

**ADDIS ABABA UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**

**PUBLIC EXPENDITURE IN ETHIOPIA:  
TREND AND ITS SIGNIFICANCE**

**BY**  
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TREND AND ITS SIGNIFICANCE**

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This is to certify that the thesis prepared by Zerihun Assefa, entitled: **Public Expenditure in Ethiopia: Trends & its Significance** and submitted in partial fulfillment of the requirements for the Degree of Master of Arts in Applied Economic Modeling and Forecasting (Financial Policy Analysis and Planning) complies with the regulations of the university and meets the accepted standards with respect to originality & quality.

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## **Abstract**

Improvement of life of citizens through public expenditure has raised questions for a number of years. Moreover, different theories were framed and varieties of policies were articulated on the importance of public expenditure and its significance to growth.

This paper examines the impact of public expenditure (disaggregated into recurrent and capital expenditure) on economic growth from 1973 to 2005 E.C. Three variable multiple regression model was adopted while recurrent expenditure and capital expenditure were used as independent variables and gross domestic product - GDP, as dependent variable. The results suggest that both recurrent public expenditure and capital expenditure had positive and significant impact on economic growth. This necessitates the government to follow a parallel movement among these expenditures and avoid doing one at the expense of another as the nation should not be starved today for the return of tomorrow. Moreover, trend of capital expenditure is increasing that, if continued, shows the country's bright future in capital investment if it is properly managed and free from misallocation.

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## **List of Acronyms**

ADF = Augmented Dickey-Fuller

ECT = Error Correction Term

EPRDF = Ethiopian People Revolutionary Democratic Front

GDP = Gross Domestic Product

IFPRI = International Food Policy Research Institute

MoFED = Ministry of Finance & Economic Development

OLS = Ordinary Least Squares

WB = World Bank

# CHAPTER ONE

## INTRODUCTION

### 1.1 BACKGROUND

This paper attempts to examine the role of public expenditure, recurrent & capital, on the economic growth of Ethiopia. The roles of the fiscal authority in developed & developing countries are markedly different. In these countries there is a concern for raising living standards over time, but this need is much more pronounced in developing countries, given the extent & depth of poverty in the countries. In the relative absence or perpetual weakness of institutions to be mobilized and direct savings, the role of the state is crucial in harnessing the resources for development. Since the regulatory apparatus is weak & market signals are imperfect, the state has an important role to play in allocating investment funds. Further, with widespread poverty, there is the expectation that fiscal expenditures would play a major role in anti-poverty programs (Deverajan, 1996).

Public expenditure refers to Government expenditure, i.e. Government spending. It is incurred by Central, State and Local governments of a country. That is, public expenditure can be defined as the expenditure incurred by public authorities like central, state and local governments to satisfy the collective social wants of the people.

The relationship between economic growth & public expenditure is an important subject of analysis & debate. A central question is whether or not public sector spending increases the long run steady state growth rate of the economy. Some scholars are of the opinion that public expenditure, notably on physical infrastructure & human capital, can be growth enhancing although the financing of such expenditures can be growth retarding in the short run.

Public expenditure is the expenditure incurred by public authorities like central, state and local governments to satisfy the collective social wants of the people. Before 20th century most of the governments followed laissez faire economic policy and also the role was also limited, thus the size of the public expenditure is small.

But during 20th century and onwards this has increased significantly. During great depression John Maynard Keynes advocated the role of public expenditure in determination of level of income and its distribution. In developing countries like Ethiopia, public expenditure not only accelerates economic growth and promotes employment opportunities but also plays a useful role in reducing poverty and redistribution of income. But what is important is the direction of the public expenditure and its result.

Moreover, there are different criteria to classify public expenditure like some experts classify public expenditure on the basis of functions for which it has been incurred.

The government performs various functions like defense, social welfare, agriculture, infrastructure and industrial development. The expenditure incurred on such functions fall under this classification. These functions are further divided into subsidiary functions. This kind of classification provides a clear idea about how the public funds are spent.

Another way of classification is revenue and capital expenditure. Revenue expenditure is current or consumption expenditures incurred on civil administration, defense forces, public health and education, maintenance of government machinery. This type of expenditure is of recurring type which is incurred year after year. On the other hand, capital expenditures are incurred on building durable assets, like highways, multipurpose dams, irrigation projects, buying machinery and equipment. They are non recurring type of expenditures in the form of capital investments. Such expenditures are expected to improve the productive capacity of the economy. Modern economists suggested public expenditure can be classified as development and non-development expenditures.

All expenditures that promote economic growth and development are termed as development expenditure or can also be said as productive expenditure and all unproductive expenditures are termed as non-development expenditures.

## **1.2 STATEMENT OF THE PROBLEM**

Decision makers are divided as to whether public expenditure helps or hinders economic growth. Advocates of great government argue that government programs provide valuable “public goods” such as education & infrastructure. They also claim that increases in government spending can bolster economic growth by putting money in people’s pockets. Proponents of smaller government have the opposite view. They explain that government is too big & that higher spending undermines economic growth by transferring additional resources from the productive sector of the economy to the government, which uses them less efficiently. They also warn that an expanding public sector complicates efforts to implement pro-growth policies –such as fundamental tax reform & personal retirement accounts- because critics can use the existence of budget deficits as a reason to oppose policies that would strengthen the economy.

A major concern about Keynesian school of thought is that; if government interference is an effective remedy for recession and has no side effects, why do so many oppose a policy of budgetary expansion? Firstly, a large public sector diminishes the business sector in personnel & in sources of investment. It may be maintained that in times of recession, much of the work force is not employed at all, and therefore, employment in the public sector does not come at the expense of the private sector.

Furthermore, in a growing economy, government spending can be curtailed, the government sector can revert to a lower level of spending and personnel can be redirected to the business sector. However, while budgetary expansion is easy in a recession, cut-backs during economic highs are very difficult.

The relationship between public expenditure and growth is especially important for developing countries, most of which have experienced increasing levels of public expenditure over time. There is evidence that, unlike in the developed countries, consumption is not negatively related with economic growth.

This paper shall empirically investigate this relationship in the case of Ethiopia, with a view of explaining the reason behind the observed causality between them.

### **1.3 OBJECTIVE**

This paper intends to appraise the relationship between public expenditure, disaggregated in to recurrent & capital expenditure, & economic growth over the years 1973-2005. The trend of public expenditure will be assessed with reference to the Ethiopian economy. The specific objectives are:

- 1) To identify the trends of public expenditure disaggregated in to recurrent & capital expenditure, in Ethiopia.
- 2) To explore the short run as well as the long run impact of public expenditure on growth.
- 3) To suggest policy recommendations from the results.

### **1.4 SOURCES OF DATA**

Secondary data will be used in this analysis. The relevant data to be used would be sourced from public expenditure database of IFPRI, MOFED'S annual reports & statement of accounts for the year under review.

