



GOVERNMENT SECTORIAL SPENDING AND ITS EFFECT ON NIGERIAN ECONOMIC GROWTH

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ABSTRACT

Few decades ago many developing economies like Nigeria started to privatize their state owned enterprises. But owing to the fact that these public enterprises are means of income redistribution, those benefiting from this redistribution would use whatever political power they have to oppose this policy. The study investigates the impact of government sectorial spending on economic growth in Nigeria. The study made use of regression analysis (OLS) and cross sectional data for Nigeria between 1970 – 2012. The study reveals that there is a positive relationship between public enterprise and economic growth. The study, therefore, recommends that government should increase her spending on public enterprises that are highly productive.

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Keywords: Government, Expenditure, Public enterprises, Sectorial development, Economy, Growth.

Contribution/ Originality

- * The study contributes in the existing literature in the sense that it throws more light on how Nigeria government allocate fraction of the nation budget to available sectors.
- * The study used regression estimation technique to estimate collected data. The method used in the study incorporated variables that capture sectorial spending in Nigeria by Nigeria government for the period under study.
- * The study originated new formula which is specified thus:
$$GDP = F(?L + 1K + 2KAG + 3KEDU + 4KTC + 5KH + 6 KIS + 7KD + \dots \dots \dots SA$$
- * The study is one of the few studies which have investigated government sectorial spending and shows its effect on Nigeria economic growth.

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* It contributes logical analysis in the relationship of these spending on the growth of Nigeria economy.

1. INTRODUCTION

The public enterprises owe their genesis to the adoption of strategies of import-substituting industrialization. In some cases these policies had been implemented quite early. For instance, in Turkey, the public enterprises sector dates back to the late 1920's, in Mexico to the 1930's, in India to the late 1940's. In most cases, the common rationale for establishing public enterprises was that the private sector in existence was weak, unable to compete with foreign goods or prone to the formation of alliance with foreign capital to the detriment of national interest. It soon become clear to economists and policy makers alike that the performance of the public enterprises left something to be desired: Public enterprises experienced chronic losses which resulted in rising domestic budget deficit and inflation. The response was an attempt at rationalizing and streamlining the public enterprises. This soon proved impossible (Cem and Mehmet, 2011). In order to put socio-economic development under way and also guard government finances under conditions of capital scarcity and structural defects in private business organization, Nigeria and most developing economies regardless of ideological dispositions, unavoidably made fairly extensive investment in public enterprises for resource mobilization and allocation, particularly within the utilities and social services sector in the 1950's through the 1960's (Ariyo, 1998). In developing countries like Nigeria, government business is the biggest sector in the economy and whatever policies and programs it embarks upon will dictate the tune and pace of productivity in the economy during the year (Adeniran, 1999); These show that in spite of Nigeria's high growth rate particularly within the 1970-80 decade (From 4.5percent to 12.5percent), the economy has still been beset by a numbers of negative development-stagflation pressures, capacity underutilization of plants , large inequalities among persons and group (Soyibo *et al.*, 2007). These challenges gave government the justification to manage the economy through regulatory policies, using the well enlarged public sector, related to the activities of public enterprises on which large scale finances were expended and which were perceived to have had considered influence on the pace of development in the national economy. In view of the foregoing, conscious attempts had been made to examine the impacts of public investment on economic growth in Nigeria. Aigbokhan (1991) For instance, examined government size and economic growth in Nigeria. In another study, Ekpo (1996) examined pattern of public expenditure in Nigeria. Also Ajakaiye (2000) examined the balance between public and private investment programme in Nigeria. Ogundipe and Aworinde (2011), also examined the sectional analysis of the impact of public investment or economic growth in Nigeria between (1970-2008). One of the major gaps noted here is that none of the studies explicitly examined selected public enterprises impact on the economic growth in Nigeria.

Therefore, the main objectives of this study is to take a critical look at the impact of some selected public enterprises which are Agriculture, Education, Defence, and internal security services in the overall economic growth.

The study is structured into five sections, Section one is the introductory part, section two the literature review, section three the methods of the study, while section four deals with analysis of the study and findings, and section five conclusion.

