International Journal of Contemporary Business and Economics 2023, Vol. 01 (02) 44-55©TARC-2023. ISSN-Print: 3005-5350, ISSN-Online: 3005-5369.

Does Pakistan's Fiscal Deficit Curb Economic Growth? An ARDL Bound Testing Methodology

Kashif Saeed [1] | Shaista Qammer [2] |

[1] Assistant Professor, The Islamia University of Bahawalpur, Pakistan
kashif.saeed@iub.edu.pk

[2] Assistant Professor, Emerson University Multan, Pakistan
Shaistaqammer@yahoo.com

ABSTRACT: This study examines Pakistan's fiscal deficit dilemma with an emphasis on economic development. The ARDL technique was used to analyze secondary data from 1982 to 2020 for the study. The results suggest that fiscal deficits financed by debt may involve only the allocation of financial capitals from the private firms to the public sector and can hurt economic development. According to the study, Pakistan's fiscal deficit is the result of ineffectiveness in the tax structure and a high proportion of unproductive outlays, including security, debt repayment, and needless parliamentary spending. The research also includes recommendations for addressing the deficit problem. The primary objective of government policies is to restrict excessive domestic credit expansion to evade the contrary impact of fiscal deficit. Additionally, the authorities must reduce the loaning rate to encourage a vigorous investment climate, which will increase employment prospects and government income.

Keywords: Fiscal Deficit, Pakistan, ARDL, Economic Growth.

Article History

Received: 13-09-2023
Accepted: 28-11-2023
Online: 26-12-2023

How to cite this paper: Saeed, K & Qammer, S. (2023) Does Pakistan's Fiscal Deficit Curb Economic Growth? An ARDL Bound Testing Methodology, *International Journal of Contemporary Business and Economics*, 1. (02), pp: 44-55

1. Introduction

Each nation's primary economic objective is to achieve steady economic expansion. To increase the standard of living, economists are attempting to determine how to attain sustainable economic expansion. However, history has repeatedly shown that it is hard to attain continuous economic growth, as it is disturbed by numerous economic instabilities. These variations in economic activity are referred to by economists as trade cycles. Nonetheless, importance is given to financing government activities to guarantee a justifiable level of economic development and adequate shield for the most vulnerable segment of nations. Therefore, the prevalence of a fiscal deficit along with its influence on a nation's macroeconomic enactment have become the primary source of concern in both developing and developed countries.

In a given year, the fiscal deficit represents the difference between government expenditures and revenues (Tran et al., 2024). Conventional wisdom holds that the fiscal shortfall contributes to economic variability. There is a substantial indication that fiscal deficits can both positively or destructively affect economic growth, depending on their financing methods. If allocated funds are spent on productive and development projects, the fiscal deficit may stimulate economic development. The use of funds for non-productive and current expenditures, such as debt repayments and unnecessary parliamentary expenses, can hurt economic development. The fiscal deficit's negative impact may cause economic fluctuations and trade cycles.

Like many other developing countries, Pakistan has felt the ill effects of budget deficits on the economy for decades. IMF (2022) suggests that the following may be among the primary reasons for a country's budget deficit:

Ineffective budget allocation (military, debt payments, etc.); limited exports and excessive reliance on imports; underutilization and shortage of resources to satisfy long-term expenditure needs;

Examining how the fiscal deficit affects Pakistan's economy is the paper's principal focus. Here is how the rest of the paper is structured: In Chapter 2, we discuss the many explanations for the budget deficit. The third part is a survey of relevant works. Data and variable descriptions are in Section 4. Section 5 details the research techniques used, while Section 6 presents the results. Section 7 summarizes the paper and offers some recommendations for lowering the budget deficit.

2. Theoretical Underpinning

Budget shortfalls are now widely recognized as a crucial economic factor. The idea of a budget deficit and its impact on key macroeconomic variables have been the subject of a great deal of research. The theories used in these analyses of the fiscal deficit and its interplay with other variables and with strategies for financing the deficit vary.

2.1 Monetarist Theory

Government deficits supported by domestic debt are only a redistribution of private sector funds to the public sector, say monetarists, and do not affect economic production. Since private industry is more productive than state administration, this shift could reduce output. Monetary finance, according to monetarists (Adil, Hatekar & Ghosh, 2021; Kantor, 2022), affects the economy through increasing aggregate demand. According to research (Clift, 2020) When the government borrows money to cover its budget shortfall, it drives up interest rates, discourages investment, and slows the economy.

