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Dynamics of Foreign Debts, Foreign Direct Investment, Trade Openness, Debt Servicing, and Inflation; Impact on Pakistan's Economic Growth.

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Abstract

Macroeconomic stability is the most important indicator for assessing a nation's economic health. The country's GDP growth rate measures economic growth and development. Foreign direct investment (FDI), debt servicing, external debts, inflation, and trade openness are essential macroeconomic indicators; this study aims to investigate the factors that impact economic growth. The study examines Pakistan's GDP from 1990 through 2023. The quantitative approach with secondary time series data was used to inquire about the relationship of GDP from 1990 to 2023 with five macroeconomic variables. The regression analysis using the ARDL model determined the long-term and short-term relationship. The study concluded that inflation, trade openness, and foreign debt statistically affect GDP growth over a longer time horizon.

On the other hand, it does not seem that factors like debt service and foreign direct investment significantly influence long-term GDP growth. The direct correlation between GDP growth and independent variables is examined through the Error Correction Model (ECM). It implies that trade volume and foreign debt have statistically significant short-term effects on GDP growth. However, inflation, debt service costs, and foreign direct investment have no appreciable short-term effects.

Keywords: Pakistan, Economic Growth, Inflation, FDI, Trade Openness, Debt Servicing, GDP

Introduction

The world's countries need additional money in the national exchequer to manage economic development and sustainabilities. This extra money is invested in profitable projects to increase income, and these incomes help return the additional money, mostly in borrowed form. Otherwise, when the project fails and does not earn a profit, it will be far more difficult for the country to pay its debts when they are due (Ud-Din et al., 2020). Maintaining economic growth and lower poverty levels is more challenging with high debt. The growth of foreign debt and worries about its capacity to be repaid, especially in highly indebted emerging nations, were the leading causes of this crisis (Ale et al., 2023). In economic theory, taking on a level of debt that can be comfortably managed may benefit the economic growth of both developing and industrialized countries (Soomro et al., 2022).

Raising levels of debt might potentially stifle economic growth because of greater levels of government borrowing; it is because of the crowding effect that increased levels of borrowing induce, which causes interest rates to rise and raises the cost of borrowing money for both consumption and investment (Akanbi et al., 2022). The extent to which a nation is in debt to

other countries has a significant bearing on the robustness of its economy. Since 1980, Pakistan, categorized as a developing nation, has struggled with substantial worries over its foreign debt. The International Monetary Fund (IMF) and the World Bank (WB), as well as countries like the United States and China, are some of the most important lenders to Pakistan; other important lenders to Pakistan include Western and Arab countries along with Asian Development Bank (ADB), International Bank of Reconstruction and Development (IBRD), European Development Fund (EDF), and International Fund for Agricultural Development (IFAD). The total debt reached PKR 44,336 billion during FY21 and FY22, comparable to 71.3 percent of the GDP. Due to its tremendous issues with foreign debt, Pakistan is now ranked 59th in the world regarding the amount of money it borrows. Pakistan is the fifth most populated nation in the world. Since the country gained independence, it has racked up an enormous amount of debt due to significant borrowing, considerable imports, continual currency depreciation, and exorbitant interest rates on borrowing money. The situation in Pakistan, on the other hand, is unique and can essentially be described as being marked by a trade deficit and a gap between savings and investments. The government has been forced to take out loans from financial institutions both inside the country and abroad, which has led to a significant build-up of national debt (Awan & Qasim, 2020). Certain liabilities, however, such as bonds, stock, and financial derivatives, are not included in the definition of debt. Commitments made to provide economic advantages to the entities that possess the accompanying financial claims are referred to as liabilities. The need for the debtor to make impending payments of interest and principal to the creditor is the primary factor determining whether or not an obligation is considered debt by the creditor (International Monetary Fund, 2017).

United States Institute of Peace assessed Pakistan's economy and described that the nation's stability depends on the solutions to the problems faced by the country. Pakistan's economic issues are worsening daily, especially inflation, which is uncontrollable. Political instability for the last ten years is one of the core issues with the economy. In the financial year 2023-24, Pakistan was about to financial default; Pakistan is to pay significant obligations of foreign debts. Pakistan is trying to fulfill the IMF five-year program signed in 2019, worth 6.5 billion US dollars. This predicament has become even more dire as a result of concerns raised by the International Monetary Fund (IMF) regarding Pakistan's dedication to reform and its capacity to amass sufficient funds to satisfy its requirements in terms of external funding, with a low level of foreign reserves; not enough for the imports of few months (United States Institute of Peace, 2023).