2. REVIEW OF LITERATURE

The public sector has been assigned the important role of achieving one national objective of economic growth with social justice, generating larger social gains and strengthening country's economy by removing regional disparities and promoting balanced development in different parts of the country (Sundara and Vidya, 2011). Based on economic theory that growth in output and growth in public investment are positively correlated, a number of empirical studies have been conducted to determine the effect of public enterprises/investment on growth. For instance, East Africa was able to sustain a growth rate of about 7-8 percent because it maintained rates of gross capital formation of about 30percent of the GDP (Ariyo, 1998).

The public sector undertaking emerge very significant in the Indian context by fulfilling various social obligations such as generation of employment for mass, provision of basic infrastructure and public utilities, protecting the consumers from being exploited e.t.c. promoting backward regions of the country and achieving balanced regional development (Sundara and Vidya, 2011). The public sector had received the best attention from the nation planner and government during the 1960's and 1970's. However, from the late 80's, the public sector enterprises have become object of controversy and criticism. The great push given to the public sector in the initial five year plans did start to recede. This paradigm shift can be attributed to the overwhelming public orientation, namely to serve the social purpose than to run them as profit making apparatus as in the private sector (ibid). In the context of the recent stabilization effort and structural adjustment in India, the statement of industrial policy (July 24, 1991).stated: Public enterprises have shown a very low rate of return on capital invested. This has inhibited their ability to generate themselves in term of new investment as well as in technology. The result is that many of the public enterprises have become a burden rather than being an asset to the government (Nagaraj, 2011). The program for structural reform submitted to the international monetary fund (IMF) on November 11, 1991 to secure its financial assistance for the ongoing reform process stated: India's severely constrained budgetary circumstance create both the need and opportunity for rationalism the shape of public sector activity, and for placing greater reliance on the private sector for resource mobilization and investment. Public enterprises in Nigeria attracts large amount of budgetary support for their expansion or their operations, but in many cases they have failed to generate adequate returns on the investment of public money and contributed significantly to the public sector saving gap and fiscal deficit. (Reproduce in Reserve Bank of India Bulletin, April, 1992.P.789). Such views seem to be shared by many policy advisors as well. In his introduction to a recently published set of essays on the Indian economy, Bimal (1992), opined that "the public sector has become a big drain on the exchequer".

In order to put socio-economic development underway and also guard government finances under condition of capital scarcity and structural defects in private business organization, Nigeria and most other African countries regardless of ideological dispositions, unavoidable made fairly extensive investment in public enterprises for resource mobilization and allocation, particularly within the utilities and social serving sector in the 1950's through the 1960's (Ariyo, 1998).

In both technical and economic perspective, investment in public enterprise is seen as a vital investment. This is because it is an organization whose primary function is the production and sale of goods and/or services and in which government or other government controlled agencies have an ownership status that is sufficient to ensure their control over the enterprises regardless of how actively that control is exercised (Tanzi, 1984). The public enterprise approach to resource mobilization and allocation for national socio-economic development is in consonance with the Keynesian approach to economic development, particularly since the post 1930 global economic depression (Bos, 1986). Levine and Renelt (1992) report that physical investment ratio was the most consistent and robust explanatory variable accounting for differences in growth performance of a large sample of countries over an extended period of time. According to Schmidt *et al.* (1996), this result corroborate other empirical analysis of the determinants of growth for regions of the world.

Ford and Poyet (1991), Toen -Geon and Jongeling (1994) employed the aggregate production function to evaluate the impact of public investment on growth based on US data. They found that public investment has a significant and positive impact on private output and also that public investment on infrastructure has a significant and positive influence on growth. Using the same approach, Ram (1996) established that the public investment approach is more productive than private investment in 53 developing countries using panel data. Blejer and Khan (1984) and Easterly and Rebelo (1993) also report that government infrastructure is complementary with private investment although other types of government investment are not. Greene and Villanueva (1991) and Serven and Salimano (1991) report similar findings based on multi-country panel data, while Musalem (1989) reports a complementary in private and in public investment in a time series study of investment in Mexico. Ariyo (1998) using time series study of investment in Nigeria established that only private domestic investment has constantly contributed to raising GDP growth rate during the period, although, public investment has a positive sign but it is statistically insignificant.

