

## The Role of Fiscal Policy on Economic Growth A Study of Ghana: An Empirical Literature

### Author's Details:

**Benjamin Blandful Cobbinah**<sup>1\*</sup>, **Chidiebube Emmanuel Obodo**<sup>1</sup>, **Francis Atta Sarpong**<sup>1</sup> **Larsey Naphtali Akwetteh**<sup>1</sup><sup>1</sup> School of Economics and Management, Anhui University of Science and Technology, Huainan, PR China

**Email:** bencobbah421@gmail.com, chidiebubeobodo1523@gmail.com, francis.sarpong@stu.ucc.edu.gh; nlarsey.nl@gmail.com

### Abstract

*The effectiveness of fiscal policy on emerging country economic growth is a hot topic of discussion. While adjusting the levels of public spending and determining tax rates, policymakers in developing countries strive to address socioeconomic concerns such as poverty, unemployment, hunger, bad investment, and illiteracy. The impact of fiscal policy on Ghana's economic growth is examined in this study. The study looked into and reviewed a variety of journals in order to provide this report on the roles, effects, and impacts of fiscal policy on Ghana's economic growth. The discrepancies in conclusions of the effect of fiscal policy measures on economic growth can be seen in the research mentioned above. Some studies have found that it has a favorable effect, while others have found that it has a detrimental effect. A few researchers have found that it has no effect. They also illustrate that there are disparities in public spending and tax revenues between countries, with one having a good influence and the other having a negative impact, and one or both having an impact and being effective. In terms of monetary and fiscal policies, fiscal policy boosted economic growth in certain countries while having the reverse effect in others. When government expenditure was channeled to productive and investment sectors with sustainable productivity, fiscal policy achieved its targeted economic growth objectives. According to the findings, despite its important role in welfare advancements, government consumption spending has been detrimental to economic growth; policymakers must analyze its composition in order for it to improve growth. Government consumption expenditures should be reduced through targeted measures. Expenditures that are likely to stifle private investment should be scrutinized as well.*

**Key words:** Fiscal Policy, Tax, Government Spending, Economic Growth, World Bank

### 1.0. Introduction

Governments all throughout the world devise and implement taxation and public spending programs. The primary goal of these measures has been to hasten economic and social development. Regarding the role of government fiscal policy in encouraging economic growth and development, there have been two primary points of view. Fiscal policy, according to both Keynesian and endogenous models, can be used to encourage economic growth. Governments, on the other hand, are viewed as fundamentally bureaucratic and inefficient by both classical and neoclassical views, and as a result, they tend to obstruct rather than aid economic growth [Ocran 2009: 2].

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### 1.1. Fiscal and Economic Growth Trends in Ghana

Fiscal policy, both classical and neoclassical, has been an essential part of economic growth and development programs across many countries, including Ghana. The amount of policies that have been introduced over the years demonstrates this. The implementation of the Economic Recovery Program has been one of the most significant (ERP). Before Ghana adopted the ERP proposed by the IMF and the World Bank, the economic growth rate trend was uneven [Figure 1]. On the fiscal side, the ERP was largely introduced to assist minimize budget deficits and inflation in order to foster economic growth and development by creating an enabling environment. Introduction of cost recovery measures, reduction of subsidies, divestiture of state-owned enterprises, retrenchment of civil servants, improvements in tax collection efficiency, widening of the tax net, and general fiscal and aggregate demand restraint were among the instruments used [Aryeetey and Harrigan, 2000: 13].

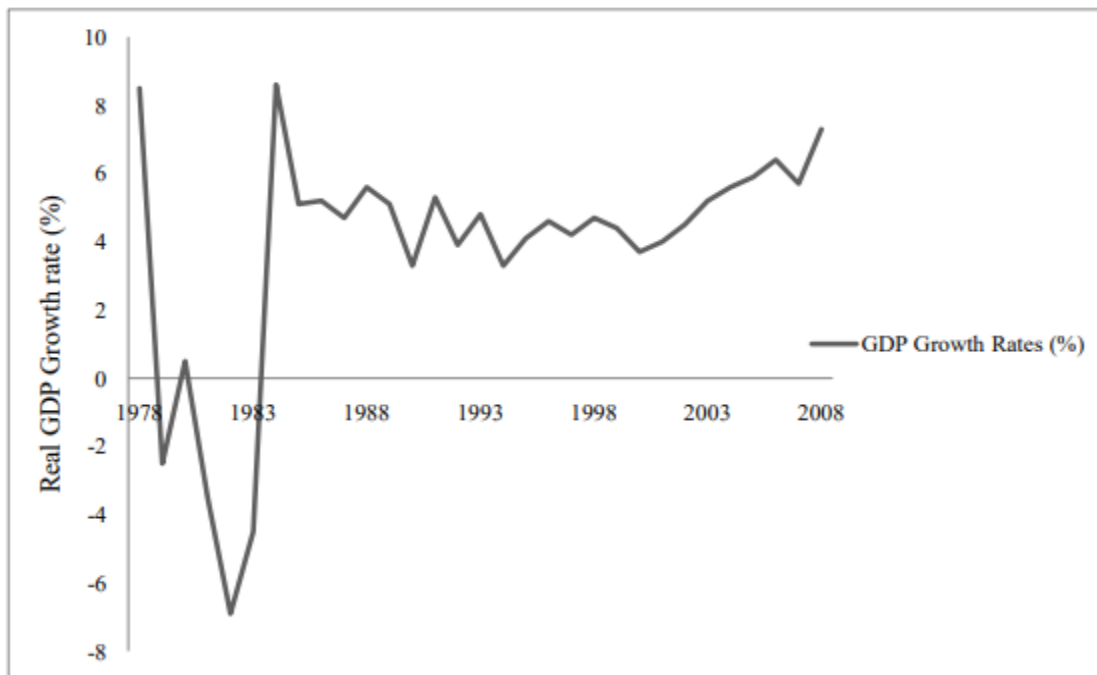


Figure 1.1: Trends in Real GDP Growth Rates, 1978-2008

Data Source: IMF Data and Statistics (2011)