The foreign commercial bank had given Pakistan $ 9 billion to Pakistan, Pakistan repaid most of the commercial banks' loans, and loans of China commercial banks were rescheduled. These loans are highly interest-based, as few are taken on LIBOR and SHIBOR. Pakistan China loans have been worth $ 27 billion for 20 years, and Pakistan public sector corporations have used these loans for different projects. Pakistani currency devalued significantly in 2018, decreasing all economic indicators due to financial disasters and political instability. These economic conditions increased poverty, inflation, and a sharp surge in petroleum costs (SBP, 2024).

Table 1: Pakistan's Economic Indicators

Economic Indicators	Value
GDP	$376.493 billion (nominal; 2022)
GDP growth rate	The growth rate of 4% in 2022 is expected to decline to 2% in 2023.
Food Inflation rate	45.10% in February 2023
Poverty rate	37.5% in 2022
Exchange rate	1US$ = 282 KR in March 2023
Foreign reserves	US$ 8.70 billion, as of February 10, 2023
External debt	US$126.3 billion in December 2022

Source: SBP reports 2023

The nominal GDP of Pakistan is $376,493 billion in 2022, with a slight increase in growth rate of 4 %, which is expected to fall by 2 %. The food inflation was 45 in the first quarter of 2023, with a 38% poverty rate. Repayment of loan principal amount and interest cost is periodically known as debt servicing; if the domestic currency falls and loans are not adequately utilized, debt servicing is a nightmare (Awan & Qasim, 2020). Ultimately, in such difficult economic conditions, the debts are taken to repay debts, (Haque et al., 2023). The latest economic surveys indicated that the economic growth of Pakistan will improve in the next few years, in contrast to poor economic conditions. However, considering the heavy flood losses due to climate change in autumn 2023, The dilemma of dwellers has become increasingly terrible since 2018. The king of the problems ahead is the repayment of debt due in FY2024, FY2025, and FY2026, around $22, $25, and $23 billion, respectively (Institute for Policy Reforms, 2023). Foreign remittances are significant contributors to debt repayment; in the next three financial years, many of the remittances will be used for debt repayments (Akanbi et al., 2022).

A sluggish economic condition of recessions resulted in many economic effects, like tax reduction, low employment, wide budget deficits, and low individual earnings. Countries use external debts to overcome these economic challenges (Dey & Tareque, 2020). An inflated economy means continuous price raises in the financial year; on the contrary, some economists relate economic growth with inflation, but the issue is debatable (Ahmad, 2022). A worried increase of 38 percent in the Consumer Price Index (CPI) from May 2023, where a 29 percent increase in the first five months of the year 2023. The Sensitive Price Index (SPI) increased by 33 percent, which is alarming for a developing country. In context to the present study, the subject of worry is the relationship between inflation and economic growth; it is seriously intricate; in Pakistan, economic growth is slow with high inflation (Azam & Khan, 2022 & Aboudi & Khanchaoui, 2021). Economic growth varies with the rate of change in foreign companies' investments in a country, and increased investment brings economic activity. Economic activity generates employment with the capital inflow; injected money generates economic value with expedited production. Another advantage the FDI brings to emerging nations is, first and foremost, enhanced managerial abilities and simplified access to primary resources (Elboiashi, 2011& Abbas et al., 2018).

Purpose of Study

Researchers have explored the link between economic expansion and trade openness, but there is a lack of research on how foreign direct investment, external debts, inflation, and trade openness impact the growth rate of the domestic product. Pakistan's Debt Trap Problem has led to significant utilization of national funds for debt repayment. It leaves limited

resources for government spending and development projects. The study analyzes the association between GDP growth rate and critical interconnected economic factors.

Research Questions

The research study examines the effect of external loans, debt servicing, FDI, inflation, and trade openness on the GDP growth rate of Pakistan. The five research questions are formulated for the study.

I. What is the impact of foreign debts on the GDP growth rate?
II. What is the effect of debt servicing on the GDP growth rate?
III. What is the impact of inflation on the GDP growth rate?
IV. What is the Impact of FDI on the GDP growth rate?
V. What is the impact of trade openness on the GDP growth rate?

Literature Review

Budget shortfall and development projects need financing and are covered through loans, reduced expenditures, un-subsidies sectors, or additional tax and sometimes managed exports, imports, and internal and external funding (Ahmed et al., 2022). The other technique includes borrowing directly from the central bank producing new money. One strategy involves borrowing money from internal and external banks, while the other involves borrowing money directly from the central bank (Akanbi et al., 2022). Foreign debts can affect positively and negatively; positive outcomes are often achieved by the government allocating funds from an international loan to investment and development initiatives.

On the other hand, income generation and repayment of loans can have adverse effects (Khan et al., 2022). Foreign debts The Impact of foreign debts is measured by economic development and growth. Continuous improvement in the overall economy, handsome economic indicators, and focus on all sectors are referred to as economic development. The increased national income is known as economic growth (Perkins et al., 2006). According to the growth hypothesis, depending on the situation, the elements mentioned above can have either a good or negative impact on economic growth, especially in emerging nations. External loans are significant since they result in budget and payment limits. Pakistan is one of the most debt-taking countries in the last few decades, and the government needs to take measures (Ashraf et al., 2020).

