African Journal of Economics and Business Research (AJEBR) 1(2):1-16

The Impact of Government Expenditure on the Economic Growth of Ethiopia

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Abstract

This study used data from 1990 to 2021 to investigate the relationship between government spending and economic growth in Ethiopia. Before estimation, diagnostic tests were conducted to confirm the validity of the model specification and the dependability of the estimators. For estimation, the ARDL model was employed. The results demonstration that defense and health spending have a large short-term positive impact on GDP, but education spending has a significant long-term growth effect. These findings are consistent with Wagner's law and Keynesian theory. Conversely, it has been demonstrated that lagged agricultural spending hurts economic growth. As for the control variables, it has been demonstrated that trade openness hinders growth over the long term, while gross fixed capital formation hinders growth over the short term. On the other hand, an increase in the labor force boosts growth. Overall, the findings imply that government spending can be a useful tool for promoting economic growth, with medium- and long-term development plans paying special attention to education spending.

Keywords: Government expenditure, Economic growth, ARDL model, Ethiopia, Fiscal policy, Sectoral spending

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Introduction

Economic growth is generally expected to improve people's quality of life by enhancing infrastructure, healthcare, housing, education, agricultural productivity, and food security. It is usually measured by the annual growth rate of real gross domestic product (GDP) and is considered a key mechanism for reducing long-term poverty and creating prospects for improved welfare (Loto, 2012).

Different policies are employed to advance economic development, among which fiscal policy plays a fundamental role in maintaining stability and promoting growth. Government expenditure, as a major instrument of fiscal policy, enables governments to achieve developmental goals, particularly in developing countries, by fostering economic expansion. Public expenditure refers to the spending undertaken by governments. It includes consumption, investment, and transfer payments. In a broader sense, public expenditure reflects the government's overall involvement in different sectors, while in a narrower sense, it concerns the allocation of funds and execution of projects within a fiscal year (Tsegaw, 2009).

The expansion of public spending is largely attributed to the inability of market economies to effectively and fairly distribute resources for socio-economic infrastructure (Okoye, Omankhanlen, Johnson, Urhie, & Ahmed, 2019). Today, both developed and developing countries use public expenditure to improve income distribution, direct resources toward strategic sectors, and influence the composition of national income (Vtyurina, 2020). In the context of developing economies, most sectors demand increasing financial resources each year, and public spending has become a primary tool for promoting growth (Sharma, 2012). Appropriately targeted expenditure can help stimulate growth, particularly in the short run, when structural limitations such as poor infrastructure and a shortage of skilled workers restrict production capacity (International Monetary Fund [IMF], 2020).

Keynesian economics argues that government spending positively influences growth by stimulating aggregate demand and correcting short-term inefficiencies (Chandana Aluthge, 2021). In contrast, classical and neoclassical economists view government spending as destabilizing, reducing economic efficiency (Lowenberg, 1990). A middle-ground perspective, advanced by Friedman (1997), suggests that government expenditure promotes growth up to an optimal threshold, beyond which it becomes harmful.

In less developed countries (LDCs), such as Ethiopia, fiscal policy plays a particularly vital role by addressing market failures, mobilizing resources, and providing essential public goods. Government spending in sectors such as education, health, agriculture, and defense has long been regarded as central to development efforts (Berihun, 2014). According to the National Bank of Ethiopia (NBE, 2021), Ethiopia's economy recorded real GDP growth of 6.3% in 2021, despite challenges from conflict in the northern regions and the

COVID-19 pandemic. This compares with earlier growth rates of 8% in 2016, 10.1% in 2017, 7.7% in 2018, 9% in 2019, and 6.1% in 2020.

Two important questions remain: (a) does increased government spending necessarily translate into higher economic growth, and (b) which sectors contribute most effectively to growth? Theoretical perspectives differ, with some scholars warning of fiscal inefficiency and instability, while others emphasize expenditure's growth-enhancing effects. Empirical evidence is also inconclusive, with results depending on the sectors analyzed, methodologies applied, and study periods considered.

