The Impact of Government Expenditure Budget on Economic Growth In The Case Of Ethiopia

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Abstract
The paper examines the impact of government expenditures on economic growth in Ethiopia based on annual time series data from 1991 to 2016, gathered from the Ethiopian Ministry of Finance and World Bank databases. Economic growth depends on capital and recurrent expenditure, agriculture, industry, trade, foreign direct investment, services, and inflation. The regression model between the variables Durbin-Watson and VIF Test for autocorrelation and multicollinearity was the instrument of analysis. The findings show that the dependent variable of economic growth has a positive and significant relationship with the predictors of trade, capital expenditure, and services. The beta coefficient is highly positive for capital expenditure, trade, and the service sector, implying that the higher the investment in services and trade, as well as an increase in capital expenditure, the greater the economic growth. The government should increase its efforts to guarantee that resources are appropriately managed and invested in producing areas to support economic growth.
Keywords: Autocorrelation, Economic expenditure, Economic growth, Multicollinearity, Regression

1.   INTRODUCTION

The primary goal of public expenditure policy is to achieve long-term, equitable economic growth. Many government programs are geared primarily towards encouraging long-term, equitable economic growth. Public spending can and has played a significant role in the building of physical and human capital over time. Appropriate public spending may also be useful in stimulating economic growth, especially in the short run, when infrastructure or skilled workforce constraints become an effective limitation on increased production (IMF, 2020). For decades, the extent of government spending and its impact on long-run economic development, as well as vice versa, has been a topic of intense debate (VAMVOUKAS, 2004). Budget deficits, according to the macroeconomic literature, are stimulative to the economy, and budget surpluses are recessionary. However, the idea that increased government spending will boost the economy is debatable. Policymakers are often interested in demand management strategies and supply-side policies when assessing effective policy measures to encourage the economy. Demand management policies are concerned with the control of the money supply and government spending. Controlling the money supply will have an impact on the degree of liquidity in the financial sector, affecting private expenditure. Changes in government expenditure have a direct impact on consumer spending (Brahmasrene, 2007). The relationship between government expenditure and economic development has gotten a lot of attention in recent years, as Keynesian economists try to figure out how much government expenditure affects economic growth. Because of the absence of unanimity on the data and conclusions obtained, the consequence of their study has become more confusing than useful. Theoretical debates over the role of government expenditure in economic growth are still ongoing and contentious. From the literature, there are two major points of view (André, 2021), first, there's the Keynesian perspective, which sees government expenditure as a source of economic growth.

Thus, government intervention promotes economic activity when demand is low and slows it when demand is strong, resulting in internal and external imbalances. The case for government spending indicates that investing in roads, power, transportation, telecommunications, education, and health produces benefits that boost firm productivity and hence assist economic growth. In contrast to the Keynesian theory, neoclassical scholars assert that an expansionary fiscal policy has no positive effect on economic activity. According to these scholars, economic revitalization plans based on public expenditure would have a depressing effect on the economy since public spending crowds out private investment and consumption. These negative effects result from economic actors anticipating future fiscal policy consequences and adjusting their consumption and savings behavior accordingly. According to the macroeconomic literature, budget deficits are expansionary to the economy while budget surpluses are contractionary. However, the notion that more government expenditures can stimulate growth is controversial. When considering the appropriate policy measures that stimulate growth, policymakers are usually interested in demand management policies and supply-side policies. Demand management policies concentrate on the management of money supply and government expenditures. Controlling money supply will affect the level of liquidity in the financial market, and thus alters private spending. A change in the level of government spending directly affects aggregate demand in the economy.

2. STATEMENT OF THE PROBLEM

The Government expenditure budget has a significant impact on economic growth. Because of the differences in nature and goal, each component in the structure of Government budget expenditure has a distinct amount of effect on economic growth. The determination of whether or not Government budget expenditures influence the economy, as well as which component of government expenditures budget has a stronger impact on the economy, has significant implications for the government. Within a constrained budget, the government can nevertheless achieve faster economic growth by reallocating spending toward high-efficiency components and eliminating low-efficiency ones to reduce the economy's negative effect (Nguyen, 2019). There are two categories of public spending: developmental and non-developmental. The majority of the government's development spending is spent on infrastructure, industries, healthcare facilities, and educational institutions, among other things. The non-developmental expenditures are generally maintenance-related and include things like law and order, defense, and administrative services, among other things. The influence of taxes, spending, and budget balance on numerous economic issues such as resource allocation efficiency and factor accumulation rate is projected to affect a country's economic growth through the impact of government size on taxation, expenditure, and budget balance. (S. V. Seshaiah, 2018). In a country like Ethiopia, public spending is critical to economic progress. The level of public expenditure in highly populated nations like Ethiopia is rapidly expanding as the government's duties and participation in economic activity grow. In the past two decades, the Ethiopian economy showed double-digit economic growth. However, this economic growth could not be continued for different reasons.

