

## Economic Growth Under Pressure: The Role of Inflation, Interest Rate, and Tax in Pakistan

Muhammad Danyal Saleem<sup>1</sup>, Dr H.M.Adnan<sup>2</sup>, Qurat ul Ain Razzaq<sup>3</sup>

<sup>1</sup> BSAF Foundation University, Islamabad

<sup>2</sup> Lecturer, Economics and Finance Department, Foundation University Islamabad. Email: [Madnan.hanif@fui.edu.pk](mailto:Madnan.hanif@fui.edu.pk)

<sup>3</sup> Lecturer, Economics and Finance Department, Foundation University Islamabad. Email: [qurat.razzaq@fui.edu.pk](mailto:qurat.razzaq@fui.edu.pk)

### Abstract

The study analyzes the effect of macroeconomic factors like inflation, interest rates and taxation on the economic growth of Pakistan during 1990-2024. The study uses the World Bank, State Bank of Pakistan and Pakistan Economic Survey data and adopts Autoregressive Distributed Lag (ARDL) model, Newey-West robust regression, Granger causality test and diagnostic tests to explore short run, long run relationships between the variables. The results show that the tax rate has a positive strong effect on the economic growth in the short run ( $p < 0.05$ ), and exchange rate fluctuation has an adverse strong effect on the economic growth in the short run ( $p < 0.05$ ). The results indicate a small positive impact of FDI outflow, while the remittances have a negative effect on GDP, contrary to the expectation, indicating some inefficiency in using remittance inflows. Since the ARDL bound test showed the presence of a long run cointegrating relationship among these variables, but individual long run coefficients were not statistically significant at conventional levels, the examined variables are not long run cointegrated. The results from the diagnostic tests indicate that the model appears stable and that there are no serial correlation, heteroskedasticity or specification errors. The results of the Granger causality tests suggest that the exchange rates Granger-cause GDP, while no causal relationship is detected for remittances, FDI inflows, FDI outflows, inflation, and taxes. The findings highlight the significance of good tax policy as a catalyst to economic growth in Pakistan and the need for sound policy on exchange rates to cushion the impact of shocks. The study calls for further improving the efficiency of tax collection, expanding tax base and redirecting remittance funds into productive investments to ensure sustainable economic development. Fiscal and monetary policy coordination is crucial to minimize economic uncertainty and provide a conducive atmosphere for investment in Pakistan.

**Keywords:** Economic Growth, Inflation, Interest Rate, Taxation, Exchange Rate, Pakistan, ARDL, Fiscal Policy, Monetary Policy

### Background of the Study

Economic growth is one of the most significant measures of a country's growth and prosperity. It is a measure of the growth of goods and services, the improvement in the standard of living and the overall economic stability. Many macro-economic variables, such as inflation, interest rates, taxes, etc., play an important role in economic growth in developing countries like Pakistan.

Inflation impacts the buying power of consumers and generates uncertainty in the economy while interest rates have an impact on things like borrowing, investment and consumer purchase. Likewise, taxes are a key component of government income and influence of business activity and investment opportunities. These factors can interact in such a way as to affect economic performance and long-term growth.

Over the years, Pakistan has witnessed significant changes in policy rates, inflation rates, and tax rates, which have caused difficulties for policy makers, businesses and investors. The understanding of the impact of these on economic growth is crucial for developing sound fiscal and monetary policies. Hence, the present study aims to investigate the impact of inflation, interest rate and tax on the economic growth of Pakistan and the combined effect of all these three factors with respect to economic stability and development.

The long-term growth and success of modern economies depend on macroeconomic parameters including taxation, interest rates and inflation. These have been very volatile in Pakistan in the past, creating issues for investors and government. Therefore, interest rates influence borrowing and saving choices, taxes determine the amount of tax revenues and the allocation of resources and inflation influences purchasing power and overall economic well-being.