Between 1979 and 1983, Ghana's average annual growth rate was -3.4 percent. Political instabilities combined with exogenous shocks (droughts in 1975-77 and 1981-83, oil price spikes in the 1970s, and a severe decrease in the terms of trade) resulted in low economic performance prior to the ERP [Karikari 1995: 89]. Prior to the ERP, the economy's budget structure was characterized by recurring deficits and debts [Figure 1.2]. The accumulation of deficits and debts arose as a result of governments' overreliance on private sector borrowing to finance budgetary gaps, among other factors. Budget deficit became a major source of budgetary support in the economy, with government borrowing from domestic banks increasing from 49% in 1970 to 86% in 1982 [Kusi, 1991 cited in Kusi 1998: 10].

and 2008-2009 Rate of Real GDP Growth (percent ) Gross Domestic Product Growth Rates ( percent ) 4 As a result of the continual domestic borrowing, the private sector has been pushed out of the credit market [Aryeetey and Harrigan, 2000] and private investment has decreased.

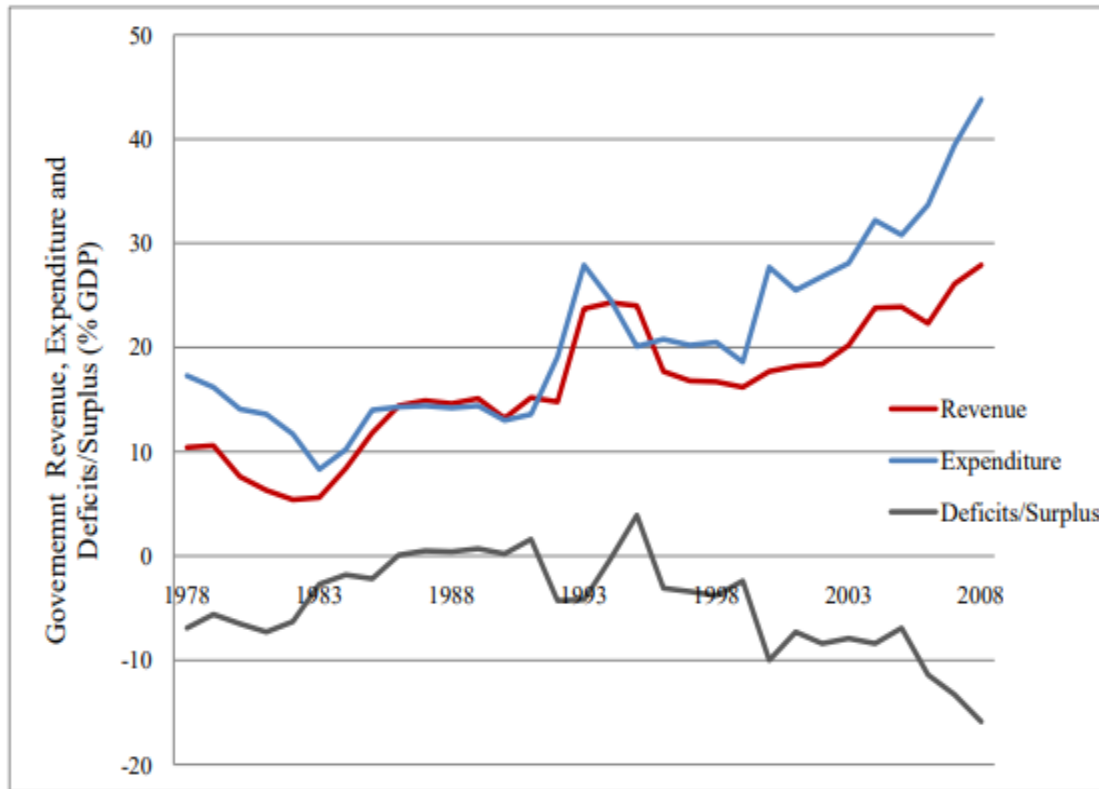


Figure 1.2: Trends in Government Revenue, Expenditure and Deficits/Surplus, 1978-2008

Data Source: MOFEP Fiscal Data (Several Issues)

