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# Government Expenditure and Growth Nexus: A Case Study of Afghanistan

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#### Keywords

- Economic Growth
- Gov-Expenditure
- Real GDP
- Revenue
- Tax
- FDI
- Trade Deficit

Abstract: Government expenditure is one of the key elements of aggregate demand and significantly impacts economic growth, especially in developing countries. This study aims to examine the impacts of government expenditure on real GDP in Afghanistan. The time series data for the years (2001 to 2020) has been obtained from the World Bank, Trade Map, Trading Economics, and NSIA. The ARDL model has been applied to study the empirical relationship between government expenditure and real GDP. The results show that in the long run, Government Expenditure and Official Development Assistance per capita positively and significantly impact real GDP (the probability values 0.0002 and 0.0203 are less than 0.05). In contrast, Foreign Direct Investment has a negative impact on real GDP, but it is not significant (0.8575>0.05). Trade Deficit negatively and significantly impacts real GDP (0.01630<0.05). The results of short-run ECM indicate that Government Expenditure, Foreign Direct Investment, and Official Development Assistance have positive and significant impacts on real GDP (0.0000, 0.0050, and 0.0006, respectively, are less than 0.05). The results of Pairwise Granger causality tests indicate that Government Expenditure does not cause the real GDP, and vice versa. The results of diagnostic tests show no serial correlation among error terms, and the model is stable.

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# **INTRODUCTION**

The relationship between government expenditure and economic growth has been an important subject of analysis. It has continued to occupy a series of debates among researchers and policymakers in the last decades. The main question in all analyses is whether or not government expenditure increases a country's long-run growth rate (Maingi, 2017). The general view and consensus among researchers are that government expenditure, especially on physical infrastructure and human capital, can enhance growth. However, the financing source of such expenditures can be growth-retarding (Iheanacho, 2016).

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Achieving sustainable economic growth is fundamental for attaining sustainable development. Economic growth mainly requires rebuilding and expanding infrastructures, improvement of education and health services, attraction of foreign and domestic investments, environmental restoration, and strengthening the agricultural sector. Dealing with these issues will result in a great amount of money spent by the government and certainly lead to sustainable budget deficits. However, this would generate many socially valuable jobs and business opportunities (Saad & Kalakech, 2009).

Appropriate government expenditures can influence economic growth even in the short run. The government collects revenues from Taxes and other sources and spends on different projects and programs to achieve sustainable growth and stability in the whole economy (Seshaiah et al., 2018).

Government expenditure plays a vital role in Afghanistan's economy. At the same time, its severe reliance on grants is precarious and can drive the economy to crisis in its absence. On the other hand, reviewing and restructuring the policies and strategies is essential to focus on internal factors and sources of achieving sustainable growth and decreasing reliance on grants.

Government expenditure in Afghanistan was high and unsustainable. Total government expenditure was much higher than in other developing countries due to high-security expenditures (30% of GDP). A balance must be struck between meeting short-term basic needs and ensuring long-term growth. Overall, fiscal resources were minimal. At the same time, Afghanistan's long-term fiscal sustainability and outlook for poverty reduction depend on much faster economic growth rates (World Bank, 2019).

Overall, on-budget expenditures in Afghanistan have increased rapidly in nominal terms since 2010. However, considering inflation and population growth, actual per capita expenditure has increased by only 4% since 2014. Recent trends in budget allocations were broadly positive. The share of the budget dedicated to security had declined, creating space for increased expenditure on infrastructure. Allocations to the health sector had increased, driven by increased development spending, but from a very low base. However, allocations to the education sector have continued to decrease (World Bank, 2019).

### LITERATURE REVIEW

Saad Kalakech (2009) investigated the growth effects of government expenditure in Lebanon from 1962 to 2007, focusing on sectoral expenditures. They used a multivariate cointegration analysis to examine the effect of each sector on economic growth. Findings reveal that government spending on education has a positive effect on growth in the long run and a negative impact in the short run. In contrast, spending on defense negatively affects economic growth in the long run and is insignificant in the short run.

Seshaiah et al. (2018) investigated the impact of general government expenditure on GDP growth in India from 1980-81 to 2015-16 using simple regression analysis. FDI Growth Rate and two dummy variables, i.e., one for the financial crisis 2008 and another for the reform

period 1991, have been used. All the explanatory variables positively and significantly affect the GDP growth rate except the FDI Growth rate.