A study published in PLOS One, by Stylianou et al. (2024), found that inflation in Pakistan is tightly coupled with monetary variables such as money supply, which highlights the occurrence of structural and policy-driven issues that often result in macroeconomic instability. The study also highlights the dynamic interplay of these dimensions and the influence on growth patterns over time rather than their independence.

Tax, interest rates and inflation plays an important role in the dynamics of the investment and growth of the economy. Stylianou et al. (2024) argue that inflation has an intricate relationship with economic growth, with high inflation rates inhibiting investment and instilling uncertainty, while economy-friendly inflation rates can stimulate economic growth.

Likewise, interest rates are directly related to the cost of borrowing. A business has to pay more when interest rates are high, thereby reducing investment and slowing the economy. According to Rana et al. (2025) Interest rate and inflation are interrelated and both affect economic growth and stability of developing countries such as Pakistan.

Another important factor is taxation. Even in the cases of Pakistan, studies reveal that high tax rates will deter economic activity and will reduce growth potential if taxes are required to generate government revenue (Shafiq et al., 2022). Also, direct and indirect taxes have different impacts on the economy: indirect taxes can often have a larger effect on GDP.

It is important to understand the relationship between monetary policy (inflation and interest rate management) and fiscal policy (taxation and government spending) for economic stability. The fiscal policies such as tax income and fiscal deficit are found to influence the inflation and overall economic performance, especially in emerging countries by Junejo et al. (2021).

Furthermore, monetary policy tools like interest rates are used to control the economy and bring down the inflation rate. Inflation and interest rates are short-termly related with economic growth, so there is a need for policy coordination for stability (Hayat et al., 2021). The interaction points out the importance of combining both fiscal and monetary strategies to achieve economic stability. A composite score of the two impacts on investment and economic activity. A joint impact on investment/economic activity score.

The impact of a combination of taxation, interest rates and inflation can have an impact on investment decisions and economic returns. The implication of the reverse is that higher interest rates mean that capital would be more expensive, which may limit the growth of companies; and inflation would mean that the real returns on investments would decline. At the same time taxation policies also influence profitability and incentives for investment.

Research in Pakistan shows that there is an overall long-term relationship between capital formation, saving and inflation. Ibrar et al. (2024), suggests that these factors operate together to affect the investment pattern of the economy. Moreover, analysis shows that mismanagement of tax revenue and inflation can be negative to economic development, which is the reason for the need of a balanced tax and inflation policy. These challenges need to be met, to sustain the economic stability and steady progress forward.

### **Problem Statement**

Macroeconomic indicators such as inflation, interest rates and taxes play a significant role in the economic development of Pakistan. When these factors change, uncertainty arises, the costs of investments increase and economic activity decreases. High rates of interest discourage borrowing and investment; high inflation lowers purchasing power and high taxes hinder business growth. The main issue is, however, that these are mutually linked and they play a joint impact on the economic stability and investment in Pakistan. When the effects of fiscal and monetary policy are not clearly understood, it is difficult for the policymaker to design efficient fiscal and monetary policies.

### **Research Objective**

Based on the above discussion, the aim of this study is to examine the impact of inflation, interest rates and taxes on the economic development and investment pattern of Pakistan. It also focuses on the interplay between the economic factors and the fiscal policies and their impact on economic stability. The study also explores the extent of impact these macroeconomic factors have on investment behavior and economic activity of Pakistan as a whole.

### **Research Question**

- How does inflation affect economic development of the country Pakistan?
- What is the effect of interest rate on Pakistan's economic growth?
- What impact does currency rate have on the economic growth of Pakistan along with inflation, interest rates and tax?

### **Significance of Study:**

Importance of this study is that it studies all the taxes, interest rates and inflation that impact the economic development of Pakistan. To obtain economic stability and sustainable development, it is necessary to understand the relationship between different macroeconomic factors. The outcome of the study can assist the policy makers in developing monetary and fiscal policies effectively that can promote the economic development, control the inflation and increase the investment.