Figure 1.1 shows that the growth rate in the first years after the ERP was implemented (1984-89) was roughly 5.7 percent, which was significantly better than the -3.4 percent growth rate in the 1979-83 period. From a deficit of 2.7 percent of GDP in 1983 to a balance of 0.7 percent of GDP in 1989, the budget deficit was decreased. This was mostly due to an increase in income collection and a relative leveling down of spending. Total revenue increased from 5.4 percent of GDP in 1982 to an average of 13 percent of GDP for the period -20 -10 0 10 20 30 40 50, as illustrated in Figure 1.2. 1978 In 1983, 1988, 1993, 1998, 2003, and 2008, between 1983 and 1990, government revenue, expenditure, and deficits/surplus (percentage of GDP) Revenue Expenditure Deficits/Surplus 5 The strong performance of taxes was substantially responsible for the upward trend in revenue. Tax income grew from 4.6 percent of GDP in 1983 to 12.3 percent of GDP in 1989 [MOFEP Fiscal Data, Various Issues]. Total expenditures prior to the ERP adoption, on the other hand, fell from 18.8% to 16.2% of GDP between 1983 and 1991. Transfer payments and government consumption expenditures both fell by 2.0 and 6.6 percent of GDP, respectively, while investment expenditures rose from 3.3 to 5.1 percent of GDP [MOFEP Fiscal Data, Several Issues]. The World Bank gave the ERP a favorable rating in terms of fiscal performance, but noted that there is still space for improvement [World Bank 1994; Aryeetey and Harrigan 2000: 13].

## 1.2. Statement of the Problem

In Ghana, fiscal policy has played a critical role in the formulation of government plans. That is to say, the levels of government spending and taxes are largely determined by the government's objectives and plans. The government is anticipated to raise its investment spending and other outlays on infrastructure facilities and offering subsidies to the private sector in order to achieve optimal growth. Similarly, via the adoption of suitable fiscal policy tools, the government can reduce unemployment, reach its desired degree of stabilization, and reduce poverty. Individual impacts of fiscal factors have not been identical, and one problem for policymakers has been to determine the influence of each variable and guide them so that they together fulfill the purpose for which they were designed. In other words, knowing how government spending and taxes affect the economy might help us figure out how to reroute fiscal policies in order to promote economic growth and development. Total government spending increased rapidly from 20.8 percent of GDP in 1996 to 43.8 percent in 2008, while total revenue increased gradually from 17.7 percent to 27.9 percent. The constant increase in expenditures, rising deficits since 1996, and problems in boosting revenues have raised severe concerns about Ghana's fiscal policy. Due to mounting spending and deficits, the government has recently increased taxes by nine percent. Although such a policy may act as a deterrent to economic growth, it also aids the government in raising money and thereby reducing its deficits.

### **1.3. Relevance of the Study**

The study's importance stems from the belief that appropriate government spending and tax policies are vital to Ghana's economic growth. In both rich and developing economies, the circumstances around public spending and taxes are hotly debated. In Ghana, however, fiscal policy has been less successful, despite the anticipated importance of fiscal policy in encouraging economic growth. As a result, the current study aims to contribute to existing research on the topic by focusing on Ghana. The analysis will also assist policymakers in developing growth-oriented programs and implementing growth-enhancing fiscal measures. As a result, the importance of this type of knowledge in decision-making grows, as one of the government's current focuses is to encourage and promote a level of growth that is sustainable. The study also aims to shed light on Ghana's previous budgetary woes and determine what lessons may be learned from past economic performance.

## **2.0. Review of Related Literature**

### **2.1. Theoretical Literature**

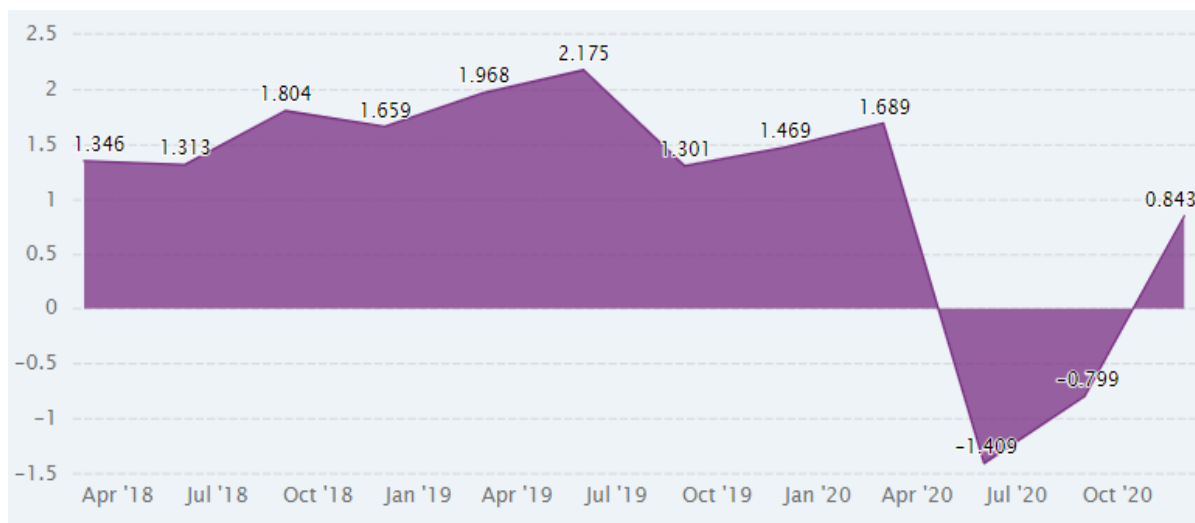
Reviewing the predictions of classical theory and Keynesian theory on the effects of fiscal policy on economic growth is one method to look at the literature on the subject. The classical theory emphasizes the importance of limiting government involvement because the economy is best left to self-correct. Keynesian theory, on the other hand, views government intervention through tax and spending policies as a desirable force that helps to stabilize output and possibly boost economic growth. In a study of related literature, Fontana (2009) concludes that there is nothing that comes near to unanimity among modern views on the consequences of fiscal policy. Furthermore, he claims that empirical evidence and case study research are insufficient to support these fiscal policy ideas.