Jiranyakul (2013) has found that the notion that more government expenditures can stimulate growth is controversial. The causation between government expenditures and economic growth in Thailand is examined using the Granger causality test. There is no cointegration between government expenditures and economic growth. A unidirectional causality from government expenditures to economic growth exists.

Odhiambo (2015) has studied the dynamic causal relationship between government expenditure and economic growth in South Africa. The study used the (ARDL)-bounds testing approach to examine this linkage. The empirical findings of this study show that, although both government expenditure and economic growth Cause each other in the short run and the long run, it is economic growth that Granger causes government expenditure.

Attari and Javed (2013) studied the relationship between Pakistan's inflation rate, economic growth, and government expenditure. This investigation uses data from the time series from 1980 to 2010. The ARDL model results show a long-term relationship between the rate of inflation, economic growth, and government expenditure.

Wu et al. (2010) re-examined the causal relationship between government expenditure and economic growth by conducting the panel Granger causality test recently developed by Hurlin (2004, 2005) and utilizing a richer panel data set including 182 countries that covered the period from 1950 to 2004. Empirical results strongly support both Wagner's law and the hypothesis that government spending is helpful to economic growth regardless of how we measure government size and economic growth.

Aluthge et al. (2021) studied the impact of Nigerian government expenditure on economic growth using time series data for 1970-2019. They employed (the ARDL) model. The findings show that capital expenditure positively and significantly impacts economic growth in the short and long run. In contrast, recurrent expenditure does not significantly impact economic growth in the short and long run.

Carter et al. (2013) studied the relationship between the components of government expenditure and economic growth in Barbados. The Dynamic Ordinary Least Squares and the Unrestricted Error Correction Model were employed to analyze time series data from 1976-2011. Generally, the findings suggest that total government spending drags economic growth, particularly in the short run, with a much smaller impact over time.

Kolluri et al. (2000) examined Wagner's Law of Public Expenditure, which emphasizes economic growth as the fundamental determinant of public sector growth, using time series data drawn from the G7 industrialized countries from 1960-1993. It presents evidence on both the short- and long-run effects of growth in national income on government expenditure by resorting to recent developments in the theory of cointegrated processes.

Barlas (2020) studied the impact of expenditure compositions on economic growth in Afghanistan. The data was collected from the World Bank and the Ministry of Finance from

2004 to 2019. The adjusted Keynesian function was applied to estimate the impact of government expenditure on economic growth. ARDL model was applied. Findings show that there is a long-run relationship between dependent and independent variables.

#### **Theoretical Review**

The economic literature, especially macroeconomic models, ensures a relationship between government expenditure and economic growth. This relationship has gained much attention from economists and researchers for decades and has been a subject of intense controversy (Rana, 2021). There are various theories about the relationship between growth and government expenditures, with different opinions on how expenditures impact the economy. One of them is the Keynesian Theory.

The theory of British economist John Maynard Keynes has formed a new direction in economic thought. He believed that the problem does not lie in the supply side, which focused on theories and previous laws, but on the side of aggregate demand. The Keynesian point of view emphasizes expenditures, with the primary goal being increased effective demand. It was found that the increase in government expenditures should be considered a basic tool of economic policy (Olulu et al., 2014). Keynesian theory focuses on how aggregate demand influences overall economic output and presents this relationship as below:

$$GDP = C + G + I + (X - M)$$

#### An Overview of Government Expenditure in Afghanistan

Government expenditure in Afghanistan was high and unsustainable. Government expenditure was much higher than in other developing countries due to security expenditures (30 % of GDP). Overall, fiscal resources were minimal. Adequate resources must be allocated to supporting health, education, and other poverty-reducing measures. At the same time, Afghanistan's long-term fiscal sustainability and outlooks for essential poverty reduction depend on much faster economic growth rates. On-budget expenditures in Afghanistan have increased rapidly in nominal terms since 2010. However, considering inflation and population growth, actual per capita expenditure has grown by only 4% since 2014. The development budget was increasing realistically and as a share of the total. Allocations to the health sector had increased, driven by increased development spending, but from a very low base. However, allocations to the education sector have continued to decline (World Bank, 2019).