The study helps government, economists, researchers and investors by providing insights into the impact of changes in inflation, interest rates and taxes on economic activity and investment decisions. Furthermore, it has highlighted the importance of policy coordination in ensuring long-term economic stability and growth, thus enriching the stock of knowledge already available on the economy of Pakistan. The results of this study could be useful for future studies on macroeconomic policy, investment behavior and economic development in Pakistan.

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### **Theoretical Framework:**

This investigation addresses the interaction of taxes, interest rates, inflation, investment and economic growth using the concepts of fiscal policy theory, Keynesian theory, and monetarist theory. These frameworks offer complementary views on macroeconomic policy-making and policy design.

Monetarists believe that the money supply is the main cause of inflation. Rising money velocity can result in rising inflation, falling purchasing power, and economic uncertainty and this can have a negative effect on long-term growth. It is therefore very important to maintain price stability for sustainable economic development (Tondi, 2026). Monetarists believe that price

stability allows for more stability of economic growth, as it provides more predictable investment and consumption environments.

Going by the other side, Keynesian economics focuses on how interest rates affect investment and aggregate demand. With lower interest rates, businesses and consumers will be more inclined to borrow, invest and spend, which will help to boost economic activity. On the other hand, if the interest rate is raised, it could reduce the amount of money that people borrow and invest, which could slow down the economy (Mankiw, 2020). According to this theory, the monetary policy is very important in controlling the economic cycles and keeping the employment level.

The idea of fiscal policy theory is that taxation affects economic performance. Excessive taxes can deter investment, growth, and business activity, while at the same time providing funds for public services and development projects. A good fiscal policy should be a balance between raising money for government spending and giving adequate incentives to the economic actors (Auerbach & Gorodnichenko, 2012). Progressive, but growth-enhancing tax measures can help to encourage investment and fund critical infrastructure and social services.

All these theories, considered together, suggest a significant linkage between taxes, interest rates and inflation, among the key macro-economic variables affecting the long-term development and stability of an economy and investment decisions. These lessons serve as a theoretical framework for examining the effects of fiscal and monetary policies on the pathway of economic growth in countries like Pakistan, where tax policy, inflation management and interest rate policy are key determinants of sustainable economic growth.

## **Literature Review:**

### **Inflation & Economic Stability in Pakistan**

Inflation is one of the significant macroeconomic indicators affecting economic growth and stability in developing countries. Ali (2017) states that inflation negatively affects the general performance of the economy due to its negative effects on purchasing power, saving and uncertainty. The study also reveals that monetary parameters such as import, money supply, and exchange rates play a considerable role in the inflation in Pakistan.

Likewise, Khan and Qasim (1996) found that excessive borrowing and expansionary monetary policies are also the significant factors which contribute to the inflation in Pakistan. In support of this theory Shabbir and Ahmed (1994), show that macroeconomic imbalances are a key factor in price instability and that fiscal deficits are a significant determinant of inflation.

Madni (2014) explains the inflation as a monetary phenomenon along with other factors of fiscal policy more comprehensively. The research reveals that fiscal deficit adds to inflationary pressures and both direct and indirect taxes increase the inflation rate in Pakistan.

Thus, the available data regularly proves that fiscal and monetary problems have a significant influence on the inflation in Pakistan and the inflation has a wide scope of implications for stability and economic development.

### **Dynamics of the interest rate:**

One of the major determinants of economic activity is interest rates particularly in regard to their effect on investment and consumption spending. Ali (2017) states that interest rates directly influence the prices of borrowing and hence consumer spending and business investment decision making. While higher interest rates deter investment and impede economic growth, lower rates promote borrowing and economic expansion.

Rana et al. (2025) also argue that there is a high correlation between interest rates and inflation, meaning that monetary policy plays an important role in managing the volatility found in the economy. The study also notes the effect of the change in the interest rate on macroeconomic stability in the long term as well as in the short term.

Moreover, new evidence shows that interest rates have significant effects on capital formation and also on the credit provision of the private sector, which is essential for economic growth. Hence, the literature shows that interest rates can be an effective policy instrument to affect investment decision and the overall economic performance of Pakistan.