#### **2.1.1. Economic Growth**

In the last two centuries, technical advancement has largely explained economic progress. Going back in time to the 1800s means returning to a time when there was no electricity, no running water, and no heating. We go back to a time when every family had roughly six children and worked in the agricultural sector for more than 70 hours a week to provide for their family's basic requirements. The economy grew in tandem with technological advancements. Because the opportunity cost of having a kid has increased as a result of economic prosperity, the number of children per family has reduced from six to two. Economic growth shifted the economy to a new level, with agricultural labor demand decreasing and nonagricultural labor demand increasing. The reason for this was that technology necessitated a higher degree of knowledge (Aghion,

Phillippe and Durlauf, 2005). The economy is structured into three sectors: primary (forestry, farming, and fisheries), secondary (manufacturing, mining), and tertiary (other) (all the other activities that do not include the primary and secondary sectors). The tertiary sector, sometimes known as the service sector, is linked to economic development. It is because it employs people on a daily basis, contributing to the global economy. The economy was shifted to a new level as a result of economic expansion, with agricultural labor demand declining and nonagricultural labor demand increasing. This was due to the fact that technological advancements needed a higher level of expertise (Aghion, Phillippe and Durlauf, 2005). Primary (forestry, farming, and fisheries), secondary (manufacturing, mining), and tertiary (other) sectors make up the economy (all the other activities that do not include the primary and secondary sectors). Economic development is tied to the tertiary sector, sometimes known as the service sector. It's because it employs people every day and contributes to the global economy.

The terms economic growth and economic development are commonly used interchangeably in literature, however it is crucial to distinguish between them because both terms are frequently misunderstood. While economic growth simply refers to a rise in output, economic development encompasses a wider range of activities. Economic development is a multifaceted process that includes significant changes in social structures, public attitudes, and national institutions, as well as the acceleration of economic growth, the reduction of inequality 15, and the eradication of absolute poverty [Todaro, 1992: 100]. As a result, economic growth might be considered a part of economic development.



Source CEIDATA.com 2020

Ghana's Gross Domestic Product (GDP) increased by 0.8 percent YoY in December 2020, after contracting by 0.8 percent the previous quarter. Ghana's Real GDP Growth YoY data is updated quarterly and covers the period from June 2006 to December 2020, with an average rate of 1.3 percent. The figures ranged from a high of 7.4 percent in March 2011 to a low of -1.8 percent in December 2008. Quarterly Real GDP Growth is calculated by CEIC using quarterly Real GDP. Ghana's Statistical Service calculates Real GDP in local currency at chain linked 2013 prices. Prior to Q2 2013, real GDP growth was computed using quarterly real GDP based on SNA 1993, at 2006 prices.

According to recent sources, Ghana's nominal GDP hit 17.8 billion dollars in December 2020. In December 2020, the GDP deflator (implicit price deflator) grew by 8.1 percent. Ghana's GDP per capita reached 2,336.9 USD in December 2020. In December 2020, its Gross Savings Rate was 17.6 percent. Investment accounted for 31.0 percent of nominal GDP contributions in December 2020. In December 2019, public

consumption accounted for 8.9% of total consumption. In December 2020, private consumption accounted for 74.3 percent of total consumption.

### **2.1.2 Fiscal Policy**

The employment of government expenditures and taxes to influence macroeconomic results is referred to as fiscal policy. The government's fiscal policies have an impact on almost all economic operations, either directly or indirectly. Fiscal policy serves a variety of functions that are critical to the economy's smooth operation.

Both government spending and government earnings can be used to boost the economy. Current spending drives aggregate demand to rise, and prices to rise as a result. This will encourage producers to generate more output, resulting in an increase in aggregate supply, while increased development expenditures cause capital formation, raising the economy's capacity (or capital), and therefore increasing aggregate supply. Both will boost the economy by increasing production, employment, and income, while revenues will be used in the opposite direction. As revenues decline, aggregate demand rises, causing the economy to expand.

To comprehend the role of fiscal policy, one must examine the government's budget as well as its economic ramifications. The government budget, or simply the budget, is a plan for spending money and raising money through taxes, fees, and other methods, as well as borrowing money if necessary [Hyman, 1994: 773]. Government spending is defined as all 16 expenditures from the government budget, including recurrent expenditures like civil service salaries, maintenance, military costs, interest payments, and subsidies to cover public enterprise losses, as well as capital expenditures like irrigation canals, roads, schools, and the purchase of non-military equipment owned by the government Expenditures by the Ghanaian government can be divided into two categories: capital expenditure and recurring expenditure. All spending on products that can last for a long time are classified as capital expenditures. It comprises costs associated with the construction of trains, bridges, roads, and schools, among other things. Government expenses that are incurred on a regular basis or within a specific year are referred to as recurring expenditures. This comprises expenses such as wages and salary, loan interest payments, and so on.