3. INSIGHT INTO THE LITERATURE

Keynesian economists advocated the use of government spending to promote growth and development by encouraging aggregate demand, particularly during recessions. This is the most obvious reason for the government's involvement in modern economic operations. This is because the government is required to remove short-term economic inefficiencies and to direct a country's growth and development in a socially optimum path. (Chandana Aluthge A. J., 2021). Several economic theories may be used to analyze the link between government expenditure and economic growth. This investigation, however, is limited to Musgrave's notion of increased government expenditure and Wagner's theory. According to Verbeck (2000), a lower level of per capita wages resulted in lower demand for public services. According to Musgrave, rising income levels will boost demand for public services, which will, in turn, expand the number of services provided by the public sector. In the long run, it will encourage the government to spend more on them. In addition, if per capita income was exclusively focused on primary necessities that were above the level of

income, demand for health, education, and transportation provided by the private sector would rise, motivating the government to spend more money. This isn't always the case, as a rise in government revenue doesn't necessarily imply economic development. (M.F. Oladele, 2017) Government spending continues to be a key tool in the development process. In practice, at all stages of growth and development, it plays a critical part in the operation of any economy. Today, the majority of developing and developed nations employ public spending to improve income distribution, direct resource allocation to targeted sectors, and influence the composition of national income (Chandana Aluthge A., 2021). The link between government spending and economic development has long been studied and debated. The focus of the discussion and the argument is on the government's involvement in national economic development. Regarding the partnership, there are primarily two viewpoints. On the one hand, the conventional effective demand theory argues that government expenditure, as an exogenous component, may be employed as a significant policy instrument to boost economic development within the Keynesian macroeconomic framework. On the other hand, Adolph Wagner's 1890 theory of the "law of the rising state role" implies that government spending is an endogenous component or effect of economic progress rather than a cause (Emerenini, 2014).

4. EMPIRICAL REVIEW

Mitchell (2005) examined how government expenditure affects economic growth in industrialized nations. He analyzed the economic consequences of these reforms by assessing international evidence, reviewing the most recent academic research, citing examples of countries that have significantly reduced government spending as a share of national output, and citing countries that have significantly reduced government spending as a share of national output. He concluded that a large and increasing government is not conducive to higher economic performance, regardless of the technique or model used. He went on to say that shrinking the government would result in increased earnings and improved American competitiveness. From 1970 to 2008, Abu and Abdullah (2010) studied the link between government expenditure and economic development in Nigeria. They attempted to untangle the influence of government spending on economic growth using disaggregated analysis. Their findings show that government total capital spending, total recurrent spending, and education all have a negative impact on economic development. Government spending on transportation, communication, and health, on the other hand, boosts economic growth. They urge that the government enhance both capital and recurring spending, including education spending, and guarantee that funds allocated for growth in these areas are adequately utilized. They also suggest that the government provide support and enhance financing for anti-corruption bodies in order to combat the problem of Nigeria's high degree of corruption in government agencies.

According to (Muhammed, 2014) from 1975 to 2011, in Ethiopia, the relationship between economic growth and various compositions of public expenditures was examined using co-integrated error correction models. The results revealed that only health expenditure and total capital expenditure are positive and statistically significant in agriculture, education, transportation and communication, urban development and housing, and total recurrent expenditures, on the other hand, are statistically insignificant. Real recurrent government spending on health and real capital government spending on education were large, and both had a favorable impact on inclusive growth in the short and long term. While economic freedom and the real GDP growth rate have a positive and negative influence on achieving equitable income distribution, they are not large enough to alter individual growth. Government capital spending had a detrimental influence on health, although it was not considerable. Recurrent government investment in education, on the other hand, inhibits inclusive growth. This result might be owing to inefficiency in allocating such funds to the correct places, such as poor people, as a result of rent-seeking and corruption. This is backed up by the inefficiency of institutions in promoting inclusive growth (Bono, 2020).