### **Poverty alleviation & economic Growth in Pakistan:**

A key element of fiscal policy, taxes also have a significant impact on the expansion and development of the economy. (Saqib et al., 2014) claim that taxes have a detrimental effect on Pakistan's economic activity, specifically on GDP growth, investment, and consumption. The study concludes that although income taxes cause a negative effect on investment, sales taxes reduce household consumption, the increase in the tax-to-GDP ratio has negative effects on economic growth.

Similarly, high tax rates in Pakistan limit economic activity and growth potential, according to Shafiq et al. (2022). The study also emphasizes that tax structure is important because indirect taxes typically have a more detrimental effect on economic performance.

In addition, Madni (2014) explains that both direct and indirect taxes are responsible for causing economic distortions, and they also cause inflation. Further, the study points out that Pakistan's tax regime is heavily dependent on indirect taxes which disproportionately affect and are an aggravating factor of inequality among the poor.

In light of this, it is argued that taxes are necessary to raise revenues for government; however, high or poorly designed taxes hinder investments and economic growth in Pakistan.

### **Interactions between the fiscal and monetary policies:**

Monetary policy and fiscal policy must play together to have macroeconomic stability. Madni (2014) has argued that fiscal deficit financed by borrowing or money creation leads to inflation and higher interest rates which, in turn, have a negative impact on private investment.

The fiscal policy instruments such as taxes and government spending on the inflation and state of the economy in the Pakistan case is also highlighted by Junejo et al., 2021. The study points out that a lack of fiscal discipline can lead to macroeconomic instability.

Additionally, Hayat et al. (2021) have demonstrated that the relationship between inflation, interest rates and economic growth is short-term and long-term, which further places an emphasis on the need for efficient policy coordination.

Consequently, the literature contains extensive evidence that there is a need for coordination between monetary and fiscal policy to stabilize interest rates, to keep inflation under control, and to promote sustainable economic growth.

### **Combined impact on investment & economic activity.**

Inflation, interest rates and taxes have a significant impact on the economy and investment patterns. In Pakistan, the long-term relationship between inflation, savings, and economic growth indicates a mutual influence among these macroeconomic variables, impacting investment decisions (Ibrar et al., 2024).

Likewise, taxes have a negative effect on investment and consumption, and high interest rates reduce the capacity for investment, Saqib et al. (2014), Inflation also hampers economic growth and introduces uncertainty through the decreased real return on investment. Moreover, Stylianou et al. (2024) stress the importance of effective policy governance as they note that the pattern of growth is affected by changes in macroeconomic variables.

The literature thus indicates that these three factors (inflation, interest rate and taxes) are interdependent elements that impact the economic activity and long-term growth of Pakistan.

**H1:** The impact of inflation is significant on Pakistan's economic growth.

**H2:** High rates of inflation in Pakistan have a significant impact on investment in the nation.

**H3:** Higher interest rates seriously impede investments in Pakistan.

**H4:** Taxation can considerably affect the economic growth of Pakistan.

**H5:** When the currency rate fluctuates, it has significant impact on economic growth of the country of Pakistan.

## Data & Methodology

This research work involves the study of the impact of taxes, interest and inflation on the economic development of Pakistan with the help of secondary data. The statistics were collected from trustworthy and legitimate sources such as the World Bank, State Bank of Pakistan (SBP), Pakistan Economic Survey, and other official government publications. These are comprehensive macro-economic data sets that are often used in policy analysis and economics research.

The analysis takes a long-term perspective and examines the relationship between inflation, interest rates, taxes and economic growth in Pakistan over the period 1990-2024. Annual statistics were used to ensure consistency and to record the economic patterns and variations over time.

The relationship between the variables was studied using various economic and statistical techniques. The data collected were analysed by using time series analysis to reveal both short term and long term relationship between the selected macroeconomic variables and economic growth. In addition diagnostic tests were conducted to ensure model stability, validity and reliability.

Data from international databases and official sources have been used in this study and analyzed. Consequently, the findings provide reliable estimates of the impact of taxes, interest rates and inflation on Pakistan's economic growth during the study period.