While taking into consideration important control variables like labor force participation, inflation, trade openness, and gross fixed capital formation, this article looks at how government spending, specifically in the areas of defense, education, health, and agriculture, affects economic growth. Both short- and long-term dynamics are examined in order to determine which spending categories best support growth.

Literature Review

Theories of Economic Growth

Economic growth refers to the growth of the goods and services produced during a period of time in a country. It is generally measured in terms of the annual growth rate of real gross domestic product (RGDP) adjusted for inflation (Melkamu, 2019). When different countries experience different growth, as a consequence, the standards of living and consumption patterns will also be different. These differences arise mainly from variations in capital, labor, and technological endowments, often expressed through the production function $Y = f(A, L, K)$. The connection between public spending and economic expansion is explained by a number of theories. Among the most notable are:

Keynesian Theory: Argues that government spending stimulates aggregate demand and positively influences growth (Romer, 1986). Expansionary fiscal policies are believed to boost both aggregate demand and supply, thereby raising output and employment (Jahan, Mahmud, & Papageorgiou, 2014). Public expenditure can thus serve as an effective tool for economic growth when causality flows from spending to growth. Moreover, government spending helps address short-term imbalances (Jibir & Aluthge, 2019) and promotes social welfare (Ram, 1986). Public expenditure on health, education, infrastructure, and security also improves citizens' quality of life and creates a conducive business environment (Aladejare, 2019; Ukwueze, 2015).

According to the Wiseman-Peacock Hypothesis, which is based on data from the UK from 1890 to 1955, government spending increases "step-like" in response to social and economic upheavals rather than gradually.

According to Wagner's Law, government spending inevitably rises as an economy grows because of the increased demand for public goods and services. This suggests that growth and expenditure are causally related (Afonso & Alves, 2016).

Theories of Public Spending

Public spending refers to government expenditures on items such as education, health, infrastructure, defense, agriculture, pensions, and debt servicing. These expenditures support government operations, provide public goods, and influence overall economic performance. The rationale often stems from the presence of market failures or externalities. Spending on education, training, and infrastructure, for example, enables citizens to reach their potential and promotes a more inclusive economy.

However, increased expenditure can also generate challenges. Bayew (2015) notes that higher spending may lead to deficits, inflation, public debt, and crowding-out effects. After World War II, government expenditures rose both in absolute terms and as a share of GDP, prompting scholars to examine their allocation and effectiveness. Musgrave (1959) identified three primary functions of public expenditure:

- Allocation – Provision of public goods.
- Redistribution – Ensuring fairer income distribution.
- Stabilization – Promoting macroeconomic stability.

Empirical Literature Review

There is conflicting empirical data regarding Ethiopia's economic growth and government spending. For example, public spending on defense, health, and education are shown to have a short-term and long-term positive impact on growth, whereas agricultural spending has a long-term negative impact (Girma 2023). Similarly, Wondimagegne (2021) found that while other sectors had little to no influence on economic growth, spending on health and education had a major positive impact. Melkamu (2019) also emphasized the value of human capital, demonstrating that labor force and educational investments greatly accelerate growth. Tefera (2017) came to similar conclusions, pointing out that capital investment, health care, and education expenditures all contribute to economic growth over the long term. Abelone (2017), on the other hand, discovered that while defense spending had a positive impact on economic growth, spending on health and agriculture was linked to a drop in output. Accordingly, Bazezew (2014) came to the conclusion that government investment in education promotes growth, but defense and agricultural expenditures have a negative effect, while Muhammed (2015) and Abdu (2014) found that health and total capital expenditure had positive and significant effects on Ethiopia's economic performance.

Evidence from other developing countries also reveals divergent results. In Malaysia, Hasnul (2015) found that expenditure on education, defense, and healthcare had no significant impact on growth. In Afghanistan, Barlas (2020) reported that current expenditure on education promoted growth, while security-related spending reduced it. Likewise, Alshahrani and Alsadiq (2014) observed that healthcare spending and domestic investment in Saudi Arabia supported economic growth, underlining the sectoral differences in fiscal policy outcomes.