2.2 Endogenous Growth Theory

Economic growth has been considered as an endogenous result of the structure, or so the

endogenous growth theory posits. Because of the endogenous nature of growth, government policies have a significant impact on the rate at which economies expand. Production growth can be attributed to several factors, including governmental investment in sectors like infrastructure, science, and technology, and the formation of both physical and human capital. Similar government measures, such as those concerning the state of law and order and the simplification of the taxation system, contribute to endogenous growth. In contrast to alternative theories, long-term growth performance can be affected by fiscal policy if growth is viewed as an endogenous variable (Akcigit & Ates, 2021).

2.3 Keynesian Theory

The terms "Income Outlay Approach" and "Conservative Approach" are also used to describe this idea. Fiscal deficits, as proposed by Keynesians, are thought to promote economic growth. A rise in the money supply would lead to higher government spending. There is a shortage of demand compared to the available funds. The lending rate falls as a result of an increase in the money supply. When interest rates are lowered, investment rises, especially in the private sector. Investment will increase as a result of the Keynesian multiplier's positive effects. When capital is invested more, more can be made. Private investment can also be curbed by Keynesian theory. Financing the deficit with debt instruments raises interest rates and reduces the amount of money available for private investment (Eichner, 2023).

2.4 Neo-classical Theory

A higher real interest rate is predicted to result from a closed economy when fiscal deficits are used to boost aggregate demand. Investment and economic activity suffer as a result of this. An increase in the fiscal deficit leads to a rise in capital outflows and an increase in the value of the currency in an open economy. A widening budget gap has the same effect on the economy as a general fall in net exports and investment. Future output is harmed by the presence of foreign debt, which discourages investment (Majhi & Dansana, 2021).

2.5 Golden Rule of Public Finance (GRPF)

According to the regulation, the authorities can implement a deficit budget so long as the funds are put toward investments that would yield a positive return. The rule may lead to less sustainable growth if it is implemented. The magnitude of the short-term impact is proportional to the degree of public debt at the outset. To justify deficit spending, GPRF argues that capital invested in growth-generating projects can yield benefits in both the short and long term. The economy's adoption of GPRF is conditional on the quantity of public debt at the outset; in the near term, the country's debt status due to external debt may be taken into account (Di Sacco et al., 2021).

2.6 The Tax and Spend Hypothesis

As per this theory, the deficit will remain stable over the long run even if the government adopts a policy of raising taxes to cut deficits because doing so will lower private consumption and incentivize lawmakers to raise their spending. If, on the other hand, the deficit is funded by tax cuts, then public spending will be constrained, but personal consumption will rise without hurting either the budget deficit or national savings. In comparison to raising the tax rate, this is the better option. Deficits widen as interest payments rise in the absence of spending cuts (Işık et al., 2021).

2.7 Sargent and Wallace Hypothesis

The fiscal deficit affects GDP expansion in two ways. Initially, the funding of the budget shortfall impacts the pace of expansion. If there is supply the economy might struggle to accommodate the extra cash generated from an increase, in the money stock. With a surge in demand, there is a

possibility of an uptick in the price level potentially resulting in inflation. Furthermore, inflation stemming from an expansion, in the money supply could hinder growth by elevating production expenses and reducing supplies (Stawska & Mourao 2023).

3. Review of Assorted Studies

Extensive research has delved into the effects of deficit, on growth. Tan et al. (2020) analyzed fluctuations and growth in Malaysia using multivariate cointegration "Vector Auto-Regressive" (VAR) modeling and a causation test. Their study examined data from 1980 to 2017 revealing insights into the impact of alterations in fiscal deficits, on growth. To assist policymakers during economic crises, the study analyzed the connection between shifts in key macro variables and economic growth. The study found that a larger deficit is associated with slower real GDP growth.

From 2001 to 2015, Lau & Yip (2019) looked at ASEAN countries and the correlation between fiscal deficit and growth. The threshold effect was found to exist in these countries. The empirical investigation here looked into the straight-line connection between deficit and expansion. Many countries, and especially a cross-section of developing nations, showed a nonlinear pattern in this relation. Both an endogenous growth model and a simple model of saving behavior across generations were used. The implications of various deficit finance strategies on economic expansion were also explored in the study.