## Results:

**Table 1**

ADF Test

Variable	Level ADF	Level p	First-difference ADF	First-difference p	Decision
GDP	-4.175	.001	-7.718	< .001	I(0)
In Exchange Rate	0.199	.972	-5.085	< .001	I(1)
In Remittance	-0.892	.791	-4.719	< .001	I(1)
FDI inflow	-3.111	.026	-3.554	.007	I(0)
FDI outflow	-4.073	.001	-6.178	< .001	I(0)
Inflation	-0.981	.760	-4.194	.001	I(1)
In Tax	-0.544	.883	-4.705	< .001	I(1)

Note. The variables are mixed I(0) and I(1), so ARDL is suitable. No variable is I(2).

The findings of the ADF Unit Root Test indicate that while Exchange Rate, Remittance, Inflation, and Tax become stationary after first differencing, GDP, FDI inflow, and FDI outflow are stationary at level. The ARDL model is suitable for additional analysis because the variables are integrated at both the I(0) and I(1) levels and none are I(2).

**Table 2**

Correlation Matrix

Variable	GDP	Exchange Rate	Remittance	FDI Inflow	FDI Outflow	Inflation	Tax
GDP	—						
Exchange Rate	-.305	—					
Remittance	-.201	.844***	—				
FDI inflow	.060	-.225	-.285	—			
FDI outflow	.172	.291	.217	.004	—		
Inflation	-.448**	.532***	.365*	.009	.058	—	
Tax	.033	.752***	.814***	-.233	.166	.069	—

Note.  $p < .05$ ,  $p < .01$ ,  $p < .001$ .

Different relationships between the studied variables are shown by the correlation matrix. While exchange rates, remittances, and taxes exhibit positive relationships with a number of factors, inflation is inversely correlated with GDP. Overall, the findings offer initial proof of connections between the study's variables.

**Table 3**

ARDL Model Selection

Item	Result
Dependent variable	GDP
Sample period	1990–2024
Observations	35
Maximum lag used	1
Selection criterion	AIC
Selected model	ARDL(0, 1, 0, 0, 1)
Selected predictors	ln Exchange Rate, ln Remittance, FDI outflow, ln Tax
AIC	138.233
BIC	150.676

Based on the AIC, the ARDL model selection findings show that ARDL(0, 1, 0, 0, 1) is the best model. For the years 1990–2024, the model's dependent variable is GDP, and its explanatory variables are Exchange Rate, Remittance, FDI Outflow, and Tax.

**Table 4**

AIC-Selected ARDL Regression Results

Predictor	B	SE	t	p
Constant	-56.208	22.050	-2.549	.017
ln Exchange Rate	-10.321	4.002	-2.579	.016
ln Exchange Rate(-1)	7.863	4.026	1.953	.061
ln Remittance	-1.390	0.936	-1.486	.149
FDI outflow	13.997	5.165	2.710	.011
ln Tax	5.185	1.541	3.365	.002
ln Tax(-1)	-2.006	1.558	-1.288	.208

Note. In the selected ARDL model, current exchange rate has a significant negative effect on GDP, while FDI outflow and tax have significant positive effects.

The findings show that while taxes and FDI outflow have a favorable impact on economic growth, exchange rates have a negative impact on GDP. There was no statistically significant effect of other factors on GDP.

**Table 5**  
ARDL Bound Test for Cointegration

Test	F-statistic	Lower-bound p	Upper-bound p	Decision
ARDL Bound Test	3.703	.001	.033	Cointegration supported at 5%

Significance level	I(0) lower bound	I(1) upper bound
10%	2.031	3.136
5%	2.328	3.500
1%	2.957	4.252

The findings of the ARDL Bound Test verify that the studied variables have a long-term relationship. The null hypothesis that there is no cointegration is rejected since the F-statistic (3.703) is higher than the upper bound critical value at the 5% significance level.