### **1.5 METHODOLOGY**

The econometric approach that would be adopted to explore the relationship between public expenditure & growth in Ethiopia shall be the OLS method. This econometric method would be used because it is very reliable & applicable in the current context. Simple regression models shall be adopted to capture the effect of recurrent & capital expenditures on Ethiopian economic growth (i.e. on real GDP).

### **1.6 SCOPE OF THE STUDY**

The trend of public expenditure & its significance on the performance of the economy shall be examined with data spanning from 1973 to 2005 E.C. Attention shall mainly be focused on exhaustive & productive public expenditure during the period under review.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 THEORETICAL LITERATURE REVIEW**

The theoretical foundation of the study shall be the Keynesian model, which indicates that during recession, a policy of budgetary expansion should be taken to increase the aggregate demand in the economy thus boosting the gross domestic product .Increase in government spending translates in increased employment in the public sector and increased orders of products from suppliers & firms in the business sector. Said differently, employment rises, income & profits of suppliers & firms increase, and they, too, can hire more employees to produce the goods and services ordered by the government. The unemployed, who have now found work, whether in the public sector or the business sector, enjoy an increase in income, and their demand & purchase of products increase. Larger profits also increase the purchasing power of firm owners & suppliers and the overall growth results in an increased demand for goods & investment.

According to the Keynesian model, if demand increases, business concerns to produce more merchandise & services, and the result is a substantial increase in the GDP, far more than the increase in government spending . Budgetary expansion acts as a catalyst to increase demand & production within sectors that do not have direct contact with public demand. Thus ,the Keynesian school of thought stresses that a harmonized society cannot be achieved and as such there is need for government interferences through her fiscal operations notably expenditure.

Generally, economic growth theory deals with long-run growth trend of the economy, or potential growth path. The focus is on factors that lead to economic growth over time and analysis of the forces that allow some economies to grow rapidly, some slowly and others not at all. Early growth theories emphasized on different aspects of the economy.

For instance, Mercantilists emphasized surplus balance of trade, Physiocrats emphasized agriculture as the source of all wealth while the Cameralists favoured taxation and state regulation for strong economy. Within the framework of the classical models of Smith and Malthus, economic growth is described in terms of fixed land and growing population. But without technological change, increasing population eventually exhausts the supply of free land and triggers law of diminishing returns which results to declining real wage down to subsistence level at which point Malthusian equilibrium obtains.

The Keynesians see demand as a prerequisite for growth. Therefore, their analysis concludes that aggregate demand management policies can and should be used to improve economic performance. In the Keynesian model, increase in government expenditure (on infrastructures) leads to higher economic growth. Contrary to this view, the neo-classical growth models argue that government fiscal policy does not have any effect on the growth of national output. However, it has been argued that government fiscal policy (intervention) helps to improve failure that might arise from the inefficiencies of the market.

Exploring the Keynesian framework, Harrod-Dommar model points out some dynamics of growth. For instance, to determine equilibrium growth rate in the economy, the balance between supply and demand for a country's output should be maintained. On supply side, saving is a function of the level of GDP. Investment is an important component of the demand for the output of an economy as well as the increase in capital stock. Therefore, the equilibrium rate of growth is given by matching proportionate change in output with the ratio of savings-output to that of capital-output. This sustains the economy along some warranted steady growth path. According to the model, temporary deviations from the warranted growth path would not be self-correcting. Because of the lack of self-correcting forces within the dynamics of the model, it is said to be characterized by 'knife-edge instability'.

That is, market-regulated growth espoused by the model is unstable and, thus, necessitates government intervention.

The public expenditure has been assigned a key role in the economic development of any country more specifically in the underdeveloped and developing countries and hence there has been a rapid expansion of the public expenditure in a developing economy like Ethiopia.

According to Adolf Wagner's law, the expansion of public expenditure is in proportion to the growth of the national income i.e. increase in government activity is accompanied by an increase in public expenditure. This is due to the fact that the government has to perform a number of functions more efficiently, which has led to an intensive growth in public activity thereby increasing public expenditure.

According to Peacock and Wiseman (1979), public expenditure grows over time, not at a constant rate, but on an arising curve. Emergencies like war and depression leads to increase in public expenditure.

Manh & Terukazu (2005) argue that public expenditure is an important instrument for a government to control the economy. Economists have been well aware of its two-side effects in promoting economic growth. On the one hand, public investment is a factor contributing to capital accumulation. Public expenditures are also used to fill up the holes that are left untouched in a market economy such as public utilities, health care, social security, etc. On the other hand, however, tax, which is the entire financial source for public expenditures, does directly reduce the benefits of taxpayers. As human capital plays the key role in promoting economic growth, a lower benefit of citizens is associated with a lower economic growth rate. Considering the economy as a whole, the question of how to spend public expenditures appropriately has been a difficult task.

Generally, public expenditure is spending made by the government of a country on collective needs and wants such as pension, provision, infrastructure, etc. Until the 19th century, public expenditure was limited as laissez faire philosophies believed that money left in private hands could bring better returns. In the 20th century, John Maynard Keynes argued the role of public expenditure in determining levels of income and distribution in the economy. Since then government expenditures has shown an increasing trend.

## 2.2 EMPIRICAL LITERATURE REVIEW

The empirical foundation of the study depends on the recurrent & capital components of public expenditure to assess its trend & significance on gross domestic product. Classification of public expenditure refers to the systematic arrangement of different items on which the government incurs expenditure.

As Manoj (2013) stated different economists have looked at public expenditure from different point of view. Recurrent expenditures are current or consumption expenditures incurred on civil administration, defense forces, public health and education, maintenance of government machinery. This type of expenditure is of recurring type which is incurred year after year. On the other hand, capital expenditures are incurred on building durable assets, like highways, multipurpose dams, irrigation projects, buying machinery and equipment. They are non-recurring type of expenditures in the form of capital investments. Such expenditures are expected to improve the productive capacity of the economy

Empirical researches on the effect of government expenditure on economic growth reported results such as: positive effect, negative effect, and those who observed mixed results and those who could not establish any relationship between government expenditure and economic growth. The first school of thought is those who support the idea that public expenditure has negative impact on economic growth.

Deverajan et al. (1996) shed light on the composition of public expenditure and economic growth for the panel of 43 developing countries from 1970 to 1990 and applied Ordinary Least Squares. Their findings suggest that increase in the share of recurrent expenditure has positive and statistically significant growth effects and by contrast, capital as a component of public expenditure has a negative impact on economic growth. These results, according to the study imply that, developing countries' governments have been misallocating public expenditure in favour of capital expenditures at the expense of recurrent expenditures.

Niloy, Emranhul and Osborn (2003) used a disaggregated approach to investigate the impact of public expenditure on economic growth for 30 developing countries in 1970s and 1980s. The authors confirmed that government capital expenditure in GDP has a significant positive association with economic growth, but the share of government recurrent expenditure in GDP was shown to be insignificant in explaining economic growth.