Balassa (1988), however, reported cross-section estimates showing that an increase in public investment led to a decline in private investment. Furthermore, he reports a negative correlation between the share of public investment in total investment and size of incremental capital-output ratios, which indicates that public investment is less efficient than private capital. Khan and Renhant (1990) also observed that the marginal productivity of public sector capital is negative whereas that of private investment is significantly positive in respect of 24 developing countries. Also Ogundipe and Aworinde (2011) established that total government expenditure has a positive but statistically insignificant on economy growth in developing nation like Nigeria.

3. METHOD OF THE STUDY

3.1. Model Specification

The specification of the model suitable for quantifying the effect of public enterprise on the economic growth in Nigeria follows the related and recent works of [Ogundipe and Aworinde \(2011\)](#) on sectorial analysis of the impact of the public investment on economic growth in Nigeria (1970-2008). Actually, many studies have analyzed how public investments contribute to economic growth, prominent studies include [Barro \(1990\)](#) and [Kelly \(1997\)](#). The consideration of [Ogundipe and Aworinde \(2011\)](#), is not unconnected with the fact that the authors attempted to link different type of public investment to economic growth, more specifically at the sectoral level. The aggregated model of Ogundipe and Aworinde is:

$$GDP_i = F(LABOR, K, KGE, SA) \dots\dots\dots (i)$$

Where: GDP =Gross domestic product

LABOR = Labour force

K = Private Capital

KGE = Capital stock

SA = SAP =Structural Adjustment Program as a dummy Variable.

3.2. Model Estimation

The model above will be restructured to incorporate some other variable which explain some public enterprise in sectorial dimension. The model will be redefined as:

$$GDP = F(?L + 1K + 2KAG + 3KEDU 4KTC + 5KH + 6 KIS + 7KD + \dots\dots\dots SA) \dots\dots(ii)$$

Where:

GDP=Gross domestic product

L = Labour force

K = Private capital

KAG = government spending in agricultural sector

KEDU= government spending in the education sector

KTC = government spending in the transportation & communication sector

KH = government spending in the health sector

KIS = government spending in the internal security sector

KD = government spending in the defense sector

SA = structural adjustment program as a dummy variable

The study adopts Ordinary Least Square (OLS) technique of data analysis was employed to estimate the specified model equation. An econometric package (e-view) was used.

3.3. Source of Data

This study made use of secondary data which are sourced from the Central Bank Annual Reports of various issues, and other related literatures to examine the impact of public enterprises on Nigeria economic growth.

4. RESULT

Co Integration Test

The study time series data was tested by using the Augmented Dickey Fuller (ADF) test statistics to examine the presence of unit root, and the ADF regression equation estimated takes this form:

$$Y_i = \alpha + \beta Y_{t-1} + \sum \gamma X_{t-1} + e_t$$

Where

Y_i = Individual explanatory variable at time "t"

β = Different term

e_t = error term,

The test is against the null-hypothesis H_0 : which is government spending has contributed to growth of Nigerian economy, $\alpha = 0$. Rejection of the null-hypothesis suggest that the series is non-stationary and must be differenced at least once in order to achieve stationarity of the variable. The co-integration test enables the researchers to determine if or if not there is an equal condition that keeps the variable in proportion to one another in the long-run. Thus, it enables the researchers to know if or if not a long-run relationship exists among the variables in the model. The relevance is to avoid biasedness in the study estimates and the regression results.

Table-1. Test for order of Integration of Variables using ADF Tests

| Variables | ADF | Decision |
|-----------|---------|----------|
| GDP | 5.9953 | 1(0) |
| KAG | -3.7165 | 1(0) |
| KD | 5.5695 | 1(0) |
| KEDU | -3.0317 | 1(0) |
| KH | 7.5569 | 1(0) |
| KIS | 6.2415 | 1(0) |
| KTC | -1.8321 | 1(0) |
| DKTC | -4.2776 | 1(1) |
| SA | -1.8166 | 1(0) |
| DSA | -4.6904 | 1(1) |

Source: ADF = Augmented Dickey Fuller Test.