The impacts of prolonged deficit on economic growth were studied by Emery et al., (2023). Information was compiled from OECD member states from 1996 to 2020. Researchers have also made use of the endogenous growth model, which they have modified by adding productive public spending and a budget deficit. No empirical or theoretical evidence of the influence of a persistent budget deficit on the balanced growth power of OECD countries was identified in this investigation. This study looked at how fiscal imbalance affected GDP growth both immediately and over time. The "golden rule of public finance" (GRPF), that authorities may carry a budget shortfall so long as the shortfall is employed to finance industrious expenditures, is incorporated into the Baro model as a general hypothesis. Long-term, the GRPF leads to slower, more evenly distributed growth, while its immediate effects are sensitive to the extent to which public debt was already high to begin with. The Baro model and Keynesian viewpoint do not directly contradict in the shorter time, but they do so in the long run. Likewise, GRPF has some immediate advantages, but it cannot foster sustained economic growth.

Pakistan's budget imbalance has been linked to negative macroeconomic and international repercussions, which Hussain et al., (2023) set out to study. This analysis used data from Pakistan from 1980 to 2021 to look at what happens to the economy when there is a deficit in government spending. Using a simultaneous equation model with the ARDL approach, we identified the connection between these factors. Findings point to a positive connection between monetary base elements like bank loans, foreign reserves, and deficit financing and an adverse between monetary base elements like money demand and interest rates. This research looks at how a country's foreign reserves decrease as a result of an increase in domestic credit used to fund a government deficit.

Using data from the Pakistan Economic Survey and International Financial Statistics from 1980 to 2021, Ajmair et al., (2022) addressed the short-run impacts of the fiscal shortfall on macroeconomic variables with signal from Pakistan. The results were estimated using an error correction model. This research looks at the short-term budget deficit

about the main macroeconomic indicators. The monetary resources, private and government investment, production, balance of payments, foreign investments, and unemployment were considered the most important variables in this analysis. Depreciation of the home currency enhanced exports, which in turn encouraged short-term private and public investment, proving that temporary measures for rising foreign reserves had a positive impact on money supply and output. The response, to the issue of unemployment was noticeable though not very promising due to the use of short-term solutions. Perez Reyna & Osorio (2018) analyzed data spanning 56 years using the Vector Error Correction (VEC) model to explore the relationship between deficit, money growth, and inflation in Colombia. Various theories such as the hypothesis, "theory of price level New Keynesian hypothesis", and Sargent and Wallace (SWH) hypothesis were considered to gain insights into these variables. The study concluded that SWH proved to be the approach to understanding these dynamics. It highlighted a two-way causal link between (i) deficit and monetary expansion and (ii) monetary expansion and price hikes. The research revealed that fiscal deficit tends to rise with money growth leading to a slowdown, in advancement.

Kebalo & Zouri (2022) examined how the budget deficit influenced the growth of countries, within the "West African Economic and Monetary Union" (WAEMU) by analyzing time series data. They utilized the Granger Causality test, established in 1995 to determine the association between the budget shortfall and economic expansion. The study used three approaches to examine the discrepancies in findings among countries. The three major schools of thought are (i) Keynesianism, (ii) Neoclassicism, and (iii) Riccardianism. There was no link between fiscal deficit and growth in three nations, whereas, in three others, deficits hampered expansion. The Ricardian approach has a zero-sum relationship between deficit and growth, according to an empirical study of seven countries.

Abdulkarim, (2023) used both theoretical and empirical analysis to investigate the impact of the government deficit on economic expansion at home. It is concluded that budget shortfalls hampered economic expansion. It analyzes the performance of fiscal insufficiency as a mechanism to promote domestic output growth in the Nigeria using data from 1981 to 2020. The budget deficit has a negative and negligible effect on real GDP growth, as shown by the linear regression model. The study indicates that if monetary deficits are a method, for balancing term economic fluctuations then it is advisable to allocate those deficits towards investments, in businesses capable of sustaining themselves financially.

From 1976 to 2013 Hussain and colleagues (2021) delved into how the fiscal deficit, private investment, and GDP were intertwined. They examined the impact of policies, including the Structural Adjustment Program (SAP) on macroeconomic variables. Through an equation model and the ARDL technique, they explored the relationship between budget deficits and macroeconomic factors. The results highlighted the consequences of Pakistan's budget deficit, on its economy. The data indicated that there was growth, in investments and GDP with the unemployment rate increasing from below 4% in 1976 to 7.8% in 2013. Additionally, the report touched upon the reasons behind the existing budget shortfall citing issues such, as tax revenues and ineffective expenditure practices. Faridi and colleagues (2022) examined how the fiscal deficit truly affects GDP growth. They analyzed a time series dataset covering the years 1972 to 2019. We use the ARDL technique to arrive at our conclusions. The key aims of this research are to (i) determine what factors contribute to the fiscal

deficit and (ii) analyze the effect that the deficit has on GDP expansion. (iii) Ideas for reducing government spending and thus the deficit. The study found that a budget deficit is inversely related to economic growth, which the authors attribute to a combination of resource scarcity and inefficiency. Based on the results, the government should implement policies that encourage tax payments and punish tax evasion to raise more money.