### **2.1.3. The Economic Growth Impacts of Fiscal Policy**

The influence of fiscal policy on economic growth has really been extensively researched and is a hot topic of controversy among economic schools of thought. According to Keynesian views, a government's active engagement in guiding a country's economic growth can be effective. This was in contrast to traditional and neoclassical economic analyses of government budgetary strategies. When it comes to economic growth, both classical and neoclassical economists believe fiscal policies are irrelevant. [Diamond, 1989; referenced in Saad and Kalakech, 2009: 3] According to traditional ideas, government spending stimulates private investment, slows economic development in the short run, and reduces capital accumulation in the long run [Diamond, 1989; cited in Saad and Kalakech, 2009: 3]. In reality, classical economists think that increases in government spending lead to price increases and temporary increases in output and economic growth in the majority of cases. This is because traditional economic theories assume that the economy responds to deviations from long-run equilibrium, which are primarily caused by the supply-driven character of output and employment. Government expenditure and taxation are treated as factors in Keynesian proposals that may be used as policy instruments. According to Keynesian macroeconomic theories, government spending and taxes can boost economic growth by increasing aggregate demand. That is, if the government increases its demand while private demand remains unchanged, aggregate demand, as well as output and employment, will rise. As a result of the multiplier impact on aggregate demand, a rise in government expenditure is likely to lead to an increase in employment, profitability, and investments. To avert economic downturns, Keynesian macroeconomics recommends expansionary fiscal policy In terms of taxation, the Keynesian school of thinking holds that raising taxes reduces disposable income and profits. Because household consumption and private investment are both

dependent on disposable income and earnings, taxes will reduce consumption and private investment indirectly. As a result, tax increases are predicted to reduce aggregate demand, output, and so economic growth. Government activities, particularly fiscal policies, play no effect in setting the long-run economic growth rate in the neoclassical growth framework, as this is governed by exogenous population growth and technical progress rates.

The long-run or steady-state growth rate of a country is determined not by government actions, but by exogenous changes in population growth, savings, and technical advancement, according to the Solow neoclassical growth model. The neoclassical growth models' ability to explain the sources of long-run economic growth was deemed insufficient, prompting the development of endogenous growth models. Endogenous growth models provide a theoretical framework for understanding endogenous growth by attempting to explain the elements that affect the magnitude and pace of economic growth, which are left unexplained and exogenously determined in neoclassical growth models [Todaro and Smith, 2003: 147]. Economic growth happens as a result of capital accumulation, human capital (including education and learning), knowledge, or research and development (better technology) under endogenous growth models, among other things. These variables are influenced by government policies and actions in the areas of taxation, law and order, 20 infrastructural services, financial markets, and other parts of the economy [Barro, 1997; cited in Reungsri, 2010: 15]. In that logic, the government points long-run economic growth.

### **3.0. Growth Models**

#### **3.1. Solow Neoclassical Growth Model**

Robert Solow's popular Solow growth model is a prominent illustration of neoclassical development ideology (1956). It extended the Harrod-Dormar formulation by include labor and technology in the growth equation, which the author assumed to be independent variables (and that, its progress is determined exogenously). Solow uses a Cobb-Douglas production function in his model, which is considered to have constant returns to scale. At any point in time, the production function is

$$Y(t) = K(t)^\beta [A(t)L(t)]^{1-\beta}$$

Given that Y represents total output in the economy, K represents available capital, L represents labor, and A represents labor productivity (also technological progress). Multiplying equation (2.2.1) by a factor  $\lambda = 1/L$  yields:

$$y = AK^\beta$$

where y is the output-labor ratio ( $Y/L$ ) and k is the labor-to-output ratio ( $K/L$ ) (capital-labour ratio). According to Equation (2.2.2), production per labor is a function of the amount of capital per labor, and the more capital each worker has to work with, the more output that labor can generate. Solow proposed that when savings are larger than depreciation, the entire capital stock grows:

$$\Delta K = sf(k) - (\delta + n)k$$

The proposed equation above represents the growth of the capital-labour ratio  $k$ , and shows that  $k$  is affected by savings  $s$ , depreciation  $\delta k$  and the addition of new workers to labor force  $n$ . Assuming a steady state growth, where  $y$  and  $k$  do not change ( $\Delta y$  and  $\Delta k$  are equal to zero), equation (2.2.4) now becomes

$$sf(k) = (\delta + n)k$$

Equation (2.2.5) describes what the author refers to as the stable equilibrium of  $k$ , represented by  $k^*$ , and the economy will return to it if  $k$  is higher or lower than  $k^*$  at the steady state. Based on the foregoing study, the

model suggests that economic growth can occur when savings and capital levels rise, but that this will only be a short-term gain, according to Solow, who argues that technological advancement is the most important factor of long-term growth.