The ADF test revealed that GDP and public enterprise spending in Agriculture enterprises were stationary at most levels, while public enterprise in defence, education, health and internal security were also stationary at levels. In contrast public enterprises in transportation and communication expenditure as well as Structural Adjusted program were non-stationary at levels. The ADF test revealed that both public enterprises expenditures in communication, transportation and structural adjusted program were stationary at first difference.

Having established the existence of co-integration between economic growth and public enterprises expenditure variables in levels, researchers obtained the long-run results of public enterprises spending and economic growth by estimating the general model in equation (ii)

Dependent Variable is GDP

| Variable | Coefficient | Standard error | t- statistic |
|----------|-------------|----------------|--------------|
| Constant | 227204.4 | 12832.89 | 17.7048 |
| KAG | 2.8292 | 0.9904 | 2.8566* |
| KD | -4.3229 | 2.6264 | -1.6460* |
| KIS | 4.2034 | 1.5873 | 2.6462* |
| KTC | 0.9210 | 1.3587 | 0.6778 |
| KH | -4.6268 | 4.7689 | -0.9702 |
| SA | 81379.22 | 15748.76 | 5.1673* |

R- Squared = 0.912, Adjusted R - Squared = 0.876 D - IN statistic = 1.58, F - ratio = 25:25

* = Significance level 1%.

5. ESTIMATION RESULTS

Public enterprises in these sectors; agriculture, education, defence and internal security services as well as structural adjustment programme were statistically significant. While public enterprises expenditure in health, transport, and telecommunication sector was statistically insignificant. This implies that public enterprises expenditure in agriculture, education, defence, and internal security services as well as structural adjusted programme are significant factors that impacted or the level of economic growth in Nigeria. The result shows that an increase in public enterprise in agriculture will bring about 28.3% growth, while increase in public enterprises in defence will make the enterprise expenditure in education, an increase in its expenditure will create 31.2% growth to the economy, while public enterprise expenditure, in internal security will bring about 42.0% growth. The estimated coefficient of the variable included in the model gave the expected signs, except public enterprise expenditure in defence and health. This implies that the two enterprises were not well utilized, as for defence, though, enterprises expenditure in the various sectors had brought about a decline in the growth of the country as a result of her heavy expenditure in peace keeping activities in the world which has brought untold hardship to the country and as for public enterprise expenditure in the health sector, the estimated coefficient was negative because of the incessant strike embarked upon by health workers as well as decline in public enterprise expenditure on this sector over the years. This implies that its contribution to growth of the Nigeria economy has been insignificant. The coefficient of multiple determinations (Adjusted R- Squared) shows that the statistical model is appropriate; with about 88% level of economic growth can be explained by the variables included in the model. The Durbin - Watson value suggests that the test is inconclusive; the implication of this is that the predictions based on the ordinary least square estimates is inefficient. The high F - statistic indicates the joint significance of the explanatory variables and the high degree to which variation in the rates of economic growth are explained by variation in public enterprises expenditure.

From the regression results the structural adjusted program is statistically significant but its coefficient and standard error figures are rather too large. The implication of this is that the

program was not properly implemented and as such its contribution to the growth of the Nigeria economy has been less significant.

6. CONCLUSION

Though it is widely held that public enterprises are inherently inefficient and their potential to improve social equity is limited, this study found that they (public enterprises) contributed significantly and positively to income equality. At the same time, the study finds that public enterprises, as sector, in many developing economics and most years are profit making and not a burden on the budget. The government should increase spending on the public enterprises that are productive and employ competent hands. This type of spending not only yields high returns to the economy as a whole, but also has a large impact on poverty reduction since most of the poor still reside in rural areas and their main source of livelihood is petty trade. The study recommended that the government should increase her spending to productive public enterprises (sectors) of the economy and reduce spending on enterprises which are less productive.

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