Lawrence et al (2014) investigates the joint effects of capital and recurrent expenditures of government on the economic growth of Nigeria using the ordinary least squares method for estimating multiple regression models covering 1980-2011 time periods. The regression results showed that both capital and recurrent expenditures impacted positively on economic growth during the period of study. The recurrent expenditure has a stronger and more accelerating effect on growth than capital expenditure. This is attributed to the fact that capital expenditure which is not meant for immediate consumption is more prone to misuse and embezzlement, and also could make it to be less growth enhancing.

Modebe (2012) suggest that in a growing economy, government spending can be curtailed, the government sector can revert to a lower level of spending and personnel can be re-directed to the business sector. However, while budgetary expansion is easy in a recession, cut-backs during economic highs are very difficult. The result emanating from this study reveals that while recurrent government expenditure had positive and non-significant impact on economic growth, capital expenditure had negative and non-significant impact on economic growth thus re-echoing the need for increase and encouragement of private sector investment while have proven over the years as a more efficient utilization of resources compared to public sector The efficiency of the private sector particularly compared to the government sector cannot be over emphasized. A public organization can continue its activity even if the services it provides are no longer required.

Its directors and the relevant minister will not be quick to relinquish power which is a function of the jobs they control and the funds at their disposal. The result is superfluous services, wasting personnel and capital, which could be directed to production that provides well-being and benefit to individuals in the economy.

Moreover, based on findings from the empirical analysis, Ifeanyi et.al (2012) offers the following recommendations, among others:

- Capital and recurrent expenditures on economic services should be directed mainly to productive economic activities. This will stimulate activities in the economic sectors and, perhaps, reverse the negative effect of on economic growth.
- The proportion of government total expenditure that goes into capital and recurrent expenditure financing should be increased since these components exert significant positive effect on economic. Similarly, the share of recurrent expenditure on transfers should be increased since it exerts positive effect on economic growth.
- Since the analysis showed that capital and recurrent expenditure on social and community services have more positive effect on growth than the other components, they require more favorable attention in the allocation of government expenditures.
- The existence of a relationship between government expenditure and economic growth necessitates the continued use of fiscal policy instruments to pursue macroeconomic objectives.

## **CHAPTER THREE**

### **PUBLIC EXPENDITURE OVERVIEW**

#### **3.1 DEFINITION**

In National Income Accounting, government spending, government expenditure, or public spending on goods and services includes all government consumption and investment but excludes transfer payments made by a state. Government acquisition of goods and services for current use to directly satisfy individual or collective needs of the members of the community is classed as government final consumption expenditure. Government acquisition of goods and services intended to create future benefits, such as infrastructure investment or research spending, is classed as government investment. Government outlays that are not acquisition of goods and services, and instead represent transfers of money, such as social security payments, are called transfer payments and are not included in what the national income accounts refer to as government expenditure. The two types of government spending, on final consumption and on gross capital formation, together constitute one of the major components of gross domestic product.

John Maynard Keynes was one of the first economists to advocate government deficit financing as part of the fiscal policy response to an economic contraction. In Keynesian economics, increased government spending is thought to raise aggregate demand and increase consumption, which in turn leads to increased production. Keynesian economists argue that the Great Depression was ended by government spending programs such as the New Deal and military spending during World War Second. According to the Keynesian view, a severe recession or depression may never end if the government does not intervene. Classical economists, on the other hand, believe that increased government spending exacerbates an economic contraction by shifting resources from the private sector, which they consider productive, to the public sector, which they consider unproductive.

### **3.2 MEANING & CLASSIFICATION**

Public expenditure refers to Government expenditure i.e. Government spending. It is incurred by Central, State and Local governments of a country.

Public expenditure can be defined as, "The expenditure incurred by public authorities like central, state and local governments to satisfy the collective social wants of the people."

Throughout the 19<sup>th</sup> Century, most governments followed laissez faire economic policies & their functions were only restricted to defending aggression & maintaining law & order. The size of public expenditure was very small.

But now the expenditure of governments all over has significantly increased. In the early 20<sup>th</sup> Century, John Maynard Keynes advocated the role of public expenditure in determination of level of income and its distribution.

In developing countries, public expenditure policy not only accelerates economic growth & promotes employment opportunities but also plays a useful role in reducing poverty and inequalities in income distribution.

#### **Classification of Public Expenditure**

Classification of Public expenditure refers to the systematic arrangement of different items on which the government incurs expenditure

There are a variety of ways in which Public Expenditure can be classified but broadly it is classified under the following heads:

- i. According to the authority which spends the money viz (a) Federal or Union or Central expenditure (b) State or Provincial expenditure, (c) Local expenditure or expenditure of municipalities and other local bodies.
- ii. According to the object of expenditure viz (a) Development activities like providing subsidies, electric power, transport service, welfare activities, employment opportunities and price stability etc. (b) Non-developmental activities like money spent on administrative machinery, law and order, interest payment on public debt and defense etc.

iii. According to the nature of expenditure via (a) Recurrent Expenditure and (b) Capital Expenditure. Recurrent Expenditure is current expenditure e.g. administrative and maintenance expenditure. This expenditure is of a recurring type while Capital expenditure is of capital nature and is incurred once for all. It is non-recurring expenditure e.g. expenditure in building multipurpose projects or a setting up big factories like steel plants, money spent on land, machinery and equipment.

Different economists have looked at public expenditure from different point of view. The following classification is a based on these different views.

### **A. Functional Classification**

Some economists classify public expenditure on the basis of functions for which they are incurred. The government performs various functions like defense, social welfare, agriculture, infrastructure and industrial development. The expenditure incurred on such functions fall under this classification. These functions are further divided into subsidiary functions. This kind of classification provides a clear idea about how the public funds are spent.

### **B. Recurrent and Capital Expenditure**

Recurrent expenditures are current or consumption expenditures incurred on civil administration, defense forces, public health and education, maintenance of government machinery. This type of expenditure is of recurring type which is incurred year after year. On the other hand, capital expenditures are incurred on building durable assets, like highways, multipurpose dams, irrigation projects, buying machinery and equipment. They are non-recurring type of expenditures in the form of capital investments. Such expenditures are expected to improve the productive capacity of the economy.

### **C. Transfer and Non-Transfer Expenditure**

A.C. Pigou, the British economist has classified public expenditure as Transfer expenditure & Non-transfer expenditure

**Transfer Expenditure:-**Transfer expenditure relates to the expenditure against which there is no corresponding return. Such expenditure includes public expenditure on:-

- National Old Age Pension Schemes,
- Interest payments, Subsidies,
- Unemployment allowances,
- Welfare benefits to weaker sections, etc.

By incurring such expenditure, the government does not get anything in return, but it adds to the welfare of the people, especially belong to the weaker sections of the society. Such expenditure basically results in redistribution of money incomes within the society.

**Non-Transfer Expenditure:-**The non-transfer expenditure relates to expenditure which results in creation of income or output. The non-transfer expenditure includes development as well as non-development expenditure that results in creation of output directly or indirectly.

- ❖ Economic infrastructure such as power, transport, irrigation, etc.
- ❖ Social infrastructure such as education, health and family welfare.
- ❖ Internal law and order and defense.
- ❖ Public administration, etc.