In general, the major part of the recurrent budget was allocated for wages and salaries and fostered recent expenditure growth. Wages and salaries have formed around 70 percent of recurrent expenditure and around 70 percent of all expenditure growth since 2010. Development expenditures have gradually shifted from agriculture and rural development to public works and DABS infrastructure. In social sectors, development expenditures on health have gradually increased. However, development expenditure on education decreased in real per capita terms, remaining at a small share of overall development expenditure (Afs 217 per capita in 2013 to Afs 142 per capita in 2017, in 2010 terms). Total Government expenditure was equal to around 58 percent of GDP. High total expenditure indicates essential security sector expenditures. Security expenditure was around 30 percent of GDP (World Bank, 2019).

Afghanistan was completely dependent on grants to finance public expenditure. Grants comprised around 45 percent of GDP and financed 75 percent of total public expenditures. Government revenues were around US\$2.5 billion per year, while total expenditures were around US\$11 billion per year. This situation will pressure government expenditures as grants decline over the medium term (World Bank, 2019).

On-budget government expenditure has increased since 2010. Over recent years, there has been a slight reorientation of expenditure towards development (development expenditure as a share of total expenditure has increased from around 24 percent in 2014 to around 33 percent in 2018).



**Figure 1.** Aggregate Nominal Expenditure by Budget Type (Billions Afs) Source: (World Bank, 2019)

Total expenditure had remained constant between 25-27 percent of GDP over the five years from 2014. Development expenditure gradually increased from 6% to 9% percent of GDP, while recurrent expenditure declined from 19 percent in 2014 to 18 percent in 2018.



Figure 2. Aggregate Expenditure by Budget Type (% of GDP) Source: (World Bank, 2019)

# **RESEARCH METHOD**

# Data Collection

The time series secondary variables data were collected from the World Bank (World Development Indicators), Trading Economics, Statista, Trade Map, and NSIA from 2001 to

2020 to study the relationship between economic growth and government expenditure. All the data are annual. The data for GDP, FDI, and Trade Deficit are in (US million dollars), the data for ODA per capital is in (US dollars), and the data for GGE is in (US million dollars). To obtain better results, the annual data has been converted into quarters.

| Variables  | Description   | Unit             |
|------------|---|------------------|
| LRGDP      | The logarithm of Real Gross Domestic Product (GDP)          | Logarithm        |
| LGGE       | The logarithm of General Government Expenditures            | Logarithm        |
| LFDI       | The logarithm of Foreign Direct Investment                  | Logarithm        |
| LODAPC     | The logarithm of Official Development Assistance per capita | Logarithm        |
| TRDDEFICIT | Trade Deficit   | Annual (Exp-Imp) |

Table 1. Description of Variables

#### Model

For empirical analysis, we first check the order of integration of data series by applying the Philips Perron (PP) unit root test. Second, the ARDL modeling approach examines the long-run relationships between RGDP, GGE, FDI, ODA, and Trade Deficit. Third, the Granger causality test is used to determine the direction of the causality between the interested variable and RGDP. Finally, several diagnostic tests are executed to check for the robustness of the model.

After controlling the effects of Foreign Direct Investment (FDI), Official Development Assistance per capita (ODAPC), and Trade Deficit (TRDDEFICIT). The relationship is given in the form of log-linear econometric mode as follows:

 $LRGDP_{t} = \beta_{0} + \beta_{1}LGGE_{t} + \beta_{2}LFDI_{t} + \beta_{3}LODAPC_{t} + \beta_{4}TRDDEFICIT_{t} + \varepsilon_{it}$ 

Based on the sample size and the Unit root test results, the ARDL model is most appropriate for this study. The equation of an ARDL model is as follows:

$$\Delta LRGDP_{t} = \beta_{0} + \sum_{i=1}^{q} \beta_{1i} \Delta LRGDP_{t-i} + \sum_{i=1}^{p} \beta_{2i} \Delta LGGE_{t-i} + \sum_{i=1}^{p} \beta_{3i} \Delta LODApc_{t-i} + \sum_{i=1}^{p} \beta_{4i} LFDI_{t-i}$$
$$+ \sum_{i=1}^{p} \beta_{5i} TRDDEFICIT_{t-i} + \beta_{6} LRGDP_{t-1} + \beta_{7} LRGDP_{t-2} + \beta_{8} LGGE_{t-1} + \beta_{9} LGGE_{t-2}$$
$$+ \beta_{10} LFDI_{t-1} + \beta_{11} LODApc_{t-1} + \beta_{12} LODApc_{t-2} + \varepsilon_{t}$$