It follows that different economies will see different results from a budget deficit's impact on economic growth. Some research finds a fiscal deficit's effect on real GDP growth to be inconsistent with Keynesian theory but in line with monetary theory, while other research favors a Ricardian equivalence approach to the issue. The findings provide credence to the hypothesis that a budget deficit, through the action of a multiplier, can stimulate economic expansion. It can also encourage imports by providing the economy with a surplus of currency that may or may not be proportional to the quantity of goods and services available. This can have a chilling effect on economic activity by worsening the balance of payments. If people don't adjust their behavior in response to a changing tax structure, a budget deficit might as well not exist.

4. Data and Description of Variables

We used annual time series data starting in 1982 and ending in 2020 to estimate the GDP equation. The period was selected because (i) there is a lack of complete and accurate data for all variables and (ii) there is a lack of data for all variables. East Pakistan is now Bangladesh, and its western half, West Pakistan, is the new Pakistan. The data was compiled from the Ministry of Finance in Pakistan's annual Economic Survey. Results were calculated using an ARDL (Autoregressive Distributed Lag Model) bound testing approach. Based on the theoretical framework presented in part II, the proposed model is.

$$RGDP = f\,(FD, PI, FR, LF, LR, EXP) \qquad (1)$$

Where:

RGDP = Real Gross Domestic Product

FD = Fiscal Deficit

PI = Real Public Investment

LR= Lending Rate

LF = Labor Force

EXP = Real Exports

FR = Real Foreign Exchange Reserves

5. Methodology

The Autoregressive Distributed Lag (ARDL) Model is used in this investigation. When compared to the two-step residual-based cointegration strategy of Engle-Granger (1987) and the cointegration methodology proposed by Johansen and Juselius, the ARDL method emerges as the clear winner. This procedure disregards the order of integration of variables. The ARDL model is used for the variables I(0) stationary and I(1) integrated of order, or both. The same holds for the small sample size. To analyze how a government deficit affects GDP growth, we introduce the Unconstrained Error Correction Model (UECM).

$$\Delta(RGDP)_t = \alpha + \beta_1(RGDP)_{t-1} + \beta_2(FD)_{t-1} + \beta_3(PI)_{t-1} + \beta_4(LR)_{t-1} + \beta_5(LF)_{t-1} + \beta_6(EXP)_{t-1} + \beta_7(FR)_{t-1} + \sum_{i=1}^{p_1}\delta_{1i}\Delta(RGDP)_{t-i} + \sum_{i=0}^{p_2}\delta_{2i}\Delta(FD)_{t-i} + \sum_{i=0}^{p_3}\delta_{3i}\Delta(PI)_{t-i} + \sum_{i=0}^{p_4}\delta_{4i}\Delta(LR)_{t-i} + \sum_{i=0}^{p_5}\delta_{5i}\Delta(LF)_{t-i} + \sum_{i=0}^{p_6}\delta_{6i}\Delta(EXP)_{t-i} + \sum_{i=0}^{p_7}\delta_{7i}\Delta(FR)_{t-i} + \varepsilon_t$$

White-noise-induced error, and the identity of the first difference operator. We used the Wald coefficient tool of combined significance to verify the long-run relationship before constructing long-run coefficients and error correction models. To put a number on the ARDL model defined by equation (2), we assumed the following.

$$H_0 = \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0 \quad \text{(No Cointegration)}$$

$$H_1 = \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5 \neq \beta_6 \neq \beta_7 \neq 0 \quad \text{(Cointegration)}$$