Cross-country studies also provide valuable insights. Lupu, Petrișor, Bercu, and Tofan (2018) showed that government spending on education and healthcare contributed positively to growth in Central and Eastern European countries, whereas defense expenditure slowed growth. Similarly, James (2017) found that in Kenya, government spending on health, education, and defense had a positive effect, particularly over the long term. In Nepal, Gupta (2017) concluded that investments in both agriculture and non-agriculture sectors were crucial drivers of growth. For West African countries, Lloyd (2017) confirmed that public spending on education significantly enhanced growth through its impact on human capital formation.

Taken together, these studies reveal that the growth effects of government spending are highly context-specific. While education and health spending tend to show consistent positive contributions, the impact of agricultural and defense spending varies widely across countries. The mixed findings highlight the importance of considering the sectoral composition, efficiency, and policy environment when assessing the role of government spending in promoting economic growth.

3. Methodology of the Study

Data Type and Sources

Time series annual data covering the years 1990–2021 were used in this investigation. The availability of reliable data on the pertinent variables led to the selection of this time frame. The data on trade openness and RGDP were found from the WB. The National Bank of Ethiopia (NBE) provided information on sector-specific government spending in the areas of labor force, agriculture, education, health, defense, inflation, and gross fixed capital formation.

Model Selection Strategy

The econometric framework was created to determine the connections between government spending and economic growth after controlling for other significant variables. The primary independent variables in this study are public spending on agriculture, education, health, and defense, while the dependent variable is real GDP. The variables being controlled for are the labor force, the rate of inflation, trade openness, and gross fixed capital formation.

ARDL and the error correction method were used in the study's data analysis. First, small samples yield the greatest value from the ARDL model. Second, as long as no regressor exceeds I(1), the ARDL model can handle regressors with varying integration orders. Third, an ARDL model will automatically choose the appropriate lag structure to minimize serial correlation and simultaneously.

The theoretical foundation is drawn from the Solow (1956) growth model, which attributes growth to the accumulation of physical capital, labor force expansion, and exogenous technological progress (Abelone, 2017; Tefera, 2017). Later developments, such as Lucas (1988), emphasized the role of human capital, while Mankiw, Romer, and Weil (1992) introduced an augmented Cobb–Douglas production function including labor, human capital, capital stock, and productivity.

Accordingly, the model can be expressed as:

$$RGDPt = f(GEDUt, GDEFt, GHLTt, GAGRt, LFt, INFt, TOt, GFCFt)$$

Where: $RGDPt$: Real Gross Domestic Product, $GEDUt$, GDEFt,GHTt and GAGRt are Government expenditure on education, defense, health and agriculture, respectively and LFt: Labor force, $INFt$: Inflation rate, TOt: Trade openness and $GFCFt$: Gross fixed capital formation

Testing for Unit Roots

The variables' time series characteristics were investigated before model estimation. Unit root testing is crucial because non-stationary data can produce erroneous regression results. The Phillips-Perron (PP) and Augmented Dickey-Fuller (ADF) tests were used (Perron, 1989). The PP test offers robustness to serial correlation and heteroskedasticity, whereas the ADF test incorporates lagged terms to account for autocorrelation in residuals.

The variables' time series characteristics were assessed prior to model estimation. It is crucial to perform unit root testing because non-stationary data can yield erroneous results. They performed PP and ADF tests (Perron, 1989). The ADF test incorporates lagged terms to account for any autocorrelation in the residuals. Robust tests that take heteroskedasticity and serial correlation into account are made possible by the PP test.

Co-Integration Test

Co-integration analysis is used to determine whether the variables share a long-run equilibrium relationship. When the variables are integrated at different orders, the ARDL bounds testing method proposed by Pesaran, Shin, and Smith (2001) provides an appropriate framework for estimation.