The primary concerns are whether foreign debt impedes development and the substantial build-up of external debt in lower-middle-income nations—as highlighted by the World Bank in 2017, raises issues related to investment barriers, economic policies, and the mechanisms through which foreign debt influences development. The World Bank brought up these concerns in 2017. A compilation of research findings has been developed to examine the extent to which external debt directly impacts economic growth. Recent research has identified total factor productivity (TFP) as an additional route via which foreign debt may affect the national economy and the development of the economy at large (Haque et al., 2023). A research study compared the 80 poor countries of the world by dividing them into two subgroups: highly indebted and non-highly indebted. Highly indebted countries have low GDP, whereas non-highly indebted countries have a reasonable GDP growth rate). Another study about data from six Asian and five Latin American countries over 32 years was conducted. The effect of debt overburden was analyzed using statistical techniques to identify the two types of nations. Latin American nations have more debt overburden than Asian

countries; the overburden of the debt reduces the income per capita (Muhammad & Abdullahi, 2020).

The debt increase is primarily because loans are taken to repay previous loans, low amounts are saved, and no economic activities are invested. The level of saving when decreases the countries use to take debts for expenditure, fulfill budget deficits, and economic development. Developing nations are facing challenges in dealing with high levels of debt. The debts range from $2089 to $ 8242 billion, which has increased by 300 percent in past years, with an average GDP growth rate of 4 percent. According to the report, as of 2022, the gross national income (GNI) per capita of underdeveloped and developing nations surface from $1036 to $4255; the range of GNI is low and indicates a poverty-line population (World Bank, 2020). The low GNI discourages private investors, so the capital flies toward the developed economies (Haque et al., 2023).

Debt overhang supposition normally grapples developing countries like Pakitan, where governments face many obstacles to overcoming debt issues (Ale et al., 2023). Managing external debts is more complex than managing domestic debts (Akanbi et al., 2022). A study evaluates the independent indicators of Pakistan's GDP from 1990 to 2017 using the auto-regressive distributed lag model (ARDL). The study concluded that economic growth increases as the debts increase, but at a different pace in the short term and long term; the aggregate demand and exports benefited from the debts (Awan & Qasim, 2020). The export sector booms after foreign debts are taken, whereas imports increase simultaneously as the development needs technology and inputs to export goods (Dey & Tareque, 2020). It is because of a few factors like low technology, fuel imports, machinery imports, and the counter effect of the money generated that the living standard of native people demands more imported goods. The import bills soon exceed the export balance, resulting in a deficit in the balance of payment or current account. The economy needs again a loan to cover the trade deficit (Ud-Din et al., 2020). Whereas the gross capital creation that includes the infrastructure development, technology, and investment, is necessary for an economy. The production of the labor force plays a vital role in the debt trap economy like Pakistan (Awan & Qasim, 2020).

Rauf and Khan (2017) found a long-term inverse correlation between accumulated debts and economic growth, as determined using the ARDL model and error correction method. Their study also indicated a short-run positive relationship between accumulated debts and economic growth in Pakistan, driven by rapid population increase. The authors recommended controlling interest rates to address external debt imbalances and issues such as corruption, trade deficits, inflation, and excessive security expenditures. In another study by Ale et al. (2023), it was concluded that a significant long-term adverse connection existed between economic growth and external debts from 1972 to 2013.

Servicing foreign debts requires effective debt utilization, and the returns from this utilization are usually meant to repay debts. Projects funded by debt must contribute positively to the economy and society (Krugman, 1988). The neo-classical and endogenous growth theories suggest a constant struggle between debt repayment and long-term economic growth. Repaying debts reduces the available resources (Muhammad & Abdullahi, 2020).

In the long term, external debts and economic development have a slight positive correlation. Many foreign reserves also show a minor positive association with economic growth

(Elhendawy, 2022). When taking out loans, it's crucial to consider the cost of debt repayment and the net benefit of external debt and compare its utilization over time. Evaluating debt utilization involves considering debt terms, repayment capabilities, and new funds acquired through borrowing. The subjective outcomes of this utilization are significant (Akanbi et al., 2022).

As noted by Shabbir (2009), the economic impact of debt repayment is a significant factor in inhibiting private investment. The pattern of debt repayment in Pakistan from 1979 to 2023 has fluctuated. Notably, the repayment cost decreased after 1999 during Musharaf's regime, following a continuous rise from 1980 to 1999. An analysis of Egypt's economy from 1980 to 2019 found that external debt repayment demonstrates a negative correlation with economic growth and a positive correlation with currency devaluation using the vector error correction approach (Elhendawy, 2022).

