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Budgetary Allocations and Selected Sectors' Contribution to Economic Development in Nigeria

I.B. Abdullahi
Department of Accounting and Finance, University of Ilorin, Ilorin, Kwara State, Nigeria

Abstract: The study evaluates, the contributions of the selected sectors of the Nigerian economy to its development, so as to serve as reference point to the Nigerian government and the relevant stakeholders charged with the responsibilities of achieving the millennium goals of the Nigerian Economic Development, tagged: (vision 2020). The issues succinctly highlighted in this study relates to the general background to the study, objective of the study, relevant literature review and trends in the budgetary allocations to the selected sectors. This study made use of vector Auto-regression estimation model as tool for analyzing the contribution of the selected sectors to the Nigerian Economic Development using Gross Domestic Product (GDP) as proxy. Following this analytical tool, this study concluded that even though the selected sectors contributed to the development of the Nigerian economy, but it is important to improve and monitor the allocations to these sectors in order to meet up with the international standard.

Key words: Budgetary, allocations, sector contribution, economic development, Nigeria

INTRODUCTION

The economic development of any nation is being influenced by the real sectors of the economy. According to Gupta *et al.* (2001) budgetary allocations on some key sectors, like Agriculture, Education, Health, Transport etc. through its positive effects can enhance equity and reduce poverty. The productivity of these allocations depend on the efficiency of resource allocation within the sectors.

The total or individual contribution of these sectors to the economy could be measured using Gross Domestic Product (GDP) index as proxy. This is because Gross Domestic Product is a measure of an economic performance of a nation.

In Nigeria, the important government places on agriculture education transport and health sectors has led to the development of may related institutions throughout the country, with the aim that these sectors would in turn generate return that will further enhance the growth and development of the country (Ijaiya, 2008).

However, in some cases, the sectoral returns have not produced the desired result. The question often asked is that does government budgetary allocation to these keys sectors have any positive impact on the development of Nigerian economy?

This study therefore, focuses attention on the contribution of these key sectors to the economic development of Nigeria over the period of 29 years between 1977 and 2005.

Objective of the study: The main of objective of this study, is to analyse the contributions of some selected sectors to the Nigerian economy, taken GDP as proxy. To achieve this main objective the following specific objectives would be pursued:

- Each of the selected sector will be analysed to determined the level of its contribution and how critical it is to the economic development of Nigeria.
- Policy recommendation would be made based on the research findings.

Literature review: The way government expenditure are allocated has important impact on development process of any nation. Budgetary allocation to public sectors are classified into capital expenditure and recurrent expenditure. The Central Bank of Nigeria (CBN, 2003) defined capital expenditure as payment for non-financial assets used in production process for more than one year. While, recurrent expenditure are payment for non-repayable transactions within 1 year. According to Gupta *et al.* (1998) public spending on education and health through its positive effects on the formation of human capital can boost economic development, while promoting equity and reducing poverty. This is more so in less Developing Countries (LDCs) where the private sectors is less active as a result of shortage of private capital and government attempts to reconcile conflicts between private and social interest by enhancing the allocation of resources where private interest is minimal or

absent, thereby responding to social economic and infrastructural needs of the nation. This position where collaborated by Odusola (1998), Olaniyi and Adam (2003) and Powell (2000). According to the World Bank (1993) report, the achievement of East Asian countries were largely due to successful educational strategies and that budgetary allocation to health sector would reduce the scourge of diseases most especially HIV/AIDS and malaria as well as improve life expectancy of the people.

In Nigeria, the importance government places on human resource development over the years has led to the establishment of educational institutions and health care centres, throughout the country. However, in late 1970s and early 1980s Federal Government spending grew substantially, resulting in fiscal crisis, inflation and heavy borrowings. Subsequently, through the austerity measures adopted in 1982 and Structural Adjustment Programme (SAP) introduced in 1986, the country attempted to bring down the fiscal deficits as part of the its stabilization adjustment programme, often by reducing public spending on across-the-board basis. These reductions, while necessary resulted in unacceptable economic and social costs as virtually all the sectors of the economy were affected.