### 3.2. Peacock-Shaw Model

Peacock and Shaw (1974) used the Harrod-Domar framework for economic growth to explain how fiscal policy influences economic growth. The Peacock-Shaw (PS) model assumes that on the supply side, production capacity  $Y_t$  in period  $t$  is determined by private investment  $I_t$  and government expenditure  $G_t$  in the previous period, as outlined in Peacock and Shaw [1974]. Thus:

$$\Delta Y_t^c = \beta(1_{t-1} + pG_{t-1}) \dots\dots\dots \text{eqn 1}$$

Where  $\beta$  is the output-to-capital ratio and  $p$  is the percentage of government spending that is spent on investment. The demand side equation is assumed in the PS model to be:  $Y_t = C_t + I_t + G_t \dots\dots\dots \text{eqn 2}$

where consumption  $C_t$ , private investment and government expenditure are given by:

$$C_t = bY_t(1 - T_y) \dots\dots\dots \text{eqn 3}$$

$$I_t = I_{t-1} = I_{0t} \dots\dots\dots \text{eqn 4}$$

$$G_t = gY_t \dots\dots\dots \text{eqn 5}$$

The specified rate of income tax is  $T_y$ , the marginal propensity to consume is  $b$ , and the current government expenditure to total production ratio is  $g$ .

Peacock and Shaw (1974) further clarified the relationship between budgetary variables and economic growth by solving equations 1 to 5 using routine approaches.

$$\frac{\Delta Y_t}{Y_{t-1}} = \beta(1 - b + bT_y - g + pg) = \frac{\Delta I_t}{I_{t-1}} \dots\dots\dots \text{eqn 6}$$

Equation 6 indicates that in order to properly utilize capital stock, the required growth demand must equal the required investment growth, which is functionally tied to both tax and public expenditure changes. As a result, changes in taxes or government spending would have a significant impact on the rate of economic growth. According to the Harrod-Dormar model,  $(1 - b + bT_y - g + pg)$  in the model indicates the savings rate ( $s$ ), while  $\beta$  (which is output-capital ratio) represents the  $1/k$ ; where  $k$  was defined as capital-output ratio in the Harrod-Dormar model. The Harrod-Dormar model is as follows:

$$\frac{\Delta Y_t}{Y_{t-1}} = \frac{s}{k} \dots\dots\dots \text{eqn 7}$$

Where  $\frac{\Delta Y_t}{Y_{t-1}}$  represents growth rate,  $k = 1/\beta$  and

$$s = (1 - b + bT_y - g + pg) \dots\dots\dots \text{eqn 8}$$

Once the goal growth rate and capital-output ratio are given or anticipated through the government's budget policies, equation 8 assists the government in predicting the required savings rate. The sum of government or public sector savings and private domestic savings equals total savings in the economy. [Gillis et al, 1987: 260] Government savings are largely budgetary savings resulting from any surplus of government revenues over



current expenditures. To achieve a faster rate of economic growth, the ratio of current expenditures to total output  $g$  must be reduced while the ratio of investment  $g$  must be increased (example; spending on roads, schools, health facilities, communication networks and etc.). The PS model, on the other hand, suggests that raising revenues, particularly taxes, as proposed in equation 8, will help increase budgetary savings ( $s$ ) and, as a result, boost economic growth.

### 3.3. Afonso-Alegre Growth Model

Afonso and Alegre's endogenous growth model is the one we're looking at today (2008). It builds on a simple endogenous growth model to show how different types of government spending and taxes affect economic growth. In an extended Cobb-Douglas type model with constant returns to scale, the model posits an economy with four types of public spending and three types of taxes. The types of public expenditures in the model are: public input expenditures in the production function ( $G_1$ ), capital-enhancing public expenditures ( $G_2$ ), labor-enhancing public expenditures ( $G_3$ ), and publicly provided consumer goods ( $G_4$ ). Consumption taxes ( $\tau$ ), corporate profits taxes ( $\tau_c$ ), and labor income taxes ( $\tau_l$ ) make up the tax system.

The production function can be written as:

$$Y_t = AK_t^\alpha L_t^\beta G_{1,t}^\gamma \dots \dots \dots \text{eqn 1}$$

where  $K_t$  and  $L_t$  stand for private capital and labor supply, respectively, and  $G_1$  stands for the public input in production, which is treated separately in the production function. For the sake of simplicity, the capital-enhancing type expenditure  $G_2$  is assumed to represent a subsidy to the acquisition of private capital [Deverajan et al. 1998; referenced in Afonso and Alegre 2008: 10]. It is anticipated that the subsidized private capital paid through the capital-enhancing kind of governmental expenditure is provided by:

$$G_{2,t} = (1 - s_t)K_t \dots \dots \dots \text{eqn 2}$$

based on the idea that  $G_2$  encourages private investment, and where  $(1-s_t)$  represents the subsidized proportion of private capital. Assume a labor supply that is determined by the level of government labor expenditure  $G_3$ , population growth  $N_t$ , and the equilibrium real wage  $w_t$ :

$$L_t = w_t^\mu G_{3,t}^\nu N_t^n \dots \dots \dots \text{eqn 3}$$

Because state policies that create disincentives to labor supply on the labor market can exist [Afonso and Alegre, 2008: 11], the parameters  $\mu$  and  $\nu$  are assumed to be in the range (0,1). However,  $\nu$  is permitted to be between -1 and 1.

The utility function is also treated as assuming a Cobb-Douglas type utility function for the household agent(s) who live for an unlimited number of years.

$$U_1 = \sum_{t=j}^{\infty} \beta^t C_t^\theta G_{4,t}^{(1-\theta)} \dots \dots \dots \text{eqn 4}$$

where  $C_t$  denotes household consumption and  $G_4$  is public spending that is consumed directly by households and hence enters the utility function as  $G_4$ . According to economic theory, average consumption for household agents does not change over time, but there can be temporal fluctuations.