5.   RESEARCH METHODOLOGY

The purpose of this paper is to assess the effects of government expenditure budgets on the Ethiopian economy through the two main components: capital and recurrent expenditure based on time series secondary data. The dependent variable in this study is economic growth, whereas the independent variables are capital and recurrent expenditure, agriculture, industry, service, foreign direct investment, inflation, and trade. The data were obtained from the World Bank database and Ethiopia's Ministry of finance for the period from 1991 to 2016 this covers 26 years of data.

Table 1 Research Data

Years	RE Billons	CE in Billions	RS in Billions	MDG Billions	TE Billions	GDP	FDI % GDP	AGRI % GDP	IND% GDP	SERV% GDP	INFL% GDP	TRD% GDP
1991	3.70	1.21	0.00	0.00	4.91	-7.14	7.28	58.67	7.28	29.67	19.08	9.01
1992	3.06	1.48	0.00	0.00	4.54	-8.67	6.09	63.83	6.09	26.83	15.53	15.67
1993	3.52	1.78	0.00	0.00	5.30	13.14	7.45	59.95	7.45	28.71	13.38	17.69
1994	4.51	2.69	0.00	0.00	7.20	3.19	8.18	52.70	8.18	33.80	2.93	29.01
1995	5.71	3.16	0.00	0.00	8.87	6.13	9.29	51.92	9.29	33.13	12.71	29.55
1996	5.89	3.56	0.00	0.00	9.45	12.43	9.78	51.17	9.78	33.27	0.24	29.77
1997	3.65	4.07	1.41	0.00	9.13	3.13	12.20	54.03	12.20	27.37	0.21	28.93
1998	4.96	1.78	3.23	0.00	9.97	-3.46	11.57	49.06	11.57	32.84	-0.15	37.41
1999	7.10	2.39	3.37	0.00	12.86	5.16	12.19	45.49	12.19	35.86	2.22	38.24
2000	10.28	2.14	2.68	0.00	15.10	6.07	11.41	44.67	11.41	37.45	9.46	33.26
2001	7.24	3.52	3.89	0.00	14.65	8.3	0.35	42.34	11.93	38.5	-5.76	39.54
2002	7.72	4.53	4.21	0.00	16.46	1.52	0.26	38.69	12.74	41.44	-3.62	40.32
2003	6.90	4.58	4.90	0.00	16.38	-2.16	0.47	37.23	12.9	42.75	12.77	53.95
2004	8.41	6.26	5.31	0.00	19.98	13.57	0.55	38.68	12.69	40.07	3.91	54.44
2005	8.62	8.50	5.85	0.00	22.97	11.82	0.27	41.17	11.79	39.14	9.88	58.09
2006	8.68	11.84	7.46	0.00	279.82	10.83	0.55	42.52	11.59	38.57	11.55	56.04
2007	8.54	13.84	10.02	0.00	323.98	11.46	0.22	42.27	11.59	39.11	17.22	51.42
2008	10.39	17.36	14.21	0.00	419.59	10.79	0.11	45.18	10.21	37.9	30.31	51.9
2009	10.82	26.48	17.31	0.00	546.05	8.80	0.22	45.88	9.68	38.77	24.15	40.83
2010	13.21	37.56	20.51	0.00	712.82	12.55	0.29	41.44	9.44	41.76	1.44	52.27
2011	17.29	43.80	26.18	0.00	872.66	11.18	0.63	41.25	9.66	41.43	20.06	56.33
2012	35.98	41.49	30.88	12.86	1,212.03	8.65	0.28	44.33	9.48	38.58	33.54	49.88
2013	26.85	60.83	36.62	17.22	1,415.14	10.58	1.34	41.24	10.94	39.67	4.9	45.35
2014	30.04	69.14	42.80	14.57	1,565.57	10.26	1.86	38.52	13.47	39.89	10.98	46.82
2015	41.73	68.84	62.66	14.69	1,879.21	10.39	2.63	36.06	16.3	39.55	10.83	42.71
2016	70.45	86.06	79.08	0.48	2,360.65	9.43	4.14	34.7	21.93	36.72	10.4	37.12

Source: Ministry of Finance & World Bank

Where RE recurrent expenditure, CE capital expenditure, RS regional subsidy, MDG millennium development goal, TE total Expenditure, GDP Gross Domestic Product, FDI foreign direct investment, ARG agriculture, IND industry, SERV service, INFL inflation, and TRD trade.