To assess the short-run dynamics, the error correction model (ECM) for the estimation can be formulated as follows:

$$\Delta LRGDP_{t} = \beta_{0} + \sum_{i=1}^{q} \beta_{1i} \Delta LRGDP_{t-i} + \sum_{i=1}^{p} \beta_{2i} \Delta LGGE_{t-i} + \sum_{i=1}^{p} \beta_{3i} LODApc_{t-i} + \sum_{i=1}^{p} \beta_{4i} LFDI_{t-i} + \sum_{i=1}^{p} \beta_{5i} TRDDEFICIT_{t-i} + \delta_{1}ECT_{t-1} + \varepsilon_{t}$$

# **FINDINGS**

# Unit Root Analysis

The temporal aspects of all data series are examined using Phillips Perron (PP) unit root tests (see Table 2). Checking the order of the integration is a prerequisite for applying the ARDL model. The results show that the model series is stationary at different orders. The logarithm of RGDP, the logarithm of GGE, the logarithm of FDI, and the logarithm of ODA per capita are integrated at I (0), and TRD Deficit is integrated at I (1).

|                       |             | At Level |         |              |           |               |
|-----------------------|-------------|----------|---------|--------------|-----------|---------------|
|                       |             | LRGDP    | LGGE    | LFDI         | LODAPC    | TRDDEFICIT    |
| With Constant         | t-Statistic | -3.8184  | -2.9241 | -4.6297      | -4.9915   | -1.6120       |
| With Constant         | Prob.       | 0.0042   | 0.0472  | 0.0003       | 0.0001    | 0.4716        |
|                       |             | * * *    | **      | ***          | ***       | n0            |
| With Constant & Trand | t-Statistic | -0.9081  | -1.7611 | -5.2160      | -4.8808   | -1.4084       |
| with constant & frend | Prob.       | 0.9493   | 0.7138  | 0.0003       | 0.0008    | 0.8508        |
|                       |             | n0       | n0      | ***          | ***       | n0            |
|                       |             |          |         |              |           |               |
|                       |             |          |         | At First Dif | ference   |               |
|                       |             | d(LRGDP) | d(LGGE) | d(LFDI)      | d(LODAPC) | d(TRDDEFICIT) |
| With Constant         | t-Statistic | -3.2624  | -3.5640 | -3.9248      | -3.7667   | -3.4117       |
| With constant         | Prob.       | 0.0203   | 0.0088  | 0.0030       | 0.0049    | 0.0135        |
|                       |             | **       | ***     | ***          | ***       | **            |
| With Constant 9 Trend | t-Statistic | -3.8115  | -3.9154 | -4.0413      | -3.6710   | -3.4547       |
| with Constant & Henu  | Prob.       | 0.0212   | 0.0161  | 0.0113       | 0.0306    | 0.0520        |
|                       |             | **       | **      | **           | **        | *             |

#### Table 2. Unit Root Test (PP)

Source: Author's calculations

# Lag Length Criteria

Considering the unit root test result, we can apply the ARDL model to examine the long-run relationship between Real GDP and other series. Before that, selecting the appropriate lag length is essential to avoid any biases. This study uses the Schwartz Criterion (SC) determined in the VAR environment to select the appropriate lag *(see Tables 3 and 4 below)*. Considering our small sample size, it is determined that two lags fit our sample size.

| Lag | LogL     | LR        | FPE       | AIC        | SC         | HQ         |
|-----|----------|-----------|-----------|------------|------------|------------|
| 0   | -610.025 | NA        | 29.452    | 17.572     | 17.733     | 17.636     |
| 1   | 104.275  | 1306.149  | 0.000     | -2.122     | -1.158     | -1.739     |
| 2   | 213.131  | 183.501   | 0.000     | -4.518     | -2.751359* | -3.816     |
| 3   | 220.989  | 12.123    | 0.000     | -4.028     | -1.459     | -3.008     |
| 4   | 240.864  | 27.825    | 0.000     | -3.882     | -0.509     | -2.542     |
| 5   | 330.794  | 113.054   | 0.000     | -5.737     | -1.561     | -4.078     |
| 6   | 397.240  | 74.04060* | 9.44e-10* | -6.921148* | -1.942     | -4.943504* |
| 7   | 410.212  | 12.601    | 0.000     | -6.577     | -0.796     | -4.281     |