By incurring such expenditure, the government creates healthy conditions or environment for economic activities. Due to economic growth, the government may be able to generate income in form of duties and taxes.

### 3.3 THEORY & POLICY ON PUBLIC EXPENDITURE

#### 3.1. THEORY

**Wagner's Law:** Wagner's Law is named after the German political economist Adolph Wagner (1835-1917), who developed a "law of increasing state activity" after empirical analysis on Western Europe at the end of the 19th century. He argued that government growth is a function of increased industrialization and economic development. Wagner stated that during the industrialization process, as the real income per capita of a nation increases, the share of public expenditures in total expenditures increases. The law cited that "The advent of modern industrial society will result in increasing political pressure for social progress and increased allowance for social consideration by industry."

Wagner (1893) designed three focal bases for the increased in state expenditure. Firstly, during industrialization process, public sector activity will replace private sector activity. State functions like administrative and protective functions will increase. Secondly, governments needed to provide cultural and welfare services like education, public health, old age pension or retirement insurance, food subsidy, natural disaster aid, environmental protection programs and other welfare functions. Thirdly, increased industrialization will bring out technological change and large firms that tend to monopolize. Governments will have to offset these effects by providing social and merit goods through budgetary means.

In his *Finanzwissenschaft* (1883) and *Grundlegung der politischen Wissenschaft* (1893), Adolf Wagner pointed out that public spending is an endogenous factor, which is determined by the growth of national income. Hence, it is national income that causes public expenditure. The Wagner's Law tends to be a long-run phenomenon: the longer the time-series, the better the economic interpretations and statistical inferences. It was noted that these trends were to be realized after fifty to hundred years of modern industrial society.

## **Peacock and Wiseman Theory of public expenditure**

In 1961, Peacock and Wiseman elicited salient shaft of light about the nature of increase in public expenditure based on their study of public expenditure in England. Peacock and Wiseman (1967) suggested that the growth in public expenditure does not occur in the same way that Wagner theorized. Peacock and Wiseman choose the political propositions instead of the organic state where it is deemed that government like to spend money, people do not like increasing taxation and the population voting for ever-increasing social services.

There may be divergence of ideas about desirable public spending and limits of taxation but these can be narrowed by large-scale disturbances, such as major wars. According to Peacock and Wiseman, these disturbances will cause displacement effect, shifting public revenue and public expenditure to new levels. Government will fall short of revenue and there will be an upward revision of taxation. Initially, citizens will engender displeasure but later on, will accept the verdict in times of crisis. There will be a new level of “tax tolerance”. Individuals will now accept new taxation levels, previously thought to be intolerable. Furthermore, the public expect the state to heal up the economy and adjust to the new social ideas, or otherwise, there will be the inspection effect.

Peacock and Wiseman viewed the period of displacement as reducing barriers that protect local autonomy and increasing the concentration power over public expenditure to the Central government. During the process of public expenditure centralization, the role of state activities tend to grew larger and larger. This can be referred to the concentration process of increasing public sector activities.

Nowadays, the growth in public expenditure has become a compulsion and thus, the disturbance situations matter little.

## **The Classical v/s the Keynesian approach of public expenditure**

The classical economists believe that the government intervention brings more harm than good to an economy and that the private sector should carry out most of the activities. In his *Welfare of Nations*, Adam Smith (1776) advocated much on the “laissez-faire” economy where the profit motive was to be the main cause of economic developments. According to the classical dichotomy, an increase in the total amount of money leads to a proportionate increase in all money prices, with no change in the allocation of resources or the level of real GDP, which is known as money neutrality. The classical economists assumed that the economy was perfect: it is always at full employment level, wage rate and rate of interest is self-adjusting and as a matter of fact, the budget should always balance as savings is always equal to investment. Since they believe that the economy was always at its full employment level, their objective was certainly not growth.

Following the 1929-30 Great Depression, the classical economists that opposed government interventions, argued that strong trade unions prevented wage flexibility which resulted in high unemployment. The Keynesians, on the other hand, favored government intervention to correct market failures. In 1936, John Maynard Keynes’ (1883-1946) “*General Theory of Employment, Interest and Money*”, criticized the classical economists to put too much emphasis on the long run. According to Keynes, “we are all dead in the long run”. Keynes believed depression needed government intervention as a short term cure. Increasing saving will not help but spending. Government will increase public spending giving individuals, purchasing power and producers will produce more, creating more employment. This is the multiplier effect that shows causality from public expenditure to national income.

Keynes categorized public expenditure as an exogenous variable that can generate economic growth instead of an endogenous phenomenon. Hereby, Keynes believed the role of the government to be crucial as it can avoid depression by increasing aggregate demand and thus, switching on the economy again by the multiplier effect.

It is a tool that brings stability in the short run but this need to be done cautiously as too much of public expenditure lead to inflationary situations while too little of it leads to unemployment.

**Maximum Social Advantage:** The politics of public expenditure have gained new dimensions, namely welfare maximization. The principle of maximum social advantage is derived from the principle of equi-marginal utility. The law states that a rationale individual will distribute his given money income on two or more goods in such a way, that the marginal utility of the last money spent on either good, is the same.

**Dalton's Condition:** According to Dalton, "public expenditure in every direction must be carried just so far that the advantage to the community of a further small increase in any direction is just balance by the disadvantage of a corresponding small increase in taxation and in receipts from any other source of public income. This gives the ideal of both public expenditure and public income". Hereby, there will be a cycle where money collected from the public, directly or indirectly, will go back to them in the form of public expenditure programmes. During this process, taxpayers suffer those benefitting from these social welfare programmes gain. For the population to benefit from these continuous transfers of funds, sacrifice must be less than benefit

**Pigou's Condition:** In his Economics of Welfare, Professor A. C. Pigou (1932) divided welfare economics into two parts, namely, the production and the distribution. The pigou tax rate is used to internalize negative externalities and taxes are used as subsidy for positive externalities. According to Professor Pigou (1928), the condition of maximum social advantage is that situation in which, "Expenditure should be pushed in a direction to the point at which satisfaction obtained from the last shilling spent is equal to the satisfaction lost in respect of the last shilling paid as taxes to the government.

**Transfer Payments:** A transfer payment is a '*payment for which no good or service is exchanged*'. In other words, money has simply been transferred from one person in society to another without anything being done for it. Normally when we transfer money we get something in exchange. It may be buying goods or services, or employing someone to do something. In the case of transfer payments, however, this doesn't happen. An example of this situation is unemployment benefit. The person unemployed has not done anything for the money - the government has simply transferred it to them from other taxpayers as they are in need.

The main government department that deals with transfer payments is the Department of Social Security. It makes welfare payments to those in need, but no good or service is exchanged. Most other government expenditure is **not** transfer payments, as the people receiving the payments are working in some way for them.