**Table 6**  
Long-Run ARDL Coefficients

Predictor	B	SE	t	p	95% CI
In Exchange Rate	-1.779	1.405	-1.266	.220	[-4.711, 1.152]
In Remittance	-0.209	1.298	-0.161	.874	[-2.916, 2.498]
FDI inflow	0.166	0.501	0.332	.743	[-0.879, 1.212]
FDI outflow	13.180	10.883	1.211	.240	[-9.521, 35.882]
Inflation	-0.082	0.090	-0.912	.373	[-0.270, 0.106]
In Tax	1.641	1.869	0.878	.390	[-2.257, 5.539]

Note. Although the bound test supports a long-run relationship, individual long-run coefficients are not statistically significant.

The long-term results show that none of the individual explanatory factors had a statistically significant impact on GDP. The individual long-run coefficients are not statistically significant, even if the ARDL Bound Test indicates that there is a long-term relationship between the variables.

**Table 7**  
Short-Run Error Correction Model Results

Predictor	B	SE	t	p	95% CI
$\Delta \ln$ Exchange Rate	-5.945	6.791	-0.875	.392	[-20.110, 8.221]
$\Delta \ln$ Remittance	-1.936	1.622	-1.194	.247	[-5.318, 1.447]
$\Delta$ FDI inflow	1.210	1.095	1.105	.283	[-1.075, 3.494]
$\Delta$ FDI outflow	11.574	6.140	1.885	.074	[-1.233, 24.381]
$\Delta$ Inflation	-0.077	0.110	-0.696	.495	[-0.307, 0.153]
$\Delta \ln$ Tax	4.751	1.907	2.491	.022	[0.772, 8.729]
ECT(-1)	-1.056	0.226	-4.681	< .001	[-1.526, -0.585]

Note. The error correction term is negative and significant, showing adjustment toward long-run equilibrium. In the short run, tax has a significant positive effect on GDP. FDI outflow is weakly significant at the 10% level.

The short-term findings show that while FDI outflow is only marginally important at the 10% level, taxes significantly boost GDP.

**Table 8**

Newey-West Robust Regression Results

Dependent variable: **GDP**

Predictor	B	Newey-West SE	t	p	95% CI
Constant	3.888	0.629	6.178	< .001	[2.597, 5.180]
$\Delta \ln$ Exchange Rate	-8.592	4.713	-1.823	.079	[-18.262, 1.079]
$\Delta \ln$ Remittance	-2.982	1.039	-2.871	.008	[-5.113, -0.850]
FDI inflow	0.423	0.269	1.571	.128	[-0.129, 0.975]
FDI outflow	7.606	4.221	1.802	.083	[-1.055, 16.267]
$\Delta$ Inflation	-0.004	0.066	-0.067	.948	[-0.140, 0.131]
$\Delta \ln$ Tax	3.563	1.354	2.632	.014	[0.786, 6.341]

Model summary:  $R^2 = .435$ , Adjusted  $R^2 = .310$ ,  $F = 3.467$ ,  $p = .011$ ,  $N = 34$ .

Note. Newey-West standard errors were used to control for possible heteroskedasticity and autocorrelation.

Remittances have a large negative impact on GDP, whereas taxes have a considerable beneficial impact on economic growth, according to the Newey-West regression results. The fact that the entire model is statistically significant suggests that the chosen factors work together to explain changes in Pakistan's GDP.

**Table 9**

Diagnostic Tests

Test	Statistic	p-value	Decision
Durbin-Watson	1.939	—	No serious autocorrelation
Breusch-Godfrey LM test	0.011	.916	No serial correlation
Breusch-Pagan test	4.222	.647	No heteroskedasticity
Jarque-Bera normality test	0.632	.729	Residuals are normally distributed
Ramsey RESET test	0.223	.641	No specification error
CUSUM test	0.660	.776	Model is stable
CUSUMSQ test	0.169	.253	Model is stable
Hansen stability test	1.105	—	No strong instability

The results of the diagnostic tests verify that the estimated model is well-specified and statistically reliable. The results show that the model is stable during the research period, the residuals are normally distributed, and there is no serial correlation, heteroskedasticity, or specification errors.