The household agents are believed to be capital and firm owners, as well as labor suppliers. Due to the budget restriction, the household agent will have to decide whether to consume or invest a portion of their income in additional capital for the next period, as well as pay taxes on labor, corporate profits, and consumption. The constraint faced by the household can be depicted as follows:

$$(1 + \tau_c)C_t + s_{t+1}K_{t+1} = (1 - \tau_l)wL_t + (1 - \tau_\pi)\pi_t + r_tK_t \dots \text{eqn 5}$$

where  $\tau_c$ ,  $\tau_l$  and  $\tau_\pi$  are the previously defined tax types,  $\pi_t$  and  $r_t$  represent corporate Profits and the equilibrium rate of capital price paid by enterprises to households are two different things. Household agents are also expected to regard government decisions on taxes and public spending as exogenous, and to choose how to split their income between private capital investment and current consumption on their own. Subject to a budget limitation (eqn 5), household agents consume to maximize their utility (eqn 4)

The effect of permanent increases in any of the postulated fiscal variables can be further described in the form of growth after log-linearising and replacing the equations for labor and capital in (2.3.1):

$$\frac{\partial y_t}{\partial g_{1t}} = \frac{\delta(1+\mu)}{\phi} > 0 \dots \text{eqn 6}$$

$$\frac{\partial y_t}{\partial g_{2t}} = \frac{a(1+\mu)}{\phi} \frac{(1-s_t)}{s} > 0 \dots \text{eqn 7}$$

$$\frac{\partial y_t}{\partial g_{3t}} = \frac{vy}{\phi} > 0 \dots \text{eqn 8}$$

$$\frac{\partial y_t}{\partial g_{4t}} = \frac{(1-\theta)(1+\mu)a}{\phi} \geq 0 \dots \text{eqn 9}$$

Where  $\Phi = (1 - \alpha) (1 + \mu) - \alpha\mu$  and the Components with little letters signify their rates of growth. Taxes, on the other hand, can be shown in a similar fashion

$$\frac{\partial y_t}{\partial(1-\tau_{l,t})} = \frac{a(1+\mu)}{\phi} \frac{y}{\lambda} + \frac{y\mu}{\phi(1-\tau_{l,t})} < 0 \dots \text{eqn 5}$$

$$\frac{\partial y_t}{\partial(1-\tau_{\pi,t})} = \frac{a(1+\mu)}{\phi} \frac{\delta}{\lambda} < 0 \dots \text{eqn 6}$$

Where  $\lambda = (1 - \tau_{\pi,t})\delta + (1 - \tau_{l,t})\gamma + a$ . Changes in public input in production (G1), capital-enhancing public expenditure (G2), and labor-enhancing public expenditure (G3) will all have permanent and positive effects on growth, whereas changes in both labor income tax ( $\tau_l$ ) and corporate income tax ( $\tau_{\pi,t}$ ) will have lasting and negative effects on growth. And, because both government consumption spending (G4) and consumption taxes (c) affect the economy through consumption, both would have a short-term effect on growth, assuming that consumers would not modify their consumption patterns in the long run.

#### 4.0 Previous Studies

Shatti (2014) investigated the impact of fiscal policy on economic development in Jordan. Using the multiple regression method, the researcher examined time series data from 1989 to 2013 to show the impact of fiscal policy on economic development. The current expenditure and yearly tax collection have a direct and considerable impact on Jordan's economic development, according to this study. Capital spending and economic growth have an inverse relationship.

Ismail et al. (2015) used time series data from 1970 to 2010 to investigate the impact of government spending on economic growth. The study discovered that in the long term, there is a strong and positive association between government spending and economic growth, but that in the short run, there is a negative relationship. The study also found that the Wagnerian theory holds true in Ghana. According to the researcher, government spending takes a long time to provide economic advantages.

Butt et al. (2013) looked into the influence of Pakistan's fiscal imbalance on economic growth. The researchers examined time series data from 1980 to 2010 and checked the association between regressors using the Pearson Correlation test. The study discovered that the dependent variable GDP and the independent variables investment and inflation have a non-linear relationship. GDP, budget deficit, and domestic credit all have a linear relationship.

Chude et al. (2013) investigated the link between government education spending and economic growth in Nigeria. The research used time series data from 1977 to 2012. The empirical findings revealed that all of the model's variables have an impact on Nigeria's economic growth. The regression results revealed that total education spending in Nigeria is statistically significant and favorably associated to long-term economic growth.

Sheikh and Chaudhry (2013) investigated the factors that influence defense spending in India and Pakistan. Economic, strategic, and political variables all influence the demand for defense spending in both countries. The findings of this study show that strategic factors such as domestic threats, nuclear threats, and conflicts have a favorable impact on both countries' defense spending.

Bhunja (2011) investigated the impact of government spending on the Indian economy's growth. From 1991 through 2010, the researcher examined time series data on economic growth and government spending. The researcher discovered a negative relationship between economic growth and agricultural and educational spending. There is a link between health, national security, transportation, and communication spending and economic growth.

Ahmed (2011) used annual time series data from 1982 to 2010 to study the function of fiscal policy in regulating economic growth in the context of Pakistan. The findings revealed that both federal and provincial tax income had a detrimental impact on economic growth. The non-development expenditure was insignificant since the government does not spend money wisely in this area.