The inflation theory and structural inflation present different ideas, and the quantity theory of money (QTM) explains how inflation comes from excessive growth in liquidity. The theory states that costly monetary policy shocks increase inflation in the long run. When the economy is performing at maximum capacity, the reasoning lends credence to money neutrality over the long run; as the money supply increases, inflation rates increase equally (Yang & Shafiq, 2020). The sequential substitute model specifies the renewed complex relationship between unemployment, inflation, and economic growth, with a clear economic future and market conditions (Aboudi & Khanchaoui, 2021). The current inflation rate in Pakistan impacts the human resource market and affects the actual salaries of human resources, which leads to a shift inward in the production of industry and overall economic growth (Niken et al., 2023). Economists disagree with the association between economic growth and inflation, especially in the last twenty years, when economists have debated about inflation as the economic growth rate. Many studies have been conducted to analyze the theoretical and empirical aspects, and the conclusion was the same: a negative relationship exists between inflation and GDP growth. Gudaro et al. (2012) studied the relationship between Pakistan's GDP, CPI, and FDI using panel data from 1960 to 1998. Economic growth has an inverse relationship with inflation and a direct relationship with external investment.

Agudze and Ibhagui (2021) investigated the developed and developing national economies and the effect of a linear relationship between inflation and FDI in industrialized nations, with no impact on non-industrialized nations. The non-linear relationship was analyzed by dividing the data into five-year intervals; the finding invalidated the threshold effect or non-linear relationship in developed and developing countries.

Foreign direct investment has emerged as an essential tool to determine economic growth over the last few decades. Asari et al. (2011) examined the Malaysian economy and evaluated the direct foreign investment from 1979 to 2008 and the export and economic growth. The study concluded that the GDP and exports increased as the FDI increased. Similarly, Rahman (2015) investigated Bangladesh's economy and concluded that FDI is one of the sources of economic growth. A study investigated Pakistan's economy concerning FDI and GDP growth rate from 1980 to 2006; economic growth increased with the FDI in the short run. The study urges the development of a sound financial system to benefit from FDI in the long term (Nuzhat et al., 2009). Many studies have been done in Pakistan to determine the Impact of FDI on economic growth; Rehman (2016) concluded that FDI improves the growth rate and

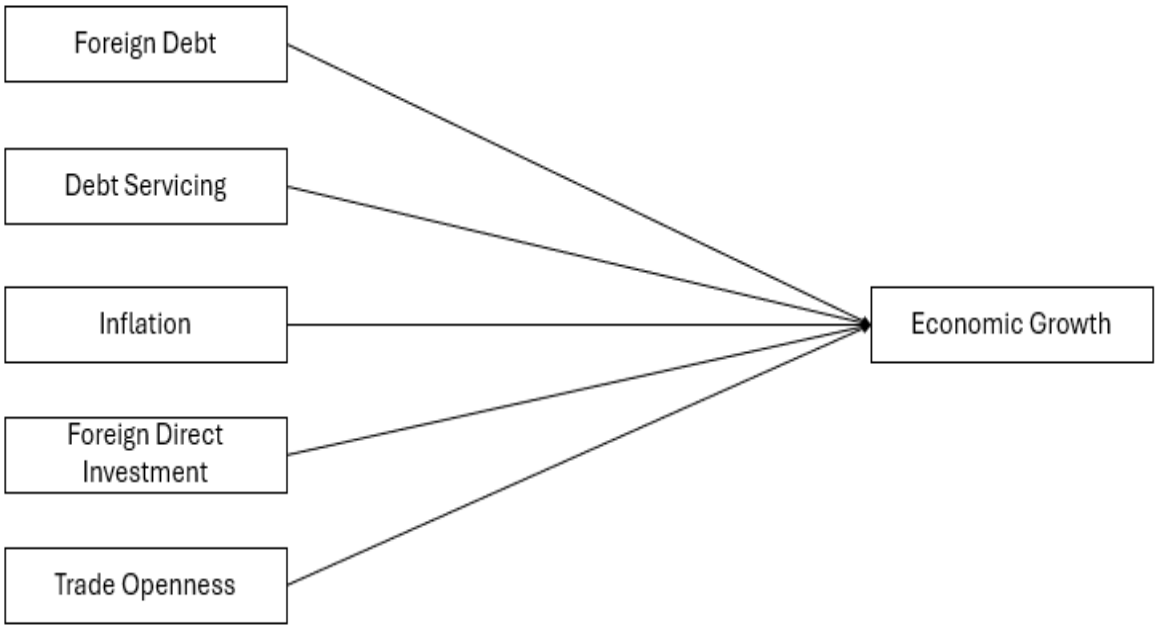
suggested reducing terrorism. The post and pre-9/11 comparison of the Pakistan economy presented that terrorism affected the FDI, which resulted in low economic growth. Foreign investment is considered the consistent way of investment for economic growth in non-industrialized nations; foreign funding assists the local capital, creates jobs, expands markets, fastens technological growth, reduces poverty, and boosts the economy (UNCTAD 2017).