ARDL Bounds Test

In the ARDL bounds testing, the calculated F-statistic is evaluated against critical values at different significance levels. A long-run relationship exists if the statistic exceeds the upper bound (I(1)); no such relationship is present if it falls below the lower bound (I(0)) ; and results are deemed inconclusive when the statistic lies between the two bounds.

Model Diagnostic Tests

Several diagnostic tests were carried out to confirm the ARDL fitness model's robustness in this investigation. The tests evaluated model specification (Ramsey's RESET test), serial correlation (Breusch–Godfrey LM test), residual normality (Jarque–Bera test), heteroskedasticity (Breusch–Pagan LM test), and stability (CUSUM and CUSUMSQ tests). Every diagnostic test should be passed by the well-defined model, which should also show stability over the short- and long-term relationships.

Results and Discussion

Descriptive Analysis

It provides a summary of the variables used in the estimation. Ethiopia's RGDP ranged from USD 125,406 thousand to USD 2,228,081 thousand, with a mean of USD 593,324 thousand and a standard deviation of USD 670,271 thousand. Government expenditure on agriculture averaged 7.34% of GDP, ranging between 1.91% and 28.45%, with a standard deviation of 5.37%. Education expenditure varied from 8.63% to 30.54% (mean = 19.67%, SD = 6.38%), while health and defense accounted for average shares of 5.59% and 11.96%, respectively. Health expenditure ranged from 2.09% to 8.98% (SD = 1.8%), while defense ranged from 3.6% to 36.17%.

The labor force averaged 35.9 million, ranging from 19.9 million to 58 million, with a standard deviation of 11.5 million. The inflation rate averaged 11.28%, with fluctuations between –8.48% and 44.36% (SD = 11.59). Trade openness averaged 25.81% of GDP, with a minimum of 4.9% and a maximum of 40.9% (SD = 9.57). Gross fixed capital formation averaged 24.48% of GDP, ranging from 3.92% to 40.67% (SD = 10.47). These statistics highlight the substantial variation in government spending across sectors and the macroeconomic variables considered.

Unit root Test

All variables in their original form are subjected to the two well-known unit root tests in this study: the AD and the Phillips-Perron tests. It is discovered that a few of these variables are not stationary. The variables' order of integration is then formally ascertained by applying the same tests to their initial differences, such as

trend and intercept. To determine whether unit roots are present, the study compares p-values to 5% critical values. Table 1 below processes and displays the findings of the unit root tests for every variable, both in their original form and differences.

Table 1: The unit root test

Variables	ADF at the level		ADF at 1st difference		PP at the level		PP at 1st difference	
	t-statistic	P value	t-statistic	P value	t- statistic	P value	t- statistic	P value
LNRGDP	-1.56785	0.7826	-5.68898	**0.0003***	-1.55016	0.7894	-5.70878	**0.0003***
LNAg	-3.21478	0.1001	-6.24082	**0.0001***	-3.13890	0.1154	-9.63371	**0.0000***
LNEduc	-0.86960	0.9471	-6.49557	**0.0000***	-0.63375	0.9695	-6.59412	**0.0000***
LNHe	-2.09119	0.5289	-7.00584	**0.0000***	-3.60546	**0.0457***	-10.3684	**0.0000***
LNDe	-3.8652	**0.0266***	-4.05785	**0.0177***	-2.28225	0.4306	-2.46676	**0.3409**
LNLF	-2.76774	0.2191	-4.81019	**0.0029***	-2.07453	0.5391	-4.71224	**0.0037***
InfR	-4.16565	**0.0132***	-7.43109	**0.0000***	-4.11819	**0.0147***	-9.44908	**0.0000***
LNTOp	-2.45893	0.3444	-4.49318	**0.0068***	-0.98321	0.9320	-12.8643	**0.0000***
LNGFCF	-1.79187	0.6843	-6.59201	**0.0000***	-1.57794	0.7786	-6.49504	**0.0000***

Source: Own computation using Eviews9.