The main examples of transfer payments are:

- Benefits - unemployment and social security
- Pensions
- Lottery winnings

**Public Goods and Merit Goods:** In a free market economy goods and services will only be provided if firms can ensure they will receive payment for them. They will then provide whatever quantity is the most profitable. In doing this, they take account only of the costs and benefits to them. If there are *external costs or benefits*, they will not take account of these. This may mean that they don't provide the socially optimal level of output. Public goods and merit goods are goods that would either not be provided at all or would not be provided in sufficient quantity, for these reasons.

**Public goods:** Public goods are goods that would not be provided in a free market system, because firms would not be able to adequately charge for them. This situation arises because public goods have two particular characteristics. They are:

**Non-excludable** - once the goods are provided, it is not possible to exclude people from using them even if they haven't paid. This allows 'free-riders' to consume the good without paying.

**Non-rival** - this means that consumption of the goods by one person does not diminish the amount available for the next person.

We can see this if we look at the case of street lights. If a street light is provided by a firm, then it cannot exclude people from benefiting from it. It is not possible to charge people who walk under it. When people walk under it, it is also true that they don't make it go dimmer - they don't diminish the amount available for the next person. Street lights are therefore non-excludable and non-rival - they are **public goods**.

**Merit goods:** Merit goods are goods that would be provided in a free market system, but would almost certainly be under-provided. Take the case of education. If there were no state education provided at all, there would still be private schools for those who could afford them, and indeed many new private schools might open. However, there would not be nearly enough education provided for everyone to benefit. This happens because the market only takes account of the *private costs and benefits*. It does not take account of the *external benefits* that may arise to society from everyone being educated. For this reason, merit goods will be under-provided by the market.

If the private sector won't provide these goods in sufficient quantity, then the only way more will be provided is either if the government encourages firms to produce more (perhaps by subsidizing the good or service) or if provides them itself. A significant proportion of government expenditure arises from the government providing merit goods. The main examples are: Education, Health and Fire service.

**Current Spending vs Capital Spending:** Government expenditure (like expenditure by private sector firms) can be categorized into either 'current expenditure' or 'capital expenditure'. **Current expenditure** is recurring spending or, in other words, spending on items that are consumed and only last a limited period of time. They are items that are used up in the process of providing a good or service. In the case of the government, current expenditure would include wages and salaries and expenditure on consumables - stationery, drugs for health service, bandages and so on.

By contrast, capital expenditure is spending on assets. It is the purchase of items that will last and will be used time and time again in the provision of a good or service. In the case of the government, examples would be the building of a new hospital, the purchase of new computer equipment or networks, building new roads and so on. The breakdown between these two types of spending is very important. Capital expenditure has a lasting impact on the economy and helps provide a more efficient, productive economy. A new hospital, for example, will be much more efficient and allow more patients to be treated for many years into the future. Current expenditure, however, doesn't have such a lasting impact. Once the money is spent, it is gone and the effect on the economy is simply a short-term one.

### **Automatic Spending vs Discretionary Spending**

**Automatic expenditure** (not surprisingly!) is expenditure that happens automatically. In other words, the government doesn't have exact control over the level of this type of expenditure. The most obvious example of this is spending on benefits. The government sets regulations for who is entitled to benefits, and it sets the level of the benefits. However, the one thing that it cannot dictate is the number of people who may then be entitled to them as this will often depend on the state of the economy. As the economy goes into recession and people lose their jobs, more people will be entitled to benefits. This will mean government expenditure will rise - not because the government chose to spend more, but simply because of the state of the economy. This spending is therefore automatic spending.

**Discretionary spending** is, by contrast, spending the government *chooses* to make. In a time of recession, it may choose to spend more to try to boost the level of aggregate demand and therefore equilibrium output. At other times, it may choose to lower the level of expenditure to avoid '*crowding out*' private sector spending. Either way, it is operating a **discretionary fiscal policy**.

**The Multiplier:** When the government increases the level of its spending, the effects will often go well beyond the spending itself. There will often be knock-on effects in the economy as well. To illustrate this, consider the example of previously unemployed workers who are taken on by the government, say as construction workers. They will now be earning significantly more money. They will almost certainly spend most of this money, and the firms that they spend it with are also therefore better off. They in turn are likely to spend some of this extra money, and so the cycle begins again..... At each stage of the cycle, the amount being passed on will become less and less. Some might not be passed on because it is saved. Some might be spent on foreign goods and so leave the country. Some will be lost in tax as the government takes its share of the extra income.

The initial increase in expenditure has therefore led to a bigger increase in the level of income of the economy. This is known as the **Multiplier effect**. The size of the Multiplier will depend on how much income gets passed on at each stage. If the unemployed workers were to save all their extra income, then there would be no Multiplier at all and the cycle would stop. However, if they and everyone who receives extra income spends the majority of it (on UK goods and services) then the multiplier will be much bigger.

The multiplier can therefore be worked out from the extra consumption that is generated from each increase in income. This extra consumption is measured by the *marginal propensity to consume* and from the MPC we can work out the multiplier.

**POLICY:** The standard Keynesian analysis also postulates that an expenditure of the government on consumption or investment goods will result in an equal increase in exogenous aggregate public plus private spending on consumption and investment goods.

One type of simple Keynesian analysis would assume that government expenditure produces nothing of value. An increase in government expenditure financed by taxes has a positive effect on aggregate demand. But this is accompanied by a dollar-for-dollar reduction in (disposable) income combined with the same reduction in consumption that would have occurred had there been an equivalent decline in income from any other source. Since consumption declines by less than the decline in disposable income, the net effect on aggregate expenditure will be positive.

A more sophisticated Keynesian view would suggest that if the socially optimal amount of government expenditure is being undertaken a one-dollar increase in that expenditure should produce value exactly equal to the dollar of taxes required to finance it. Wealth, permanent income and consumption should not change. As a result, increases in government expenditure should have greater impact than the preceding Keynesian analysis would postulate because there will be no offsetting reductions in taxpayer wealth and consumption---unemployed workers will be put to work and will spend the earnings so received.

Another interpretation would be the situation where the country is engaged in a war. In this case wealth and consumption would be reduced by the government expenditure in comparison with the pre-war state, though not in comparison with the scenario where the war is avoided by surrender to the enemy. But standard Keynesian fiscal policy deals with government expenditure changes designed not to fight wars but to smooth cyclical fluctuations in output and employment. What is at issue is the timing of the path of government expenditure to offset fluctuations in private expenditure that cause variations in employment. Wealth effects from misallocating resources by making the expenditure too early or too late should be counterbalanced by the social gains from smoothing out fluctuations in output and employment.

So the question ultimately turns on whether a temporary expansion of government expenditure also leads to an expansion of total private plus public expenditure. While the possible wealth effects above may not be important, substitutions of public for private consumption and investment expenditures may well be.

Suppose, to take a somewhat silly but informative example, the government decides to hand out free soap and toothpaste to the community to increase employment in the factories producing these products. Since it must raise taxes to cover the expense of purchasing these household items (we have already dealt with the cases where bond and monetary finance are used instead of taxes), the public has to reduce either its consumption or its savings by the additional amount the government is spending. It would seem reasonable to suppose that people would maintain their original consumption of soap and toothpaste by simply substituting the products provided by government for those that were previously purchased in the private market. Total private plus public consumption would be unchanged and the fiscal policy would have no effect on the IS curve.