Trade openness refers to the extent to which a nation's economy engages in international trade, with inward orientation indicating limited participation and outward orientation involving active engagement with other countries. This concept is often gauged using indicators such as the trade-to-GDP ratio, and it is believed that greater trade openness can improve economic efficiency and positively affect income and investment. Salinas and Aksoy (2006) analyzed the trade openness of 39 countries before and after trade liberalization to determine whether there were changes in GDP growth rates from 1970 to 2004.

The research findings indicated that economic growth substantially increased following the implementation of trade liberalization. The level of trade openness in Pakistan was found to have significant effects on economic development, exchange rate, unemployment, and foreign direct investment (Ramzan, Asif, & Mustafa, 2013). Zafar et al. (2015) pointed out that trade openness positively impacted foreign direct investment, while imports showed no significant effect. Additionally, exports were found to have a notably positive relationship with GDP. Trade liberalization led to an increase in the GDP growth rate through a one-way causal relationship. Although in the long term, Pakistan's trade openness harmed economic growth, in the short term, it contributed to its increase in human capital (Hye, 2012).

Conceptual Model: The factors that drive economic growth are illustrated in the diagram given in Figure 1. The dependent variables depend on the independent variables.

Figure 1 Conceptual Model



Hypothesis

H_1: Pakistan's External debts substantially impact the GDP growth rate.

H_2: Inflation has a substantial effect on Pakistan's GDP growth rate.

H_3: Debt servicing for external debts has a significant impact on the GDP growth rate of Pakistan.

H_4: Foreign direct investment significantly impacts Pakistan's GDP growth rate.

H_5: Trade openness substantially impacts Pakistan's GDP growth rate.

Variables Description

The independent variables for the study were selected after the literature review, and the gap was identified; external debts, trade openness, inflation, and debt servicing were the independent variables for the study, whereas the dependent variable was the GDP growth rate.

Table 2 Variables Summary, Measurement Unit, and Data Source.

Variables	Symbols	Variable Proxy with unit	Source
Economic Growth	gdpgrowth	GDP growth (annual %)	**WDI**
Debt Service	debtservice	Debt service to exports (%)	**WDI**
Foreign Debt	totaldebt	External debt stocks (% of GNI)	**WDI**
Inflation	Cpi	Inflation, consumer prices (annual %)	**WDI**
Foreign direct investment	fdiinflow	Foreign direct investment, net inflows (% of GDP)	**WDI**
Trade Openness	Trade	Trade (% of GDP)	**WDI**

Econometric Model:

Research used the GDP as the dependent variable, and foreign debts, foreign debt servicing, inflation, foreign direct investment, and trade openness are independent variables.

$Y = f\ (X1, X2, X3, X4, X5, \varepsilon)$

$$Y_t = \beta_0 + \beta_1 FD_t + \beta_2 FDS_t + \beta_3 IR_t + \beta_4 FDI_t + \beta_5 TO_t + \varepsilon_t$$

$Y = \beta 0 + \beta 1\text{FD} + \beta 2\text{FDS} + \beta 3\text{IR} + \beta 4\text{FDI} + \beta 5\text{TO}$ ….

Where GDP (Gross Domestic Product), FD (Foreign Debt), FDS (Foreign Debt Servicing), IR (Inflation rates), FDI (Foreign Direct Investment), and TO (Trade openness). The βx represents the coefficient of each variable, and ε represents the stochastic error term. The yearly time series data results and the level's non-stationarity qualities are erroneous (Granger, 1981). A time series is a succession of observations of variables with regular intervals; data from the economic time series have distinctive characteristics, including volatility, meandering, co-movement, trend, persistence, and nature. A straightforward regression analysis that uses such data may also inform us about the pattern of relationships between the variables of interest, provided that the critical properties of time series data are recognized and dealt with appropriately (Shrestha & Bhatta, 2018).

RESEARCH DESIGN & METHODOLOGY

The quantitative research methodology was employed to analyze Pakistan's economy's annual time series secondary data from 1990 to 2023. Data for this study was sourced from the World Bank Indicator, Pakistan's economic survey reports, and the official websites of the State Bank. The analysis utilized an autoregressive distributed lag model, a multivariate regression analysis suitable for examining both short-term and long-term effects within regression models (Pesara et al., 2001).

