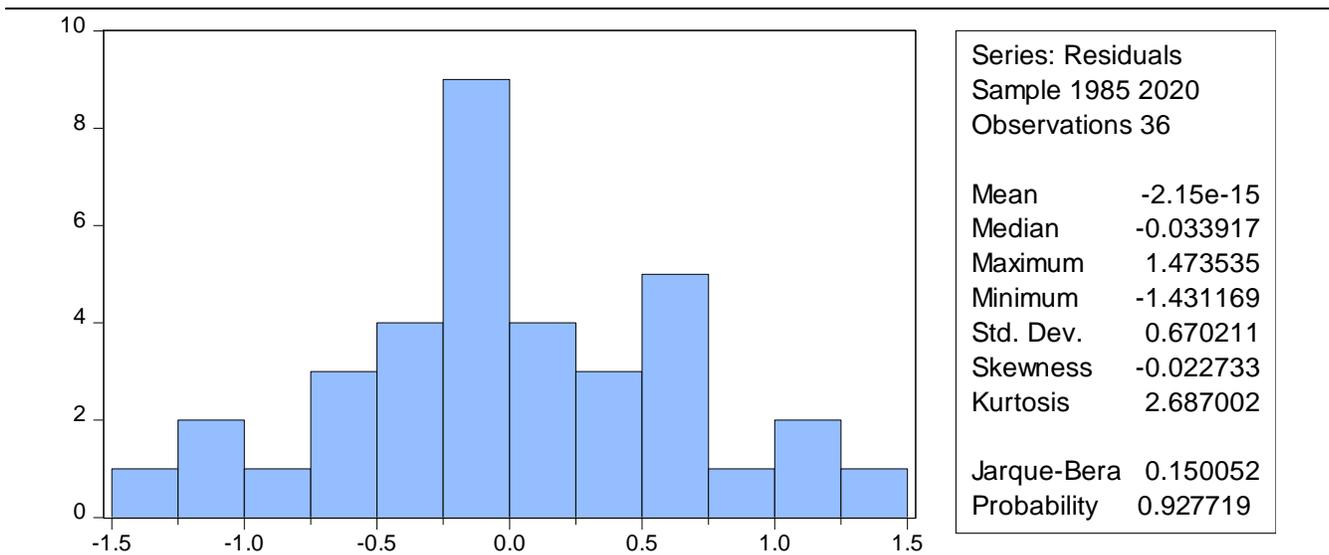
To assess the normality of residuals, a normality test is conducted, which includes examining the histogram of residuals and performing the Jarque-Bera test. Based on the outcomes, the Jarque-Bera test is found to be statistically insignificant. Results predicted that the residuals are followed by a normal distribution. The Jarque-Bera test is a test for normality that evaluates whether the kurtosis and skewness of the residuals deviate significantly from those of a normal distribution. In this case, the insignificant result indicates that the residuals exhibit a distribution that is close to normal. Additionally, the histogram of residuals can also be examined visually to assess their distribution. If the histogram displays a symmetrical bell-shaped curve, it further supports the assumption of normality. However, without visual representation, it cannot be explicitly stated whether the residuals

follow a normal distribution, but the insignificant Jarque-Bera test result provides statistical evidence in favor of normality.

Overall, Jarque-Bera test insignificant, it can be justified with results that the here presented a residuals are normally distributed, suggesting that the assumption of normality is met in the model.