In the absence of any long-term link between the parameters in equations (2), the null hypothesis predicts that they are all equal to zero. The null

hypothesis is refuted by evidence showing the non-zero parameters suggest a long-term connection. The F statistic is then compared to the crucial values suggested by Pesaran et al. (2001) after the Wald test has been applied. If the calculated F statistic is more than the crucial value, the null hypothesis of no long-run association is rejected. If the F-statistic is smaller than the crucial values at the bottom of the range, then we accept the null hypothesis and no long-run association or co-integration is present. If the F-statistic values are between the upper and lower destined acute values, the test is questionable at the chosen significance level. The following equation can be used to make estimates of the long-term parameters if there is a relationship:

$$RGDP_t = \alpha + \sum_{i=1}^{p_1} \beta_{1i}(RGDP)_{t-i} + \sum_{i=0}^{p_2} \beta_{2i}(FD)_{t-i} + \sum_{i=0}^{p_3} \beta_{3i}(PI)_{t-i} + \sum_{i=0}^{p_4} \beta_{4i}(LR)_{t-i}$$

$$+ \sum_{i=0}^{p_5} \beta_{5i}(LF)_{t-i} + \sum_{i=0}^{p_6} \beta_{6i}(EXP)_{t-i} + \sum_{i=0}^{p_7} \beta_{7i}(FR)_{t-i} + \varepsilon_t$$

The short-run dynamics can be found by estimating the following equation:

$$\Delta RGDP_t = \alpha + \sum_{i=1}^{p_1} \delta_{1i}\Delta(RGDP)_{t-i} + \sum_{i=0}^{p_2} \delta_{2i}\Delta(FD)_{t-i} + \sum_{i=0}^{p_3} \delta_{3i}\Delta(PI)_{t-i} + \sum_{i=0}^{p_4} \delta_{4i}\Delta(LR)_{t-i}$$

$$+ \sum_{i=1}^{p_5} \delta_{5i}\Delta(LF)_{t-i} + \sum_{i=0}^{p_6} \delta_{6i}\Delta(EXP)_{t-i} + \sum_{i=0}^{p_7} \delta_{7i}\Delta(FR)_{t-i} + \omega ECM_{t-1} + \varepsilon_t$$

6. Results and Discussion

We have used “Schwarz Bayesian Criterion” (SBC) to establish the longest possible lag between variables. The SBC suggests a maximum delay of 2. Table 1 displays the outcomes of the Wald test.

Table 1: *F-Test For Cointegration*

Equation	Computed F-Statistics	5% Critical Value Bounds		Outcome
		I(0)	I(1)	
$_eRGDP / FD, PI, LR, LF, EXP, FR$	7.19	2.32	3.50	Cointegration

The levels of significance are provided by Pesaran et al. (2001).

The F-statistic value of 7.19 is more than the critical threshold of 5%, indicating that the absence of co-integration should be rejected as a hypothesis.

6.1 Long-Run Estimating Results

Then we calculate the ARDL model's long-run coefficients. Table 2 displays the outcomes of the assessed long-run coefficients.

Table 2: *Estimated Long Run Coefficients using the ARDL Approach Dependent Variable: RGDP*

Regressors	Coefficient	Standard Error	T-Ratio[Prob]
FD	1.5734	.17164	9.1671[.000]
PI	.040333	.0014807	27.2399[.000]
LR	.0011367	.3557E-3	3.1954[.005]
LF	-.016963	.0093007	-1.8238[.083]
EXP	-.0086085	.010650	-.80829[.428]
FR	-.36504	.21892	-1.6674[.111]
C	-2.8006	.25818	-10.8473[.000]

Source: Authors’ calculations.

Since the fiscal deficit's regression coefficient is -1.5734, we can see that a one-million-dollar increase in the deficit has a negative 1.5734-million-dollar impact on RGDP. The impact is substantial and supported by the data. There may be several factors at play when a deficit has a negative effect. First, monetarists argue that a decrease in RGDP can come from resource allocation from the private sector to the public sector where internal borrowing is used to finance fiscal deficit. Due to rising lending rates, private investment is discouraged when there is a budget deficit because of the transfer of resources that results. Second, fiscal deficit can hinder economic expansion if surplus resources are used for wasteful endeavors. As for the third point, Keynesians argue that aggregate demand can be affected by monetary deficit financing. If the rate of expansion in the money supply is greater than the rate of increase in domestic output, then some of the excess may be lost as higher import demand. The balance of payments and, by extension, economic growth, are harmed by this channel. Consistent with previous research (Clift, 2020; Kantor, 2022; Adil et al., 2021; Hussain et al., 2023; Stawska & Mourao, 2023), we demonstrate that budgetary deficits have a detrimental effect on economic growth.

Coefficient of public investment equals.040333, so every $1,000,000 spent on public investment adds

$.040333, 000,000 to GDP. The effect of government spending on GDP is small but statistically substantial. The findings are in line with the "investment multiplier theory" of J. M. Keynes. As a result, we may expect to see a positive correlation between RGDP and government spending. Public investments may encourage more private investment and economic growth because they are complementary and have beneficial externalities. Focusing on infrastructure and public good-related activities with government funding can encourage private investment (Tun and Wong, 1982). Since the private sector is more efficient than the public sector, public investment may help economies in developing countries by encouraging private investment. Private investment in Pakistan's economy is boosted by the government's efforts to stimulate growth. Our findings are in line with the literature.