Table 3. VAR Lag Order Selection Criteria

Source: Author's calculations

**Table 4.** Optimal Lag Structure of Variables using (SC)

| Variables    | LRGDP | LGGE | LFDI | LODAPC | TRDDEFICIT |
|--------------|-------|------|------|--------|------------|
| Optimal Lags | 2     | 2    | 1    | 2      | 0          |

Source: Author's calculations

#### Cointegration

The results of the bounds cointegration test are reported in Table 5. The results indicate that the estimated F-statistic is 15.157, which is very large and significant at the 1 percent significance level. The bound test results show cointegration among the data series and confirm the long-run relationship between RGDP and GGE, FDI, ODA per capita, and Trade Deficit.

| Test Statistic | Value  | Signif. | I (0) | l (1) |
|----------------|--------|---------|-------|-------|
| F-statistic    | 15.157 | 10%     | 2.45  | 3.52  |
| k              | 4      | 5%      | 2.86  | 4.01  |
|                |        | 2.5%    | 3.25  | 4.49  |
|                |        | 1%      | 3.74  | 5.06  |

## Table 5. F-Bound Test

Source: Author's calculations

#### Long-run Analysis

The results of Bound tests in Table 5 indicate the presence of a long-run relationship between RGDP and other series. The results of the long-run relationship (see Table 6) indicate that GGE and ODA per capital have a positive and statistically significant impact on RGDP. A 1 percent increase in GGE is associated with a 0.41516 percent increase in RGDP. The coefficient of GGE is significant at the 5% level. Similarly, a 1 percent increase in ODA per capita is associated with a 0.1880 percent increase in RGDP, and the coefficient is significant at a 5% level. FDI has

a negative impact on RGDP, but the coefficient is not significant. Similarly, TRDDEFICIT negatively impacts RGDP, but the coefficient is significant at a 5% level.

| Variable   | Coefficient | Std. Error | t-Statistic | Prob.   |
|------------|-------------|------------|-------------|---------|
| LGGE       | 0.41516     | 0.10435    | 3.97853     | 0.00020 |
| LFDI       | -0.00702    | 0.03893    | -0.18024    | 0.85750 |
| LODAPC     | 0.18880     | 0.18154    | 1.03998     | 0.02030 |
| TRDDEFICIT | -0.00001    | 0.00004    | -3.23331    | 0.01630 |

Table 6. Log-Run Relationship

Source: Author's calculations

#### Short-run Analysis

The results of short-run analysis (see Table 7) show that GGE has a positive and statistically significant impact on RGDP, and the coefficient is significant at the 5% level. A 1 percent increase in GGE is associated with a 0.1533 percent increase in RGDP. However, GGE with one lag negatively and significantly impacts RGDP. FDI has a positive and statistically significant impact on RGDP. A 1 percent increase in FDI is associated with a 0.012 percent increase in RGDP. Likewise, ODA per capita has a positive and significant impact on RGDP. A 1 percent increase in CDA per capita is associated with a 0.1086 percent increase in RGDP.

 Table 7. Short-Run Relationship (ECM Regression)