Dandan (2011) examined the relationship between government spending and economic growth in Jordan, a developing country, using time series data from 1990 to 2006. Using regression analysis, this study discovered a favorable relationship between government spending and economic growth. According to this study's descriptive analysis, fiscal policy is seen as a useful instrument for government.

Foul (2010) looked studied the long-term link between real gross domestic saving and real gross domestic product in Tunisia from 1961 to 2007 and Morocco from 1965 to 2007. The ARDL finding revealed that Gross Domestic Product and Gross Domestic Savings are cointegrated. The Granger causality finding revealed that the variables had uni-direction causality.

For the period 1972-2008, Ali and Ahmad (2010) investigated the relationship between economic development and fiscal policy in Pakistan. The study discovered that there was a long-term link between economic growth and fiscal deficit.

According to a study conducted by Abu Eida on the impact of government spending on economic growth in the Palestinian Territories from 1995 to 2013, there is a positive association between total and current expenditures on economic growth in the Palestinian Territories. The study suggested that in order to boost economic growth, development expenditures be increased in size, as well as financial changes in terms of rationalizing, hiring, and directing government spending (Abu Eida, 2015). According to a research of the influence of fiscal policy on economic growth in Algeria from 1970 to 2013, increased government expenditure had no meaningful impact on improving economic growth rates because of weak productivity, which led to poor government multiplier effects (Tahtan & Ben Yahya, 2016)

Another study, based on data from the same time period, found that public spending has a minor impact on establishing economic balance in Algeria. It was also discovered that expenditure initiatives in Algeria were not aimed at channels that would improve and balance productivity. Their claim was attributable to the government's ineffective financial oversight of investment projects (Jahida & Bin Azza, 2018).

In a different study, the usefulness of Saudi Arabia's fiscal and monetary policies in generating economic growth was assessed through time (1986-2012). They focused on two main pillars: fiscal policy, which is controlled by government spending, and monetary policy, which is influenced by money and interest rates, as well as the relevance of both in promoting economic growth. The analysis discovered a strong correlation between the variables of the two independent policies and the dependent economic growth variable. However, they suggest that fiscal policy's success in affecting economic growth through government expenditure was stronger than monetary policy's effectiveness. (Otaibi & Saedi, 2015)

Macek and Janku (2015) looked at the impact of fiscal policy on economic development in OECD nations from 2000 to 2012, based on institutional characteristics in each country. They conducted their research using the OLS statistical method and discovered that government spending has a stronger favorable impact on countries with weak institutional circumstances. This is due to the fact that these countries spend more on infrastructure, which leads to higher growth rates, yet taxes have a negative impact in countries with low institutional circumstances, and taxes have a positive influence in countries with better institutional conditions.

Morina (2017) looked at the relationship between fiscal policy and economic growth in Southeast European developing nations from 1994 to 2015. She identified a positive impact of tax revenues and a negative impact of government spending on economic growth in those countries using the OLS method and the Housman test.

Adefeso, Hakeem, and Salawu (2010) used data sets from 1970 to 2005 to investigate the relationship between fiscal policy and economic growth in Nigeria. To examine the data, the scientists used the error correction technique.

As a result, we may see variances in the findings of the effect of fiscal policy tools on economic growth from the research mentioned above. Some studies have found that it has a favorable effect, while others have found that it has a detrimental effect. A few research have found that it has no effect. They also illustrate that there are disparities in public spending and tax revenues between countries, with one having a good influence and the other having a negative impact, and one or both having an impact and being effective. In terms of monetary and fiscal policies, fiscal policy boosted economic growth in certain countries while having the reverse effect in others. When government expenditure was channeled to productive and investment sectors with sustainable productivity, fiscal policy achieved its targeted economic growth objectives. They also discovered in certain research that in order to increase the effectiveness of fiscal policy on economic growth, a government must regulate the cost of investment projects, minimize waste, fight corruption, and improve its legal system.

## **5.0 Conclusions and Recommendations**

Based on the findings of the aforementioned studies, it can be stated that taxes and government spending have had significant long-term effects on Ghanaian economic growth. This supports the conclusions of the majority of studies conducted since the inception of endogenous growth theories. According to the findings, the amount of government spending and taxation in a given economy may be used to manage economic growth in both the short and long run. It is critical for Ghana because it gives its population more options in terms of education, health, and product variety. Fiscal policies, which adjust tax rates and government expenditures, are one strategy to affect and alter aggregate demand and supply to adapt growth prospects. GDP growth is a metric of growth that is influenced both directly and indirectly by the government.

Despite its important role in welfare advancements, government consumption spending has been detrimental to economic growth; policymakers must analyze its composition in order for it to improve growth. Government consumption expenditures should be reduced through targeted measures. Expenditures that are likely to stifle private investment should be scrutinized as well. Rather of raising taxes, the research suggests that the government implement measures to increase the tax base. This entails taking steps to eliminate tax evasion and increase payments from both the official and informal sectors. Ghana's tax base can also be expanded by implementing measures that boost the degree of business activity.

### **5.1 Limitations of the Study**

One of the most common difficulties in research of this sort conducted in poor countries such as Ghana is the lack of trustworthy data. This study only looked at the literature from a variety of case studies. It does, however, open the door for other academics to go beyond and collect trustworthy data in order to predict how fiscal policy affects or influences economic growth.

### **Conflicts of Interest**

The authors declare that they have no competing interests in the research's publication.

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