Table 1: Pearson's correlations matrix of dependent and independent variables [[

	Economic Growth	Recurrent Expenditure	Capital Expenditure	Agriculture	Industry	Service	Foreign Direct Investment	Inflation	Trade
Economic Growth	1								
Recurrent Expenditure	.064 .37	1							
Capital Expenditure	.399* (.022)	.708** .000	1						
Agriculture	-.485** .006	.555** .002	-.568** .001	1					
Industry	.259 (.101)	.733** .000	.580** (.001)	-.743 .000	1				
Service	.476** (.007)	.315 .058	.416* (.017)	-.705** .000	.401* (.021)	1			
Foreign Direct Investment	-.397* (.022)	-.267 .074	-.396* (.023)	.595** .001	-.150 .232	-734** .000	1		
Inflation	.057 .391	.204 .159	.218 .142	.076 .338	-.225 .134	.046 .412	-.327 .052	1	
Trade	.559** .002	.224 .136	.329 .050	-.812** .000	.358* .036	.860** .000	-.689** .000	.120 .280	1

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

Model 1: The dependent variable is economic growth, whereas the determinants are independent factors.

EG = β0 + β1RE + β2CE + β3 AGR + β4IND + β5SER + β6 FDI + β7 INF + β8Trd+ Ɛ

The highest positive and significant correlation coefficient of 0.559 is found between economic growth and the trade sector, while the lowest and most negative correlation coefficient, -0.860, is found between the trade sector and services. Service and capital expenditure, with a positive and significant correlation coefficient of.476 and.399, respectively, affect the economic growth of the country, implying that the higher the investment in the service sector and the higher the capital expenditure budget, the higher the economic growth. The findings show that current expenditure, industry, and inflation are positively associated with the dependent variable of economic growth, In addition, foreign direct investment and agriculture are related negatively to economic growth, implying that the higher foreign direct investment and agriculture, the lower the economic growth.

5.1. Regression analysis

This study uses secondary data analysis based on the regression model to examine the statistical significance and reliability of the outcome. It primarily focuses on regression results from various model parameters in order to investigate the influence of government expenditure on economic growth.

Table 2 Collinearity Statistics

Model	B	t	Sig	Collinearity Statistics		F	Sig
				Tolerance	VIF		
Constant	211.887	1.137	.271				
RE	-0.005	-0.017	.689	.315	3.177		
CE	.507	.409	.007	.113	8.843		
ARG	-2.174	-1.196	.247	.195	5.119		
IND	-2.438	-1.093	.289	.486	2.057	57.214	.009
SER	2.170	.975	0.034	.359	2.785		
FDI	-.101	-.230	.821	.355	2.817		
INF	.018	.050	.961	.548	1.824		
Trade	2.213	.857	0.021	.361	2.718		
R .783 **R-Square .742** **Durbin-Watson 1.689**							

Economic growth: Dependent Variable

As shown in Table 2, the tolerance levels for all variables are greater than 0.10, the VIF value is less than 10, and the correlation matrix of all variables has paired values less than 0.80 (table1 above), this result indicates that there is no multicollinearity issue that distorts the findings analyzed.

6. CONCLUSION AND RECOMMENDATION

The purpose of this study was to discover which components of public expenditure contribute to growth and development, which ones don't, and which ones should be reduced or decreased to the absolute minimum.

The study employs a statistical methodology based on economic models, trend analysis, and basic regression. The findings show that economic growth is positively associated with and dependent on the service sector, trade, and capital expenditure. This means that the more trade, service, and capital expenditures there are, the higher economic growth will be. Increases in FDI and agriculture, on the other hand, result in weaker economic growth. Based on the findings the following recommendations are forward to the policymakers and concerned bodies:

- The government should devise an effective expenditure budget control system to enhance efficiency in public sectors and increase its capital expenditure budget to build and improve infrastructure to attract foreign direct investments so that it stimulates the economy's growth.
- The government should create a conducive environment by modernizing its services so that investors engage in the service and trade sectors in order to contribute to economic growth.
- The government should use both monetary and fiscal policies as inflation controlling techniques to improve the living standards of its citizens.
- Agriculture should be given a higher emphasis on both diversity and technology, especially in a country like Ethiopia where the majority of the society is agrarian.

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