| Variable           | Coefficient | Std. Error        | t-Statistic | Prob.   |
|--------------------|-------------|-------------------|-------------|---------|
| С                  | 0.1877      | 0.0493            | 3.8075      | 0.0003  |
| D (LRGDP (-1))     | 0.6818      | 0.0743            | 9.1779      | 0.0000  |
| D(LGGE)            | 0.1533      | 0.0318            | 4.8152      | 0.0000  |
| D (LGGE (-1))      | -0.1183     | 0.0302            | -3.9127     | 0.0002  |
| D(LFDI)            | 0.0120      | 0.0041            | 2.9092      | 0.0050  |
| D(LODAPC)          | 0.1086      | 0.0299            | 3.6327      | 0.0006  |
| D (LODAPC (-1))    | -0.0850     | 0.0275            | -3.0945     | 0.0029  |
| CointEq (-1) *     | -0.0333     | 0.0089            | -3.7600     | 0.0004  |
|                    |             |                   |             |         |
| R-squared          | 0.8438      | Mean depender     | nt var      | 0.0165  |
| Adjusted R-squared | 0.8275      | S.D. dependent    | var         | 0.0167  |
| S.E. of regression | 0.0069      | Akaike info crite | erion       | -7.0009 |
| Sum squared resid  | 0.0032      | Schwarz criteric  | on          | -6.7537 |
| Log-likelihood     | 270.5324    | Hannan-Quinn d    | criteria.   | -6.9022 |
| F-statistic        | 51.7162     | Durbin-Watson     | stat        | 1.9290  |
| Prob(F-statistic)  | 0.0000      |                   |             |         |

Source: Author's calculations

Nevertheless, ODA per capita with one lag negatively and significantly impacts RGDP. As expected, the estimated coefficient of the error correction term, CointEq (-1), is negative and statistically significant. It confirms the presence of a long-run relationship among the variables. The estimated coefficient of CointEq (-1) is -0.0333, which indicates the speed of convergence of the RGDP toward its long-run equilibrium. It implies that any deviation from the equilibrium is eliminated in less than one year.

#### Model Diagnostic

In order to check the reliability of findings, several diagnostic tests are conducted. For the error terms, serial correlation and heteroskedasticity tests are performed. The Breusch-Godfrey Serial Correlation LM test (see table 8) shows no serial correlation among error terms (F-statistic 0.9274 is greater than 0.05). The results of the Breusch-Pagan-Godfrey Heteroskedasticity test (see Table 9) show that error terms are normally distributed with no heteroscedasticity (F-statistic 0.1824 is greater than 0.05).

Similarly, the Ramsey RESET test (see Table 10) indicates no specification issue in the estimated model (t-statistic 0.9806 is greater than 0.05). The results of the diagnostic tests imply that it is reasonable to claim that the model behaved well. Moreover, plots of the cumulative sum of squares (CUSUM of Squares) (see Figure 3) based on the recursive residuals do not show any instability in the coefficient estimates across the sample periods.

| F-statistic   | 0.0755 | Prob. F (2,61)       | 0.9274 |
|---------------|--------|----------------------|--------|
| Obs*R-squared | 0.1852 | Prob. Chi-Square (2) | 0.9116 |

#### Table 8. Breusch-Godfrey Serial Correlation LM Test

Source: Author's calculations

|                     | .,      | igain coujrey         |        |
|---------------------|---------|-----------------------|--------|
| F-statistic         | 1.4291  | Prob. F (11,63)       | 0.1824 |
| Obs*R-squared       | 14.9770 | Prob. Chi-Square (11) | 0.1836 |
| Scaled explained SS | 24.7395 | Prob. Chi-Square (11) | 0.0100 |
|                     |         |                       |        |

Table 9. Heteroskedasticity Test: Breusch-Pagan-Godfrey

Source: Author's calculations

#### Table 10. Ramsey RESET Test

|             | Value  | df      | Probability |
|-------------|--------|---------|-------------|
| t-statistic | 0.0244 | 62      | 0.9806      |
| F-statistic | 0.0006 | (1, 62) | 0.9806      |

Source: Author's calculations



*Figure 3.* CUSUM of Squares Source: Author's calculations

### **Granger Causality**

The results of the Granger Causality test (see Table 11) indicate that GGE does not granger to cause the RGDP; likewise, RGDP does not cause the GGE. Similarly, FDI does not granger cause the RGDP, and RGDP does granger cause the FDI. ODAPC does not granger cause the RGDP, and RGDP does granger cause the ODAPC. TRDDEFICIT does not granger cause the RGDP, but RGDP does granger cause the TRDDEFICIT.