Regenerate response

Figure 1: Residuals Normality Test



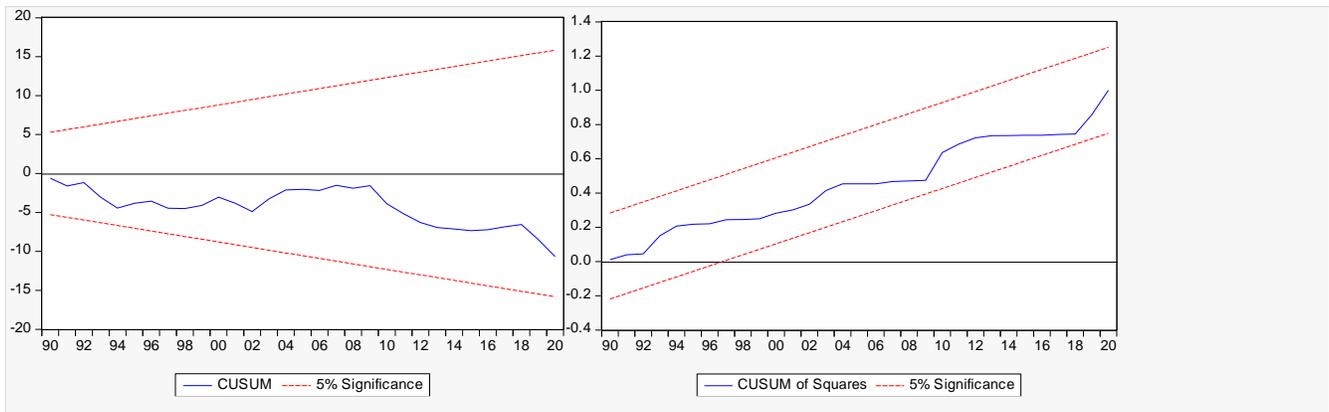
Source: Author’s estimation

Stability Analysis

The stability of a model can be assessed by means of a Recursive Model of CUSUM (Cumulative Sum) and CUSUM of squares. These methods help to detect any structural changes or instability in the estimated parameters over time. In Figure 2, the graphs of the Recursive residuals are plotted. The critical region values at a 5% level of significance are also indicated. If the recursive residuals fall within these critical region values, it suggests that the model is dynamically stable and there are no significant structural changes. Based on your statement that the recursive residuals lie within the critical region values at a 5 percent significance level, it can be concluded that the model is dynamically stable. This indicates that the estimated parameters of the model remain consistent over time and there are no significant shifts or changes in the relationship between the variables. It is imperative to note that the stability analysis provides an indication of the model's reliability and

robustness over time. However, it does not guarantee the accuracy or predictive power of the model. Further analysis and evaluation of the model's performance are necessary to assess its overall validity and usefulness.

Figure 2: Stability of Model



Source: Author's generated

Conclusions and Recommendations

The study aims to investigate the affiliation amongst external Debt, poverty, and Economic Growth in Pakistan exhausting time series (annual) data from 1981-2020. Numerous econometric procedures as the test of Augmented Dickey-Fuller (ADF), bound test, further model of Autoregressive Distributed Lag (ARDL), and normality test of residuals are engaged to analyze the results.

The findings reveal that GFCF and FDI exerts a significant and positive influence on Economic Growth in Pakistan. This recommends that a rising trends in investment in fixed capital and inflow of foreign direct investment can contribute to economic growth. These effects are steady reliable with previous studies accompanied by Shah (2020), Ali (2015), Saqib (2013), Falki (2009), and Makki & Somwaru (2004), which also initiate the same upshots among variables of investment and Economic Growth.

Precisely, study novelties that poverty and external debt have a adverse association with growth of Pakistan economy. The high level of external debt burdens the economy, leading to difficulties in meeting debt servicing obligations. This negatively affects economic growth. Similarly, high levels of poverty indicate lower levels of human capital, limited access to resources, and reduced productive capacity, all of which hinder economic growth. These findings are supported by previous studies conducted by Malik et al. (2010), Kharusi & Ada (2018), Rauf & Khan (2017), Zhu (2022), and Saleem (2021), which also stated a negative connection instigated between the external debt, poverty, and economic growth. The application of various econometric techniques, including ADF tests for stationarity, bound tests for cointegration, ARDL model for long-run estimation, and

normality tests for residual analysis, strengthens the reliability and validity of the outcomes. It is significant to annotation that this study provides intuition into affiliation amongst external debt, poverty, and economic progression in Pakistan. However, the results should be interpreted within the context of the study's limitations and the specific characteristics of the Pakistani economy. Further research and analysis are necessary to gain a comprehensive understanding of these relationships and to inform policy-making decisions. Based on the findings of this analysis, it is evident that external debt and poverty exerted a detrimental influence on the economic progression of Pakistan. To address these issues and promote sustainable economic growth, policymakers are recommended to consider the following measures:

External Debt Management: Efforts should be made to effectively manage external debt levels. This can involve prudent borrowing practices, ensuring debt sustainability, and exploring options for debt restructuring or refinancing to ease the burden on the economy. Implementing sound fiscal policies and improving debt servicing capacity can also help in reducing the negative external debt influence on economic progression.

Promote Foreign Direct Investment (FDI): Policymakers should create an enabling environment to attract foreign direct investment. This can be achieved by implementing investor-friendly policies, ensuring ease of doing business, providing incentives to foreign investors, and improving infrastructure. FDI inflows can contribute to economic growth by bringing in capital, technology, and employment opportunities.

Employment Generation: Policies and initiatives should be implemented to promote job creation and increase employment opportunities. This can involve investment in sectors that have high employment potential, fostering entrepreneurship, supporting small and medium-sized enterprises, and providing vocational training programs to enhance the skills of the workforce.

Poverty Alleviation: Efforts should be made to reduce poverty levels and improve living standards. This can be achieved through targeted social welfare programs, poverty alleviation initiatives, and inclusive economic development policies. Investments in education, healthcare, and social protection can help uplift individuals and communities out of poverty, enhancing their productivity and contributing to overall economic growth.

Rural Development and Education: Special attention should be given to rural areas, where poverty rates are often higher. Development programs should focus on improving infrastructure, access to basic services, and agricultural productivity in rural areas. Additionally, promoting quality education and skills development in rural communities can empower individuals, enhance human capital, and create opportunities for economic advancement.

It is crucial for policymakers to take a comprehensive and integrated approach, considering the interlinkages between Exterior debt, Poverty, and Economic growth. By addressing these issues holistically, Pakistan can strive towards sustainable and inclusive economic development.

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