ARDL bounds testing model is a method for assessing the long-term relationship between variables through cointegration analysis. Unlike other cointegration tests, such as Engle-Granger and Johansen tests, this approach accommodates different lag lengths for various variables and can be applied to both integrated and non-integrated series. Before conducting the cointegration test, unit root tests like Augmented Dickey-Fuller and Ng-Perron are used to ascertain the stationary or non-stationary characteristics of the series. In addition, a Vector Autoregressive Model is employed to assess multi-collinearity within the data series (Shrestha & Bhatta, 2018).

RESULT ANALYSIS:

Multi-collinearity in the time series data is assessed using the VIF test. The results indicate that the VIF values are low, all being less than 5, which is considered satisfactory for analyzing multi-collinearity among the independent variables. Specifically, the independent variables exhibit acceptable VIF values below 5. Additionally, with a mean VIF of 1.729, there is no indication of significant multi-collinearity in the data.

The correlation analysis is utilized to evaluate the strength of the connection between the variables included in the study. The correlation coefficients range from -1 to +1, with positive and negative values indicating varying degrees of linear relationship. The asymmetrical diagonal line can be drawn to represent this linear relationship. This study observed that economic growth in Pakistan has a negative association with debt servicing, inflation, FDI, and trade openness while exhibiting a positive association with foreign debts.

Unit Root Test:

Augmented Dicky-Fuller test results are shown in Table 3 to check the variable stationary position. The time series of the data is not stationary; this is the null hypothesis for the unit root test. If the null hypothesis is rejected the series is stationary, whereas if the null hypothesis is not rejected, the series is non-stationary. The unit root test results show that the series is stationary. The null hypothesis is rejected by comparing the p-value with the significance level of less than 0.05. Economic growth, such as GDP growth, foreign debts, and FDI, are statistically significant, whereas debt servicing, trade openness, and inflation are not statistically significant. On the first level difference, all the variables are statistically significant. The unit root test suggests that the data fits the ARDL model and Bound test.

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Table 3 Unit Root Results

Variables	**At Level**			**At First Level**		
	t-value	p-value	Result	t-value	p-value	Result
Economic Growth	-3.244	0.0176	Significant	-2.083	0.0251	Significant
Foreign Debt	-4.498	0.0002	Significant	-2.001	0.0285	Significant
Debt Service	-1.308	0.6255	Not Significant	-2.362	0.0152	Significant
Inflation	-1.438	0.5642	Not Significant	-2.393	0.0143	Significant
FDI	-4.555	0.0002	Significant	-4.664	0.0001	Significant
Trade	-1.557	0.5054	Not Significant	-2.362	0.0060	Significant

The ARDL model is used for the variables that are integrated in different orders, and variables have varying lag periods within the parameters of the complete model.

F test result 63.192 is noticeably above the upper bound value of 3.610. Nayaran (2004) suggested that the null hypothesis is rejected and an alternate is accepted, so there is no long-term association if the statistic value is less than the lower bound critical value; if the value falls between the lower and upper value, the complex evidence is there about the long term relationship (Pesarn et al., 2001). The F-test result is above the upper bound critical value; the upper bound value exceeds the critical value of the alternative hypothesis. Therefore, it is concluded that GDP growth rate and foreign debts are negatively related in the long run.

Long-Run Relationship of ARDL: The results of regression analysis of the ARDL model are used to determine the relationship between dependent and independent variables' long-term effects. The data used for the study had 32 data points from 1990 to 2023, with the R-square value of 0.9712; the model explains a 97.12 % variation in the GDP growth rate. The adjusted R-square value of 0.9543 indicates that the model best fits the independent variables. The log-likelihood determines how the model best fits the data; the higher log-likelihood denotes a better match than the lower log-likelihood. A lower value of the Root Mean Square Error (RMSE) suggested a better model fit; the study RMSE value is 0.1334, which is a lower value. RMSE indicated that the model is the best fit.

Table 4 Long-Run Relationship

Variable	**Coefficient**	**Standard Error**	**t-Statistic**	**P-value**	**95% Confidence Interval**
L1. Lgdpg	-1.037***	0.081	-12.820	0.000	[-1.208, -0.867]
Foreign Debt	-0.223***	0.023	-9.690	0.000	[-0.272, -0.175]
Debt Service	0.004	0.005	0.710	0.485	[-0.007, 0.015]
CPI	0.042**	0.017	2.500	0.023	[0.006, 0.077]
FDI	-0.101	0.063	-1.610	0.126	[-0.233, 0.031]
L1. trade	-1.188***	0.412	-2.880	0.010	[-2.057, -0.318]
D1. CPI	-0.039***	0.013	-3.000	0.008	[-0.067, -0.012]
D1. FDI	0.151*	0.085	1.780	0.092	[-0.028, 0.329]

LD. FDI	0.268***	0.076	3.540	0.002	[0.108, 0.427]
Constant	4.287***	1.377	3.110	0.006	[1.382, 7.191]
F-statistic	102.3				
Prob > F:	0.0000				
R-squared	0.9153				
Adjusted R-squared	0.9000				
Durbin-Watson	1.82*				