The parameter interest rate has a value of -.0011367. It shows that a 1 percentage point rise in the loan rate results in a.0011367 million decline in RGDP. There was a statistically significant, albeit negligible, effect. When the government faces a larger budget deficit, one option for covering the gap is to raise the money supply. When the loan rate is lowered, real GDP rises because more money is available to spend. Consumers will spend more money on long-lasting goods, and firms will have more money to invest if interest rates drop. Private investment rises as a result, contributing to overall economic expansion. The adverse correlation between growth and the lending rate is supported by several research, including (Abrar, 2019; Adabor, 2022).

A one million increase in the labor force would lead to a.016963 million rise in real gross domestic product, according to the coefficient of labor force. Worker participation also has a small but statistically significant impact on real gross domestic product. The technological expertise of a country's workforce is an example of its human capital. A country's most valuable resource is its hardworking population. Human capital has emerged as an important factor in today's knowledge-based economy. Dixit and Stiglitz's neoclassical model assumes that economies of scale cause population expansion to boost economic growth. The value of a workforce is determined by its efficiency, not its size. The building of human capital improves worker productivity, which in turn contributes to economic growth. Researcher (Hendarmin & Kartika, 2019; Siddique et al., 2020; Khan & Ahmed, 2022; Laut et al., 2023) are corroborated by our results.

An increase in exports by one million dollars would lead to a rise of.0086085 million in RGDP, according to the export regression coefficient of.0086085. The impact of exports on GDP is so little as to be statistically immaterial. Traditional As per theory an increase in exports is considered a factor that could potentially enhance demand and result in higher production levels. To enhance exports, a government pursuing an export-led economic plan will offer numerous incentives to the exporting sector (Khan et al., 2022). The number of domestic output increases due to exports. The Balance of Payment of a country is improved and the effects of external disruptions on the economy are mitigated with the help of exports. Exports were found to have a positive effect on RGDP, as found by Alam (2018). Export revenue helps economies grow, says Benli (2020). Nawaz et al., (2021) look at Pakistan to see if there is evidence for the export-led growth hypothesis. Exports, real GDP, and foreign reserves are positively correlated, as found by Matsumoto (2022). As a result, our results agree with the aforementioned studies. A one million dollar rise in foreign reserves is associated with a 0.36504 million dollar gain in real gross domestic product, according to the value of the foreign reserves regression coefficient. This value

for the coefficient is too small to be statistically significant. The Keynesian strategy of fiscal expansion relies on a weaker currency to spur economic growth through exports, and increasing foreign exchange reserves (FER) is one way to achieve this goal. Increased investment and GDP growth are hence possible in FER-rising economies. (Ampah & Kiss, 2019; Morais & de Araujo, 2021; Loktionov & Mazurova, 2023) all find similar results to what we have found.

6.2 Error Correction Estimating Results

The short-run dynamic limitations are projected using the unconstrained error correction model (UECM). In Table 3 we present the estimated outcomes of error correction. All coefficients share the same indications even shortly. The error correction term (ECM) is significantly adverse and statistically important. The ECM value is -0.84620. Achieving equilibrium is within sight for 84% of respondents. The speed is lightning-fast.

ble 3: Error Correction Representation For The Selected ARDL Model Depen DRGDP

Regressors	Coefficient	Standard Error	T-Ratio[Prob]
dRGDP1	-.45452	.11300	-4.0224[.001]
dFD	-.033943	.0019943	-17.0202[.000]
dPI	1.4280	.22990	6.2116[.000]
dPI1	-7.4845	.36760	-20.3605[.000]
dLR	-.4804E-3	.3766E-3	-1.2754[.217]
dLF	.67024	.29485	2.2731[.034]
dEXP	-3.3096	.33391	-9.9118[.000]
dFR	.51416	.15684	3.2781[.006]
Ecm(-1)	-.84620	.039562	-21.3896[.000]

Source: Authors' calculations.