Real gross domestic product, agriculture, education, health, labor force trade openness, and gross fixed capital formation are all stationary at first difference, along with the spending defense sector and inflation rate, as shown in Table 1's results on stationarity of variables at a significance level of 5%. The ARDL regression model is the most suitable when the variables are integrated in different orders, and it is used in this investigation. Due to the small sample size of data in the ARDL model, Pesaran and Shine (2001) claim that the ARDL approach automatically determines the lag length and that the AIC was used as a guide to determine the optimal lag and for model selection criteria. The maximum lag number can be set to log the number of observations, per the general rule. Therefore, in this study, the lag length for the model was determined by selecting the maximum lag of 2.

Bound Co-integration Test

One of the primary methods used to examine co-integration and causality within the ARDL modeling framework is the Bound Test for Co-integration. This approach was introduced by Pesaran and his colleagues in 2001, and it is applicable regardless of the integration order of the variables, whether they are purely stationary (I(0)), integrated of order one (I(1)), or mutually co-integrated.

Table 2: ARDL Results of the Bound Co-integration test

Test statistics	Value	Critical Value Bounds		
		level of Statistical significance	F-bounds test	
			I(0) Bound	I(1) Bound
F- statistics	12.44554	1%	2.79	4.1
		5%	2.22	3.39
		10%	1.95	3.06

Source: Author computation

The null hypothesis that there is no cointegration is rejected at the 1% significance level because the Pesaran F-statistic result of 12.44554 is greater than the upper bound critical value (Table 2). This demonstrates that there is a long-term correlation between the variables. Cointegration is further supported by the F-statistic, which is significantly higher than the upper bound I (1) value at the 1% level. Further supporting evidence of long-term relationships between the variables is the fact that the F-statistic for lnRGDP also exceeds the upper bound of 4.1, and the ECT coefficient is negative and statistically significant at the 1% level.

ARDL Model Long-run Results

Table 3 presents the long-term estimates. Long-term GDP growth has a negative correlation with ln (TOP) and a positive correlation with ln (EDUC) and ln (LF). Once the long-term relationship between the variables has been established, the ARDL model proceeds to calculate the long-term coefficients. The findings show that a one percent increase in lnEDUC and lnLF over time results in a 1.22 and 2.5 percent increase in lnRGDP, respectively. Furthermore, a 1 percent increase in TOP will eventually lead to a 1.33 percent drop in RGDP growth, assuming all other variables stay the same. The study also found that long-term economic growth is significantly positively impacted by government spending on education. This is because putting money into education helps build a skilled workforce, which brings big benefits over time. This is because Skilled and educated manpower is a source of new discoveries, technology, and the opportunity to create technology, increasing the productive capacity, reducing unemployment, and improving economic growth by providing useful knowledge and skills. The result supports Keynesian and Wagner's theories, and from a microeconomic perspective, education increases the probability of being employed in the labor market and improves earnings capacity (Tefera, 2017). Empirically, Lloyd (2017), and Bazezew (2014) have shown that government investment in education contributes positively to long-term economic growth and plays a key role in the overall progress and development of society.

Furthermore, the control variable *ln*LF has a significant positive effect on economic growth in the long run. Thus, the labor force improves the growth rate by increasing productivity in different sectors and promoting economic growth. For countries like Ethiopia, it can act as a key factor in boosting economic growth, especially in economies that rely heavily on labor (Tefera, 2017). Otherwise, *ln*TOP has a significantly negative effect in the long run on economic growth. The negative effect of trade openness happened because of the country's political instability, lack of strong trade policy, importing more goods than exporting, lack of awareness and knowledge of people to participate in international markets, lack of technology and lack of complementary policies. According to Marilyne Huchet et.al (2018) countries exporting higher-quality products and new varieties grow more rapidly and that openness to trade may impact growth negatively for countries which are specialized in low-quality products. In general, this result confirms Keynesian and Wagner's theories of a positive relationship between public expenditure and economic growth.