To have an effect on aggregate public plus private consumption the government has to supply something that the private sector would not otherwise have consumed. More generally, it has to induce an increase in the fraction of permanent income consumed. This may be a quite difficult undertaking.

Another form of government expenditure policy is the provision of welfare benefits to individuals whose need has been created by a decline in employment in a recession. Here, taxes are levied on people with incomes to pay them and the funds given as benefits to those with inadequate incomes. Aggregate consumption will increase to the extent that those who pay the taxes reduce their consumption by less than the additional spending by those who receive the benefits. An overall increase in spending might be expected to the extent that the recipients of the funds are more liquidity constrained than those paying the additional taxes. It might be easier for those paying the taxes to maintain consumption by borrowing than for the recipients of the funds to be otherwise able to borrow to maintain their consumption.

Another avenue for expanding government expenditure in recessions is an increase expenditure on capital goods. To the extent that the government undertakes investment expenditures that do not substitute for private investment expenditures---for example, building and fixing roads---total private plus public investment will increase. The ordering of new jet aeroplanes by the government airline to provide expanded service, on the other hand, might well reduce the future returns to investment in aeroplanes by competing private airlines so that the public-sector investment will be offset by an equal contraction of private-sector investment.

Also, if an increase in total public plus private investment is to increase aggregate demand and shift IS to the right, it must not be offset by a reduction in private consumption in response to the increase in taxes necessary to finance the expanded public expenditure. This will be assured if the level of wealth and permanent income is not significantly reduced. Such wealth reductions can be avoided if the government produces capital goods of value close to what would otherwise have been produced with the additional taxes raised.

A reduction in private sector expenditure in response to an increase in government expenditure is called crowding-out. Additional public expenditure can crowd out private expenditure, leaving total public plus private expenditure unchanged. While crowding-out usually will not be complete, some crowding out can nearly always be expected. Thus, in analyzing the effects of government expenditure changes on aggregate demand it is important to examine those expenditures carefully to make a judgment about the amount of crowding-out that might be expected in each particular case.

Another problem may arise even if the government attempts to offset the unemployment effects of a recession by producing additional roads or bridges or other public goods that it conventionally produces. The problem is that the workers employed by this additional government production will not typically be those laid off by the cyclical contraction of private production-the government may simply end up paying overtime to workers who have not been laid off.

It thus turns out that the government must be very careful as to the particular goods it produces during counter-cyclical expansionary policies. Given the planning requirements and the necessarily political nature of government expenditure, the recession may be over before a proper form of expenditure can be agreed upon and, if politically possible, undertaken.

Indeed, tax cuts and increases for the liquidity constrained would appear to be the easiest, quickest and therefore best counter-cyclical policies for governments to implement.

### **Public expenditure policy in Ethiopia:**

The events of 1991 plunged Ethiopia into a period of tumultuous and far-reaching change. With the defeat of the military regime of Mengistu Haile Mariam by the Ethiopian People's Revolutionary Democratic Front and the subsequent formation of the Transitional Government of Ethiopia, the country's geographical boundaries, social and political relations and economic structure were dramatically re-defined. The National Charter re-defined Ethiopia's internal boundaries by prescribing the creation of 14 self-administering regions. Relief aid is still required in many parts of the country; social services remain inadequate or altogether unavailable; and much of the country's infrastructure has been destroyed. The Government aims to reduce Ethiopia's high level of poverty by reallocating state resources to the rehabilitation of assets, provision of improved social and economic services and creation and promotion of conditions that will allow the private sector to assume a central role in production, employment generation and broad-based economic growth. The Government has stated its intention to focus, in future, upon the transport, health and education sectors, and within these: 1) road rehabilitation and rural roads; 2) civil aviation infrastructure; 3) rehabilitation of schools; and 4) rehabilitation of health facilities. Should resources allow, expenditure will be allocated to the construction of new schools and health facilities required to redress the uneven distribution of social services throughout the country. It is anticipated that public investment will also target medium-and large-scale irrigation schemes, and other rural infrastructure in the agricultural sector (WB, 2014).

In order to achieve its goals of development, the Government will have to improve expenditure efficiency. This will require civil service reform, budget planning, budget transfers, and other measures such as undertaking measures with regard to the use and provision of information, to coordination, and to improving transfers.

### **3.4 EFFECTS OF PUBLIC EXPENDITURE ON ECONOMY**

**Effects on Production:** The effect of public expenditure on production can be examined with reference to its effects on ability & willingness to work, save & invest and on diversion of resources.

**Ability to work, save and invest:** Socially desirable public expenditure increases community's productive capacity. Expenditure on education, health, communication, increases people's productivity at work and therefore their incomes. With rise in income savings also increase and this in turn has a beneficial effect on investment and capital formation.

**Willingness to work, save and invest:** Public expenditure, sometimes, brings adverse effects on people's willingness to work and save. Government expenditure on social security facilities may bring such unfavourable effects. For e.g. Government spends a considerable portion of its income towards provision of social security benefits such as unemployment allowances old age pension, insurance benefits, sickness benefit, medical benefit, etc. Such benefits reduce the desire to work. In other words they act as disincentive to work.

**Effect on allocation of resources among different industries & trade:** Many a times the government expenditure proves to be an effective instrument to encourage investment on a particular industry. For e.g. If government decides to promote exports, it provides benefits like subsidies, tax benefits to attract investment towards such industry. Similarly government can also promote a particular region by providing various incentives for those who make investment in that region.

**Effects on Distribution:** The primary aim of the government is to maximise social benefit through public expenditure. The objective of maximum social welfare can be achieved only when the inequality of income is removed or minimised. Government expenditure is very useful to fulfill this goal. Government collects excess income of the rich through income tax and sales tax on luxuries. The funds thus mobilised are directed towards welfare programmes to promote the standard of poor and weaker section. Thus public expenditure helps to achieve the objective of equal distribution of income.

Expenditure on social security & subsidies to poor are aimed at increasing their real income & purchasing power. Public expenditure on education, communication, health has a positive impact on productivity of the weaker section of society, thereby increasing their income earning capacity.

**Effects on Consumption:** Public expenditure enables redistribution of income in favour of the poor. It improves the capacity of the poor to consume. Thus public expenditure promotes consumption and thereby other economic activities. The government expenditure on welfare programmes like free education, health care and housing certainly improves the standard of the poor people. It also promotes their capacity to consume and save.

**Effects on Economic Stability:** Economic instability takes the form of depression, recession and inflation. Public expenditure is used as a mechanism to control instability. The modern economist Keynes advocated public expenditure as a better device to raise effective demand & to get out of depression. Public expenditure is also useful in controlling inflation & deflation. Expansion of Public expenditure during deflation & reduction of public expenditure during inflation control money supply & bring price stability.