The coefficient results show that the increase in one unit GDP lag value will decrease the 1.037 times decrease in current GDP, which is statistically significant. Foreign debts increase by one unit reduces the GDP by .0223 times; Foreign debt servicing is not statistically significant with the GDP growth rate. The increase in CPI positively impacts the GDP growth rate, an increase in the FDI is not statistically significant with the GDP growth rate, and trade openness is also positively associated with the GDP growth rate. The LD suggested that the lagged difference in GDP growth rate is statistically significant and indicates some auto-correlation in the series. The long-term association exists between independent variables, trade openness, external debts, and inflation with the dependent variable GDP growth rate. In contrast, no long-term association exists between GDP growth rate and FDI and debt servicing. The difference in the lagged values indicated some auto-correlation in the GDP growth rate, which is understandable as the past trend of GDP has some influence on the current and future rate of GDP.

Short-Run Relationship of ARDL: For the short-run analysis of the ARDL model, the Error Correction Model (ECM) term is significant; it measures the speed at which the system recovers the transient shocks in the short run to sustain a long-term relationship (Banerjee et al., 1998).

The error correction method was used for the short-run analysis of the study, and 32 observations of the distinct variables were analyzed from 1992 to 2023. The F-test value is 36.33, with a p-value of 0.0000, indicating that the overall model is statistically significant. The R-square of the model is 0.9553, indicating that the 95.53 % variation in the dependent variable GDP growth rate is explained by the independent variables used in the model. In contrast, the adjusted r-square value of 0.9290 signifies the proportion of the variability in the dependent variable explained by the independent variable, considering the model's complexity. The RMSE low value indicates that it quantifies the average magnitude of the error in the model's predictions, providing insight into the model's accuracy in forecasting.

Table 5 Short-run Relationship

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**P-value**	**95% Confidence Interval**
L1. lgdpg	-0.037	0.081	-0.460	0.651	[-0.208, 0.133]
Foreign Debt	-0.232***	0.017	13.730	0.000	[-0.267, -0.196]
Debt Service	0.004	0.005	0.720	0.481	[-0.008, 0.015]
CPI	0.004	0.012	0.360	0.726	[-0.021, 0.029]
L1. CPI	0.039***	0.013	3.000	0.008	[0.012, 0.067]
FDI	0.046	0.091	0.510	0.617	[-0.145, 0.238]
L1. FDI	0.117	0.097	1.200	0.247	[-0.089, 0.322]
L2. FDI	-0.268***	0.076	-3.540	0.002	[-0.427, -0.108]
Ltrade	-1.232***	0.427	-2.890	0.010	[-2.133, -0.331]

Constant	4.287***	1.377	3.110	0.006	[1.382, 7.191]
ECT	-0.52***	0.098	-5.306	0.000	[-0.72, -0.32]
F-statistic:	36.33				
Prob > F:	0.0001				
R-squared:	0.9553				
Adjusted R-squared:	0.9290				
Durbin-Watson Statistic:	1.92*				

The lagged dependent variable with one lagged dependent variable is not statistically sufficient in the short run. An increase in external debts is negatively associated with the GDP growth rate in the short term. However, debt servicing and inflation are not statistically significant regarding GDP growth rate. FDI inflows the contemporaneous and lagged (L1 and L2) coefficients are not associated with GDP growth rate in the short run. Trade openness is negatively related to the rate of GDP in the short run.

Furthermore, in the short term, the lagged dependent variable represented in our model by lggdp shows no statistical significance. Finally, The ECT is hypothesized based on the importance of other variables, assuming a rapid adjustment to equilibrium given its high relevance and negative sign. It represents how quickly deviations from the long-run equilibrium are corrected each period. The magnitude of the coefficient (-0.52) being relatively large and negative indicates a strong and quick reversion to equilibrium. This decisive adjustment is characteristic of markets or systems where agents quickly correct imbalances or mechanisms exist to restore equilibrium. Economically, a rapid adjustment to equilibrium (indicated by the significant and relatively large negative ECT) suggests that any shocks to the system are temporary and that the system is inherently stable.

DISCUSSION AND CONCLUSION:

A study examined the effects of external debt, inflation, foreign direct investment, payment obligations on foreign debt, and other variables on Pakistan's economic growth. The research addressed the government's growing dependence on foreign debt to fund its annual budget and aimed to showcase the potential consequences for Pakistan's economy. According to short-term ECM analysis, there is a negative correlation between Pakistan's external debt and its economic progress. It suggests potential challenges related to high debt burden and limited investment opportunities within the context of economic growth. It aligns with the neoclassical viewpoint that excessive external debt can discourage private investment and hinder economic expansion (AL-Tamimi & Jaradat, 2019).