Table 11. Pairwise Granger Causality Tests

| Null Hypothesis:                        | Obs | F-Statistic | Prob.  |
|---|-----|-------------|--------|
| LGGE does not Granger Cause LRGDP       | 75  | 1.1763      | 0.3145 |
| LRGDP does not Granger Cause LGGE       |     | 1.6635      | 0.1969 |
| LFDI does not Granger Cause LRGDP       | 75  | 0.1675      | 0.8461 |
| LRGDP does not Granger Cause LFDI       |     | 3.0854      | 0.0520 |
| LODAPC does not Granger Cause LRGDP     | 75  | 0.5748      | 0.5655 |
| LRGDP does not Granger Cause LODAPC     |     | 2.0637      | 0.1346 |
| TRDDEFICIT does not Granger Cause LRGDP | 75  | 0.2910      | 0.7484 |
| LRGDP does not Granger Cause TRDDEFICIT | -   | 4.6848      | 0.0123 |

Source: Author's calculations

# DISCUSSION

The relationship between government expenditure and economic growth has been debatable among researchers and scholars for decades. The role and intervention of government in the economy became a crucial topic after the big crisis of 1929. Keynes and his followers argued that an active role and gentle government intervention through expansionary fiscal and monetary policies would push aggregate demand and help a country eliminate recession and depression periods.

From that time onward, many scholars and researchers have studied the role and impact of government expenditures on economic growth. The long-run and short-run results of studies were different in societies. Saad and Kalakech (2009) investigated the effects of government expenditure on growth in Lebanon. They found that government expenditure, especially in the Education sector, has a positive impact on economic growth in the long run but a negative impact in the short run. Similarly, the other studies by Odhiambo (2015) in South Africa, Attari & Javed (2013) in Pakistan; Aluthge et al. (2021) in Nigeria; Wu et al. (2010) in 182 countries, Iheanacho (2016) in Nigeria; and Barlas (2020) in Afghanistan, indicate the positive and significant impact of government expenditure on economic growth. However, the results of studies by Jiranyakul (2013) in Thailand and Carter et al. (2013) in Barbados revealed that government expenditure is not the key to achieving economic growth.

The results of this study indicate the positive impact of government expenditure on economic growth both in the long run and in the short run. In this study, besides the role of government in the economy, I have focused on the role of official development assistance and trade deficit (export-import) in Afghanistan's economic growth, which is unique and makes this study different from previous studies.

If we have a bird's eye view of expenditure structure and revenue sources, we will discover that the problems are still overriding. Afghanistan is a developing country with low and unsustainable revenue sources. Lack of infrastructure and other social and political issues are the key factors of severe dependency on Afghanistan grants. Opulence, excessive consumption, and lack of a comprehensive strategic plan for growth and development are the other factors that drive the country toward budget deficit and economic pressures. Overall, the public expenditure in Afghanistan was high and unsustainable. On-budget expenditures in Afghanistan have increased in nominal terms since 2010. Wages and salaries had taken the central part of the recurrent budget and have therefore caused recent expenditure growth. Total public expenditure was equal to around 58 percent of GDP. Afghanistan relied entirely on grants to finance very high levels of public expenditure. Grants were equal to around 45 percent of GDP. Government revenues were around US\$2.5 billion per year, while total expenditures were around US\$11 billion per year (World Bank, 2019).

### CONCLUSION

As a developing country, Afghanistan relies heavily on government intervention in its economy. Government expenditure accounts for approximately 60% of the GDP, making fiscal and monetary policies highly influential. Any adjustments to these policies or government budget fluctuations significantly impact the economy. However, the government's revenue sources remain unstable due to persistent social and political challenges. This instability increases reliance on external grants and aid, which are unsustainable and subject to unpredictable, multidimensional factors.

The development budget almost entirely depends on grants or official development assistance, while 20-30% of the current budget is also financed through external funding. The findings of this study reveal that government expenditure has a positive and significant impact on economic growth in both the short and long term. However, achieving sustainable growth and long-term economic objectives requires strengthening government revenue sources.

Based on the study's findings, the following recommendations are proposed:

- 1. Strengthening domestic and fundamental sources of revenue.
- 2. Attracting domestic and foreign direct investments to expand the share of the private sector in the economy for two fundamental reasons:
  - a) Creating job opportunities for the labor force through enlarging the private sector will decrease the pressure of employment in the government structure, and in turn, it will decrease government expenditures.
  - b) Increasing tax revenue by expanding and enlarging the private sector.
- 3. Formulating a comprehensive strategic plan for growth and development considering available resources, investment opportunities, and domestic, regional, and international threats of globalization and severe competition.

## **Conflict of Interest**

The author declares that there is no conflict of interest.

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