**Effects on Economic Growth:** The goals of planning are effectively realised only through government expenditure. The government allocates funds for the growth of various sectors like agriculture, industry, transport, communications, education, energy, health, exports, imports, with a view to achieve impressive growth.

Government expenditure has been very helpful in maintaining balanced economic growth. Government takes keen interest to allocate more resources for development of backward regions. Such efforts reduce regional inequality and promote balanced economic growth.

To summarize, in modern economic activities public expenditure has to play an important role. It helps to accelerate economic growth and ensure economic stability. Public Expenditure can promote economic development as follows:-

- ❖ To promote rapid economic development.
- ❖ To promote trade and commerce.
- ❖ To promote rural development
- ❖ To promote balanced regional growth
- ❖ To develop agricultural and industrial sectors
- ❖ To build socio-economic overheads e.g. Roadways, railways, power etc.
- ❖ To exploit and develop mineral resources like coal and oil.
- ❖ To provide collective wants and maximize social welfare.
- ❖ To promote full - employment and maintain price stability.
- ❖ To ensure an equitable distribution of income.

Thus public expenditure has to create and maintain conditions conducive to economic development. It has to improve the climate for investment. It should provide incentives to save invest and innovate.

### **3.5 Causes of Growth of Public Expenditure**

Even though public expenditure came into picture in 20th century, accelerating growth of government expenditure began in late 70s.

There are several factors that have led to enormous increase in public expenditure through the years (Manoj, 2013)

- Defense Expenditure-due to modernization of defense equipment by navy, army and air-force to prepare the country for war or for prevention.<sup>[6]</sup>
- Population growth- It increases with the increase in population, more of investment is required to be done by government on law and order, education, infrastructure, etc. investment in different fields depending on the different age group is required.

- Welfare activities- welfare, mid-day meals, pension provisions etc.
- Provision of public and utility services-provision of basic public goods given by government (their maintenance and installation) such as transportation.
- Accelerating economic growth- in order to raise the standard of living of the people.
- Price rise- higher price level compels government to spend increased amount on purchase of goods and services.<sup>[7]</sup>
- Increase in public revenue- with rise in public revenue government is bound to increase the public expenditure.
- International Obligation- maintenance of socio economic obligation, cultural exchange etc. (these are indirect expenses of government)

### 3.6 TRENDS OF PUBLIC EXPENDITURE

**Table 1: Capital & recurrent expenditure (% of total expenditure) 1973-2005**

Regime	Year	Average share in total expenditure (%)	
		Capital expenditure	Recurrent expenditure
Dreg	1973-1977	29	71
	1978-1984	30	70
	1985-1991	35	65
EPRDF	1992-1998	36	64
	1999-2005	55	45

**Source:** Author's calculation based on MoFED data

Capital expenditure displays tremendous increasing trend while recurrent expenditure shows sluggish decreasing trend under the years reviewed. During the Derg regime, capital expenditure has an average share of 31 percent to total expenditure and recurrent expenditure has an average share of 68 percent to total expenditure. This shows the dominant features of recurrent expenditure in the economy. However, towards the current periods of EPRDF regime, capital expenditure (55%) overtakes recurrent expenditure (45%).

## **CHAPTER FOUR**

### **DISCUSSION AND ANALYSIS**

#### **4.1 DATA**

Building on the existing theoretical and empirical literature, this study perceives a causal relationship between government expenditure and economic growth (GDP) in Ethiopia. Therefore, exploratory causal study design is adopted to investigate the impact of public expenditure on economic growth within the context of Ethiopian economy. Empirical econometric approach is adopted in analyzing data considered relevant components of public expenditure and economic growth. The relevant time series data are extracted from the Annual Reports of Ministry of Finance and Economic Development (MoFED). Collection procedure is non-probabilistic. Based on the perceived causal relationship between the identified variables of the research interest, a multiple regression model which is stochastic in nature is specified to forge a link between public expenditure and economic growth. This is to accommodate the possible influence of other variables that may exert effect on economic growth but which are not included in the model. This implies that this study recognizes the influence of such random or intervening variables. However, the variables included in the model are considered components of public expenditure adequate enough to explain economic growth.

The data used for this study are basically time series data covering 1973– 2005, that is thirty-three (33) years.

## 4.2 MODEL SPECIFICATION

Public expenditure (capital and recurrent) is considered as independent factor of production & represents independent variable. While, GDP is dependent variable. This relationship is presented in Cobb-Douglas production function with constant returns to scale as:

$$\mathbf{RGDP = \alpha TCE^{\beta_1} TRE^{\beta_2} \dots \dots \dots (1)}$$

Where RGDP is defined as real gross domestic product (output),  $\alpha$  is the total factor productivity; TCE is government total capital expenditure; TRE is government total recurrent expenditure;  $\beta_1$  and  $\beta_2$  are the constant elasticity coefficients of capital and recurrent expenditure respectively.

The logarithmic conversion of the equation above yields the structural form of production function as:

$$\mathbf{LogRGDP = Log\alpha + \beta_1 LogTCE + \beta_2 LogTRE + u \text{ ---- (2)}}$$

Where  $LogRGDP = Log$  of Real Gross Domestic Product.

$Log\alpha = \beta_0$  is the intercept.

$LogTCE = Log$  of total capital expenditure defined as expenditure incurred on the creation or acquisition of fixed assets (new or second-hand).

$LogTRE = Log$  of total recurrent expenditure defined as expenditure incurred on the purchase of goods and services, payment of wages and salaries and settlement of depreciation on fixed assets.

$u =$  white noise error term.

Apriori Expectation:  $\beta_0 > 0, \beta_1 > 0, \beta_2 > 0$ .

## 4.3 RESULTS AND INTERPRETATION

### 4.3.1 UNIT ROOT TEST

Table 2. Results of Unit Root Test on Variables and Residuals (Regression results include an intercept but not a trend)

VARIABLES & RESIDUALS	ADF LAG	ADF TEST STAT	95% CRITICAL VALUE	REMARK
LOGGDP	1	0.721960	-2.960411	Non-stationarity
LOGTCE	1	-0.834197	-2.957110	Non-stationarity
LOGTRE	1	-1.197357	-2.957110	Non-stationarity
DLOGGDP	1	-8.262595	-2.960411	stationarity
DLOGTCE	1	-6.907672	-2.960411	stationarity
DLOGTRE	1	-5.178424	-2.960411	stationarity
RESIDUALS	1	-3.467034	-2.957110	stationarity

D = Difference

**Source:** Authors calculation with E-views

The results of the unit root test for variables presented in the table above reveal that the data series for the variables (in logs) were non-stationary in levels, that is they were  $I(1)$ , as the absolute values of the ADF test statistics were less than the absolute of the 95% critical value for the ADF statistic. This is not unexpected as most time series data are non-stationary in levels. However, upon first differencing, the variables became stationary (i.e.  $I(0)$ ), as the absolute values of the ADF test statistics were more than the absolute 95% critical value for the ADF statistic. Though the individual series were non-stationary in level, yet because they were integrated of same order, a linear combination of the variables was however stationary, as indicated by the outcome of unit root test for the residuals, which confirms the stationarity of the residual series.