**Table 10**

Multicollinearity Test

Predictor	VIF
$\Delta \ln$ Exchange Rate	1.836
$\Delta \ln$ Remittance	1.045
FDI inflow	1.504
FDI outflow	1.298
$\Delta$ Inflation	1.234

$\Delta \ln$ Tax	1.061
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Note. All VIF values are below 5, so multicollinearity is not a problem.

All VIF values are below the permissible threshold of 5, according to the findings of the multicollinearity test. Since the explanatory variables do not show a strong linear relationship with one another, multicollinearity is not an issue.

**Table 11**

Granger Causality Test Results

Dependent variable: **GDP**

Null hypothesis	Lag 1	Lag 1	Lag 2	Lag 2	Decision
	F	p	F	p	
$\Delta \ln$ Exchange Rate does not Granger-cause GDP	17.171	< .001	10.218	< .001	Significant
$\Delta \ln$ Remittance does not Granger-cause GDP	0.009	.926	1.887	.171	Not significant
FDI inflow does not Granger-cause GDP	0.480	.494	1.440	.255	Not significant
FDI outflow does not Granger-cause GDP	2.630	.115	1.030	.371	Not significant
$\Delta$ Inflation does not Granger-cause GDP	0.051	.823	0.276	.761	Not significant
$\Delta \ln$ Tax does not Granger-cause GDP	1.314	.261	0.616	.548	Not significant

The exchange rate substantially Granger-causes GDP at both lag lengths, according to the Granger causality results. However, there is no discernible causal association between GDP and remittances, FDI inflow, FDI outflow, inflation, or taxes.

### Conclusion:

This study comprehensively examined the effects of key macroeconomic variables on Pakistan's economic growth over a 35-year period (1990–2024). The effect of exchange rates, remittance flows, FDI inflows, FDI outflows, inflation and taxation on the country's GDP was explored using ARDL (Autoregressive Distributed Lag) model and other relevant econometric tools. The results of preliminary integration tests confirmed that the variables were stationary at level  $I(0)$  and  $I(1)$ , thus the ARDL methodology is appropriate to be used. In order to identify whether there exists long run relationship between the variables, ARDL bound test was used, but no long run coefficient was statistically significant at the 5% level.

The results indicate that, in the short term, taxation has a strong positive impact on economic growth, thus stressing the importance of taxation as an important tool of fiscal policy. The positive impact of FDI outflows was modest while fluctuation in exchange rate had a negative impact on GDP, which shows the vulnerability of Pakistan's economy to the external financial conditions. Interestingly, remittances were seen to have a negative impact on GDP, which is counter-intuitive, as it means that the use of remittance inflows can also negatively affect productive investment in the country's economy. Even though other variables did not have strong causal associations, the results from the Newey-West regression and from robustness checks suggest that taxation has a positive impact on economic growth, and that the exchange rate has a significant causal impact on economic growth. Both diagnostic and stability tests show that the model is reliable, stable and does not have key econometric problems.

The overall study concludes that exchange rate fluctuations and other macroeconomic volatility can have adverse impacts on economic performance but tax policy can be a strong instrument for promoting economic growth in Pakistan. To follow up these findings, the next step should be to further develop fiscal policy, by making tax collection more efficient and expanding the tax base to ensure a sustainable revenue stream for the support of growth. Policy measures for exchange rates to minimize the impact of external shocks should be improved in a prudent manner through monetary interventions and reserve policies. Concurrently, measures can be taken to encourage productive FDI inflows, while redirecting the export of funds to growth promoting projects, to further boost economic development. Remittance inflows should be channeled into investment-oriented projects, and not just consumption, like investment-linked accounts or development bonds, to have the greatest impact on sustainable growth. Finally, a synchronized policy mix of fiscal and monetary policies will help mitigate economic uncertainty, improve the investment climate in Pakistan and increase its appeal for domestic and foreign investment, and will contribute to long-term economic stability and growth.

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