The research findings indicate a detrimental link between increasing external debt and economic expansion. It is due to the substantial financial resources needed for debt repayment, which can hinder economic growth and heighten a country's dependency on aid from abroad. It is contended that lending nations and donor organizations typically enforce stringent loan terms in line with their stated political and strategic aims. Pakistan must strategically utilize foreign loans while striving to secure borrowing conditions with minimal restrictions, as its significant foreign debt constrains its economic and international freedom. While foreign loans can decrease deficits and stimulate growth, they risk causing various issues if mismanaged or allocated inefficiently (Horn et al., 2023).

The ARDL regression analysis shows the importance of certain factors in Pakistan's GDP growth. The significant variables include the consumer price index, trade openness, and

foreign debt. Controlling inflation is crucial for economic expansion, as shown by the relationship between GDP growth and CPI. Additionally, recognizing trade openness contributes to sustained economic progress by involving Pakistan in international commerce. Managing external debt is a significant burden but must support GDP growth. However, no evidence was found to support that foreign direct investment and debt service substantially impact long-term economic growth, highlighting how complex Pakistan's economic dynamics are, and balancing the management of external debt with attracting FDI is important (Sadiq et al., 2021).

The delayed change in GDP growth indicates that previous patterns and unexpected events continue to impact future periods, highlighting the importance of considering historical linkages when evaluating the current state of the economy. Policymakers and scholars should consider this when formulating policies and analyzing economic data (Goetzmann et al., 2022). The ECM analysis reveals the short-term Impact of GDP growth and independent variables. It shows that foreign government debt levels and international trade volume influence short-term economic performance significantly. It indicates that sudden changes in trade patterns and shifts in foreign debt can substantially impact GDP growth.

On the other hand, factors like foreign direct investment, inflation, and debt payment costs do not affect medium-term outcomes significantly. It emphasizes the need for policymakers to closely monitor and manage trade dynamics to understand short-term economic trends better (Londoño et al., 2021). Developing countries benefit from foreign direct investments, contributing to economic growth and infrastructure development. The ability to attract such investments indicates a positive economic and GDP growth trend. It is underscored by the literature review findings, highlighting the importance of considering a nation's current political, social, and economic environment when pursuing foreign direct investment opportunities (Li, 2023).

Successful investments depend on critical elements. The local government needs to create strategies and policies that prioritize human resources, infrastructure development, collaboration with local businesses, a stable macroeconomic environment, and opportunities for investment conducive to economic growth in Pakistan (Tahir et al., 2020). The research results show that Pakistan's short-term economic growth has been negatively impacted by its foreign debt burden. The study suggests that while external debt has a detrimental effect on Pakistan's economy in the short term, it has minimal impact on economic growth overall. It indicates that higher levels of educational attainment may not always lead to positive financial outcomes for the country. Extensive foreign debt can hinder a nation's ability to prosper economically; thus, additional measures are necessary. Given the current situation, regulatory authorities overseeing Pakistan's economy should consider forgiving the nation's debts, as increased external debt signifies a heavier burden on the country (Songwe & Awiti, 2021).

In recent years, Pakistan has seen a considerable rise in its external debt, mainly due to the need to make significant payments on dollar-denominated debts. The current state of the economy is limiting its growth potential. Research shows no statistically significant correlation between external debt and long-term economic growth, indicating minimal impact on sustained economic expansion. An increasing debt burden would also reduce tax revenue during economic downturns (Ud-Din et al., 2020 & Asghar, 2016).

Recommendations: The government of Pakistan needs to cut short the dependence on external debts for the operational and developmental budgets. The country needs to increase

exports and reduce imports to control the trade deficits, which need to be fulfilled by external debts. Private and portfolio investments must be encouraged to develop the industry and create employment opportunities. The exchange rate will be controlled, and reserves will be boosted. Technological advancement is required to produce more of the best quality products. The expenditure on defense should be reduced to invest in education and health. Resources must be efficiently utilized. Many opportunities are available in the mining and agriculture sector, and old methods underutilize the livestock and dairy sector. Many businesses are out of the tax net, so that the tax net may increase. The informal economy may be converted to a formal economy by documenting the registered economic activities in the country (Shahzad, Ahmed, & Fatima, 2023).

Limitations of the study: The fixed time series annual data sometimes ignores the short-term fluctuations, and the delayed effect used to be missed. The data pertains only to Pakistan; the worldwide events and economic situations that were not covered affected the economy. The study left out the period before 1990. The research did not include factors like terrorism, regional conflicts, and geo-political effects on the economy, ignored the Afghan war's Impact on Pakistan's economy, climate change and natural calamities on the economy, the impact of international crises, and missed the pandemic effect. These limitations can be the future direction of the research.

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