### 4.3.2 LONG RUN RELATIONSHIP

Table 3. Residual stationarity test

Null Hypothesis: ECT has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, max lag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.467034	0.0157
Test critical values: 1% level	-3.153730	
5% level	-2.957110	
10% level	-2.617434	

\*MacKinnon (1996) one-sided p-values.

As depicted in table 3 the residual stationarity property shows that the error correction term (ECT) is stationary at level. This indicates that all model variables have a long run relationship.

Table 4. Long run Estimation results

Dependent Variable: LOGGDP  
 Method: Least Squares  
 Date: 06/14/14 Time: 16:31  
 Sample: 1973 2005  
 Included observations: 33

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGTCE	0.616476	0.080148	7.691728	0.0000
LOGTRE	0.394574	0.145217	2.717133	0.0108
C	0.948865	0.230024	4.125069	0.0003
R-squared	0.928376	Mean dependent var		3.356682
Adjusted R-squared	0.923601	S.D. dependent var		0.291977
S.E. of regression	0.080704	Akaike info criterion		-2.109557
Sum squared resid	0.195393	Schwarz criterion		-1.973511
Log likelihood	37.80769	Hannan-Quinn criter.		-2.063781
F-statistic	194.4256	Durbin-Watson stat		1.011823
Prob(F-statistic)	0.000000			

Table 4 shows the long run relationship of GDP with recurrent & capital expenditures is significant and positive. The economic growth (GDP) with respect to capital expenditure is highly elastic with 1 percentage change in capital expenditure leading to an increase in GDP by 0.61 percent.

Similarly, a 1 percent change in recurrent expenditure leading to an increase in GDP by 0.39 percent.

$$\text{LogRGDP} = 0.948865 + 0.616476 \text{ LogTCE} + 0.394574 \text{ LogTRE} + U_t$$

This equation is the long-run equation for GDP which is explained by recurrent & capital expenditure that the long-run analysis based on.

### 4.3.3 SHORT RUN RELATIONSHIP

Table 5. Short Run Estimation Results

Dependent Variable: D(LOGGDP)

Method: Least Squares

Date: 06/14/14 Time: 16:39

Sample (adjusted): 1974 2005

Included observations: 32 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.012467	0.009993	1.247505	0.2225
D(LOGTCE)	0.226244	0.091810	2.464272	0.0201
D(LOGTRE)	0.352129	0.129259	2.724204	0.0110
ECT(-1)	-0.241275	0.137926	-1.749305	0.0912
R-squared	0.422774	Mean dependent var		0.026151
Adjusted R-squared	0.360928	S.D. dependent var		0.066666
S.E. of regression	0.053294	Akaike info criterion		-2.909505
Sum squared resid	0.079528	Schwarz criterion		-2.726288
Log likelihood	50.55208	Hannan-Quinn criter.		-2.848774
F-statistic	6.835941	Durbin-Watson stat		2.177313
Prob(F-statistic)	0.001341			

Table 5 contains multivariate regression results for the growth model. The results indicate that the coefficient of total recurrent expenditure and the constant are statistically significant.

More specifically, the coefficient of total recurrent expenditure (TRE) is found to be statistically significant at 5 percent level as indicated by its probability value 0.0110 and has the expected sign (positive). This therefore, implies that 1 percent increase in total recurrent expenditure raises the economic growth (RGDP) by 0.35 percent. Similarly, the coefficient of total capital expenditure is also statistically significant at 5 percent level as indicated by its probability value 0.0201 and has the expected sign (positive). This also implies that 1 percent increase in total capital expenditure (TCE) raises the economic growth (RGDP) by 0.23 percent which is found to be statistically Significant.

The F-statistics 6.8359, which is a measure of the joint significance of the explanatory variables, is found to be statistically significant at 5 percent level as indicated by the corresponding probability value 0.001341. The  $R^2$  0.4228(42.28%) implies that 42.28 percent total variation in the RGDP is explained by the regression equation. Coincidentally, the goodness of fit of the regression remained almost similar after adjusting for the degree of freedom as indicated by the adjusted  $R^2$ ( $R^2=$  0.3609 or 36.09%).

After observing the Durbin-Watson statistic 2.1773 higher than  $R^2$  0.4228 indicating that the model is non-spurious (meaningful).

The coefficient of the error correction term (ECT) for the economic growth model is significant and negative indicating the existence of long-run relationship amongst the variables. This guarantees that although GDP growth may temporarily deviate from its long run equilibrium value, it would gradually reach to its equilibrium. The coefficient of the error term is -0.241275 which showed high speed of adjustment towards long-run equilibrium. This indicates that whenever there was a disturbance in the system, 24 percent of the deviation of the actual GDP model from its equilibrium value is eliminated every year.

## **CHAPTER FIVE**

### **CONCLUSION & RECOMMENDATION**

#### **5.1 CONCLUSION**

This Study investigates the impact of total capital expenditure and total recurrent expenditure on economic growth (GDP) in Ethiopia through the use of ordinary least square multiple regression analytical method.

The study finds that total capital expenditure and total recurrent expenditure are important determinants of economic growth in Ethiopia as they are statically significant and positive.

The result is consistent with and strongly upheld the Keynesian's view that government expenditure causes economic growth. The regression results, however, reveal that the total recurrent expenditure is characterized by the higher positive value of coefficient as compared to that of the total capital expenditure. The results also reveal that every well-utilized birr unit of capital and recurrent expenditure has the ability to impact positively on economic growth of Ethiopia. A good performance of an economy in terms of per capita growth may therefore be attributed to a judicious use of total public expenditure in Ethiopia. The major policy implication of this result is that concerted effort should be made by policy makers to ensure that the disbursement of public expenditure to various sectors of the economy are well supervised and also ensure its adequate spending so as to boost the level of economic growth.

## 5.2 POLICY RECOMMENDATION

The above findings have important policy implications. The findings show that capital expenditure contributes minimally to growth as compared to the higher contributions from recurrent expenditure. This is probably because capital expenditure which is not meant for immediate consumption is more prone to misuse and embezzlement. This could make it to be less active in promoting growth.

However, government should increase total expenditure by spending more on various sectors of the economy as both recurrent & capital expenditures are statistically significant.

Most importantly, government should diversify its revenue base so as to depend on revenue from agricultural outputs (such as coffee) which may be able to sustain the future level of demand for capital and recurrent expenditures that could stimulate rapid economic growth and development (i.e. Agricultural source of revenue should be revitalized by increasing agricultural productivity while industries are activated to earn more revenue from industrial sector).

Moreover, government should speed up its expenditure on rural development, roads, water and electrification in order to accelerate the level of productivity, increase income and raise the standard of living of poor citizens. But, it should balance its financial outlay not to do capital projects such as dams at the expense of daily intake of calorie.

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## DECLARATION

I, the undersigned, declare that this project paper is my original work and has not been presented for a degree in any other university, and that all the sources of materials used for the thesis have been duly acknowledged.

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