7. Conclusions and Policy Implications

This article investigates how countries like Pakistan, which are still in the nascent stages of their economies, deal with a budget imbalance. The study uses annual time series data from 1982 to 2020 for analysis. These are the most important results from the study: Based on an analysis of the available data, the study finds that Pakistan's fiscal deficit has had a detrimental impact on the country for decades. The ineffectiveness of the current tax collection system is the root cause of the budget shortfall. Another contributing issue is the high share of money spent on things like defense, debt repayment, and wasteful parliamentary spending. The influence of the budget insufficiency on GDP growth could be neutral, positive, or negative. The impact of the budget deficit on economic growth can be shown through the theoretical frameworks introduced in earlier sections of the book. Fiscal imbalance may contribute to GDP growth if debt financing is employed to raise money. But if the government borrows more from the inside, it could push up the interest rate on domestic loans, discouraging private sector investment. Low levels of private investment can stunt the growth of an economy's output because the private sector is widely considered to be the most efficient sector. It is concluded that loan financing of fiscal deficits entails only a shift of means from the private to the public sector, which may be counterproductive to economic expansion.

The following policies are proposed by the study as a means of reducing the harm caused by the fiscal imbalance to the economy: The authorities should limit unwarranted domestic credit increases to prevent the adverse repercussions of a fiscal imbalance. Avoiding short-term devaluation and stabilizing the currency's external value will help the government rein in monetary, price, and interest rate swings. The government needs to make better use of its funds if it wants to reduce the deficit and keep up with its financial commitments. Incentives for tax compliance and deterrence of tax avoidance should inform the design of such policies. Lender interest rates should be lowered by the government to encourage small domestic investors to put their money to work creating jobs and tax income. The financial system has to be bolstered by the government. Allocation of tax dollars ought to foster economic growth. To avoid a budget shortfall, lawmakers should cut back on frivolous expenditures. If fiscal deficits are the primary tool for addressing temporary economic

swings, then the research recommends putting that money toward worthwhile endeavors. To promote sustainable economic growth over the long term, the deficit should be spent on essential infrastructure projects. Eliminating corruption will improve Pakistan's fiscal deficit and economic growth.

References

Abdulkarim, Y. (2023). A systematic review of investment indicators and economic growth in Nigeria. *Humanities and Social Sciences Communications*, 10(1), 1-13.

Abrar, A. (2019). The impact of financial and social performance of microfinance institutions on lending interest rate: A cross-country evidence. *Cogent Business & Management, 6*(1), 1540072.

Adabor, O. (2022). Exploring the asymmetric effect of lending rate on economic growth in Ghana: Evidence from nonlinear autoregressive distributed lag model. *Cogent Business & Management, 9*(1), 2087464.

Adil, M. H., Hatekar, N. R., & Ghosh, T. (2021). The role of money in the monetary policy: a new Keynesian and new monetarist perspective. In Environmental, Social, and Governance Perspectives on Economic Development in Asia (pp. 37-67). Emerald Publishing Limited.

Ajmair, M., Khan, A. G., & Bashir, U. (2022). Fiscal policy and sectoral growth in Pakistan. Pakistan *Journal of Social Research, 4*(2), 208-221.

Akcigit, U., & Ates, S. T. (2021). Ten facts on declining business dynamism and lessons from endogenous growth theory. *American Economic Journal: Macroeconomics, 13*(1), 257-298.

Alam, S. (2018). The trade integration and Pakistan's export performance: Evidence from exporter dynamic database. *International Journal of Development Issues, 17*(3), 326-345.

Ampah, I. K., & Kiss, G. D. (2019). Economic policy implications of external debt and capital flight in sub-Saharan Africa's heavily indebted poor countries. *Society and Economy, 41*(4), 523-542.

Benli, M. (2020). Export diversification and economic growth: Evidence from emerging economies. Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, (55), 285-298.

Clift, B. (2020). The hollowing out of monetarism: The rise of rules-based monetary policy-making in the UK and USA and problems with the paradigm change framework. *Comparative European Politics, 18*(3), 281-308.

Di Sacco, A., Hardwick, K. A., Blakesley, D., Brancalion, P. H., Breman, E., Cecilio Rebola, L., ... & Antonelli, A. (2021). Ten golden rules for reforestation to optimize carbon sequestration, biodiversity recovery and livelihood benefits. *Global Change Biology, 27*(7), 1328-1348.

Eichner, A. S. (Ed.). (2023). A guide to post-Keynesian economics. Taylor & Francis.

Emery, T. J., Kovac, M., & Spruk, R. (2023). Estimating the Effects of Political Instability in Nascent Democracies. Jahrbücher für Nationalökonomie und Statistik, 243(6), 599-642.

Faridi, M. Z., Ahmad, R., Hussain, A., & Usama, A. (2022). Budget Deficit: A Dilemma of Pakistan's Economy. iRASD *Journal of Economics, 4*(1), 117-126.