Table 3: Long-run results of the ARDL model

Long Run Coefficients		
Variables	Coefficient	Prob.
LNAG	-0.059628	0.0692
LNEDUC	1.217629	**0.0473****
LNHE	0.349930	0.0988
LNDE	-0.024024	0.6852
LNLF	2.499678	**0.0031*****
INFR	-0.006537	0.0791
LNTOP	-1.329889	**0.0043****
LNGFCF	-0.205747	0.2808
C	-23.686706	**0.0132****

****p < 0.01, **p < 0.05*

Short-run ARDL Model Results

Table 4 reports the short-run dynamics of the ARDL model. The error correction term (CointEq(−1) is negative and significant, with a coefficient of −1.965. This suggests a strong and rapid adjustment toward long-run equilibrium after short-term shocks, with about 196.5% of disequilibrium corrected within a single period. Although some scholars suggest that the error correction coefficient should fall below -1 for stability (Narayan & Smith, 2006), the magnitude observed here implies oscillatory convergence and a swift return to equilibrium, reinforcing the presence of a stable long-run relationship.

In the short run, real GDP exhibits positive autocorrelation, with a differenced coefficient of 1.16 ($p < 0.01$), suggesting that past GDP growth significantly influences current growth. Sectoral analysis reveals that government expenditure on health and defense exerts a statistically significant and positive impact on GDP.

Specifically, a 1% increase in health spending raises GDP by 0.03%, while a one-period lag in defense spending contributes 0.02% to GDP growth. These findings align with prior studies (Ochieng, 2014; Tefera, 2017), which emphasize the role of health and defense sectors in enhancing productivity, safeguarding national assets, and fostering a conducive environment for economic activity. However, contrasting evidence from Abelone (2017) and Bazezew (2014) suggests that the impact of health and defense spending may vary depending on institutional efficiency and policy orientation.

In contrast, agricultural expenditure has a negative short-run effect on economic growth. A one-period lag in agricultural spending leads to a -0.01 % decrease in GDP, due to the delayed benefits of investment of agriculture by the way of infrastructure-heavy investments such as irrigation systems, input purchase, and mechanization. Structural impediments such as poor transport infrastructure, political instability, and delayed project implementation further limit the agriculture sector's short-term productivity (Abelone, 2017; Bazezew, 2014). These findings relate to Ethiopia's ADLI approach to economic development which encourages a gradual transformation from agriculture to industrial economic development.

Labor force participation increases short-run economic growth. If we increase the labor force by one percent of the total labor force, this raises GDP by a whopping 15.33%. And with a one-period lag for labor force increases, GDP increased by an additional 44.56%. Clearly employment expansion and labor productivity's contribution to output is extremely critical, particularly in labor-intensive economies (Melkamu, 2019). Moderate stable inflation also enhances growth. A one-period lag in inflation yields an increase of 0.02% in GDP. Mild inflation likely positively impacts the economy by lowering unemployment rates and stabilizing price expectations.

Trade openness has both positive and negative short-run effects. Trade openness with one-period lag has a positive and significant (0.78%) effect on GDP, which may indicate that productivity gains are providing an outward shift in growth temporarily from export activity. Trade openness contemporaneously has a negative and significant (-1.39%) effect on GDP. Trade openness is causing this negative effect because much of Ethiopia's exports are low-quality exports, combined with an import-heavy trade structure and lack of institutional capacity (Huchet et al., 2018).