Hendarmin, H., & Kartika, M. (2019). The relationship between human capital and the regional economy productivity. *JEJAK, 12*(1), 138-152.

Hussain, B., Tahir, M. N., Ashiq, S., & Iqbal, M. (2021). Impact of Macroeconomic Instability

on Private Investment: Evidence from Pakistan. *Kashmir Economic Review, 30*(2).

Hussain, M. A., Qureshi, S. A., & Ahmad, M. M. (2023). Role of Macroeconomic Dynamics in Determining Government Debt: Evidence From Developing Economy. International *Journal of Business and Economic Affairs, 8*(4), 58-67.

Işık, C., Ongan, S., Bulut, U., Karakaya, S., Irfan, M., Alvarado, R., ... & Rehman, A. (2021). Reinvestigating the Environmental Kuznets Curve (EKC) hypothesis by a composite model constructed on the Armey curve hypothesis with government spending for the US States. *Environmental Science and Pollution Research, 1*-12.

Kantor, B. (2022). Recent monetary history: A monetarist perspective. *Journal of Applied Corporate Finance, 34*(2), 82-99.

Kebalo, L., & Zouri, S. (2022). Monetary agreements reform and issue of the key fiscal convergence criterion in the West African Economic and Monetary Union (WAEMU). *Journal of Economic Integration, 37*(1), 30-53.

Khan, A. A., & Ahmed, R. (2022). Effect of human capital investment on economic growth and productivity: a simulation approach. *Journal of Contemporary Issues in Business and Government Vol, 28*(03).

Khan, M. F., Khan, M. A., Khan, W. A., & Bhutto, N. A. (2022). Host community perception toward the importance of the China-Pakistan Economic Corridor (CPEC). *Competitive Education Research Journal, 3*(1), 232-242.

Lau, W. Y., & Yip, T. M. (2019). The nexus between fiscal deficits and economic growth in ASEAN. *Journal of Southeast Asian Economies, 36*(1), 25-36.

Laut, L. T., Pranizty, T. P. I., & Sugiharti, R. R. (2023). Does human capital spillover affect labor productivity. *Journal of Socioeconomics and Development, 6*(1), 36.

Loktionov, V., & Mazurova, O. (2023, January). Macroeconomic assessment of the consequences of materialization of certain strategic threats to energy security. *In AIP Conference Proceedings (Vol. 2552*, No. 1). AIP Publishing.

Majhi, P., & Dansana, A. (2021). Understanding Schools in the Context of Classical and Neo-Classical Theories of management. *The Online Journal of Distance Education and e-Learning, 9*(1).

Matsumoto, H. (2022). Foreign reserve accumulation, foreign direct investment, and economic growth. *Review of Economic Dynamics, 43*, 241-262.

Morais, A. A., & de Araujo, G. J. F. (2021). Investment in infrastructure in municipalities from public social security funds: an exploratory study. *Revista Cadernos de Finanças Públicas, 3*, 1-28.

Nawaz, H., Barbra, N., & Hassan, N. (2021). The Impact of COVID-19 on Pakistan's Export Oriented Economic Growth. *Economics and Business Quarterly Reviews, 4*(3).

Perez-Reyna, D., & Osorio, D. (2018). The monetary and fiscal history of Colombia: 1960-2017. University of Chicago, Becker Friedman Institute for Economics Working Paper, (2018-61).

Pesaran, M. H., Y. Shin and R. J. Smith (2001). Bound Testing Approach to the Analysis of Level Relationships, *Journal of Applied Econometrics, 16*(6), 289-326.

Siddique, H. M. A., Mohey-ud-din, G., & Kiani, A. (2020). Human health and worker productivity: evidence from middle-income countries. *International Journal of Innovation, Creativity and Change, 14*(11), 523-544.

Stawska, J. M., & Mourao, P. R. (2023). Fiscal and monetary interactions in the European countries: panel data analysis. *Applied Economics, 55*(5), 562-576.

Tan, C. T., Mohamed, A., Habibullah, M. S., & Chin, L. (2020). The impacts of monetary and fiscal policies on economic growth in Malaysia, Singapore and Thailand. *South Asian Journal of Macroeconomics and Public Finance, 9*(1), 114-130.

Tran, T. P. K., Tran, N. P., Nguyen, P. V., & Vo, D. H. (2024). Government expenditure–shadow economy nexus: the role of fiscal deficit. *International Journal of Emerging Markets*, *19*(2), 322-338.