GFCF negatively affects short-run growth. The current period and the one-period lag of GFCF have a negative effect on GDP by -1.53% and -0.66%, respectively. The long gestation period of capital investment and upfront cost may explain the negative effects as capital investment involves expenditure sooner, but the growth benefit is received in another time period. There will be costs to infrastructure and other types of development (like human capital development) that will reduce consumption as the resource diversions will be felt immediately. Increased capital investment will then create a demand for profit. So much capital can

accumulate can create inefficiencies and keep capital levels higher than optimal. Furthermore, where there is too much capital, it will also mean underutilized resources, each with effects that dampen short-run growth. Overall, the short-run findings corroborate aspects of Keynesian and Wagnerian theories, affirming the growth-enhancing potential of targeted public expenditure. The results are consistent with empirical evidence from James (2017), Al-Fawwaz (2016), and Ochieng (2014), while diverging from studies such as Hasnul (2015), Lupu et al. (2018), and Abu & Abdulahi (2010), highlighting the contextual nature of fiscal policy effectiveness.

Table 4: Short-run Estimation Results

Co-integrating Form		
Variables	Coefficient	Prob.
D(LNRGDP(-1))	1.165370	**0.0085*****
D(LNAG)	-0.071330	**0.0944**
D(LNAG(-1))	-0.185811	**0.0175****
D(LNEDUC)	0.150610	0.6557
D(LNEDUC(-1))	0.121178	0.6744
D(LNHE)	0.529771	**0.0351****
D(LNHE(-1))	0.217975	0.0887
D(LNDE)	-0.515822	0.0930
D(LNDE(-1))	0.995276	**0.0217****
D(LNLF)	15.337985	**0.0476****
D(LNLF(-1))	44.565310	**0.0185****
D(INFR)	0.007174	0.0938
D(INFR(-1))	0.013695	**0.0215****
D(LNTOP)	-1.399846	**0.0117****
D(LNTOP(-1))	0.781750	**0.0349****
D(LNGFCF)	-1.531022	**0.0223****
D(LNGFCF(-1))	-0.667182	**0.0420****
CointEq(-1)	-1.964993	**0.0036*****
*CointEq = LNRGDP - (-0.0596*LNAG + 1.2176*LNEDUC + 0.3499*LNHE - 0.0240*LNDE + 2.4997*LNLF -0.0065*INFR -1.3299*LNTOP -0.2057*LNGFCF -23.6867)*		

***p < 0.01, **p < 0.05

Diagnostic and Stability Tests

Furthermore, lnLF considerably accelerates economic growth in the near term. While a one-period increase in lnLF of one percent raises lnRGDP by 15.33 percent, a one-period lag in lnLF of one percent raises lnRGDP by 44.56 percent in the short term. This is due to the high employment rate and abundance of job openings at the time, as well as the fact that more people were employed in the productive and development sectors. More

goods and services are produced for the same amount of relative work in an economy when labor productivity rises. More goods and services can be consumed at more affordable costs thanks to this increase in output.

Conclusions and Policy Implications

This study used an ARDL framework to evaluate how government spending affected Ethiopia's economic growth between 1990 and 2021. The findings show that while defense and health spending support short-term expansion, education spending consistently fosters long-term growth. On the other hand, due to inefficiencies and delayed returns, agricultural spending and gross fixed capital formation have detrimental short-term effects. Labor force participation contributes positively to growth, whereas trade openness hampers long-run performance, exposing structural trade weaknesses.

These findings demonstrate that public spending can be a powerful instrument for growth, but its effectiveness depends on sectoral targeting and implementation efficiency.

Policy Implications

- Prioritize Education Investment –Direct greater resources to education to strengthen human capital and sustain long-run growth.
- Scale Up Health Spending – Expand healthcare access and infrastructure to improve labor productivity and support both short- and long-term outcomes.
- Reform Agricultural Expenditure – Address inefficiencies through modernization, improved input use, and better-targeted investments.
- Restructure Trade Policy – Promote export diversification, value addition, and competitiveness to turn trade into a growth driver.
- Optimize Capital Formation – Ensure infrastructure projects are well-targeted and efficiently implemented to maximize productivity gains.

In conclusion, Ethiopia's growth trajectory can be strengthened by prioritizing education and health, improving agricultural efficiency, and restructuring trade and investment policies. Achieving inclusive and long-lasting development depends on the efficient distribution and administration of public funds.

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