In recent years, the realization that healthy and well-educated people make an economy more productive has shifted the focus of public spending on these sectors and other sectors like agriculture and transport.

According to Ihimodu (2007), agriculture remains the mainstay of the Nigeria economy. It contributes at 40% of the nations' Gross Domestic Product (GDP) and >60% of the employment. This is in spite of the dominant role that the oil sector ahs being playing since, about two-and-a-half decades now. Agriculture provides most of the food needs of the citizens as well as the raw material required in the domestic industries especially the agro-allied ones. Studies carried out by Quresh *et al.* (1996) show that agriculture production in rural India has improved farmers income and their well being. Ihimodu (2007) opined that is spite of these advantages of agricultural sector to Nigerian economy, in review of the sector performance, mixed results were observed. Some of these constraining factors to agricultural performance during the period of the 1988 agricultural policy include:

- Non-conducive enabling macro-economic environment under the policy operated
- Inconsistency and instability of macro-economic policies that discourages medium-and-long-term investment
- Poor state of infrastructures, especially in the rural areas
- Poor funding of agricultural development activity
- Inadequate availability of inputs including credit and poor targeting of beneficiaries

Transport sector of any nation is dynamic affecting the social economic and political environment, as the transport environment grows it requires improve transportation systems (Ogunsanya, 2007). These could be done through adequate funding of infrastructure, service provision and administration. According to Ogunsanya (2007), in most countries during the early stage of railway development, the government was either building and operating railways or heavily subsidizing it. Similarly, in air transport, the first viable airlines were either government-owned or government-subsidized. As the railway and air reached the state of maturity, government started to withdraw from ownership and subsidy of transport enterprises, eliminating all the economic regulations of the industry. The import of this is that the transport sector of the economy should not be sole responsibility of the government but with private effort in funding the sector. The current reform in the Nigerian, transport sector suggests that issues relating to the planning and administration of the transport system are main functions of the government, while private sector as increasingly tasked to invest, own and managed different elements of the transport system. In this regard, the major responsibilities and functions of the government are outlined by Nigerian's Draft National Transport Policy of 2004.

Trends of budgetary allocations and selectors sectors contributions to economic development: The trend of government budgetary allocations made to the selected sectors such as agriculture, education, transport and health is shown on the Table 1 between 1977 and 1983, transport sector received more funds than other 3 sectors analysed, probably because of reconstruction of infrastructures as contained in the Nigerian Economic Development Plan of 1969. However, the periods from 1993-2005 witnessed his sporadic increase in allocations to these sectors and this might be attributed largely to various reforms going on virtually in all sectors of Nigerian economy. For instance, the emphasis on primary health care delivery and development of the tertiary health care institutions (like the Teaching Hospital, Federal Medical Centre), the Universal Basic Education Programme, the massive Investment on dams, Bore holes, irrigation facilities to boost food production and rehabilitation of federal roads through direct labour (FERMA) and development of Inland Waterways among others infrastructural projects accounts for the enhanced

Table 1: The government expenditure

Years	Total government expenditure N'000	Expenditure on agriculture N'000	Expenditure on education N'000	Expenditure on health N'0000	Expenditure on transport N'000
1977	7676.4	105.5	500.0	114.1	2,300.4
1978	5637.2	128.4	301.4	49.6	1331.1
1979	8,379.1	321.9	533.2	96.2	1865.7
1980	10654.1	435.6	952.6	147.2	2349.3
1981	6564.2	775.1	440.9	128.4	1625.7
1982	7998.0	1035.1	488.4	130.2	1283.9
1983	6807.3	1185.2	346.6	136.0	1094.4
1984	4,634.6	252.5	144.9	51.1	261.9
1985	6516.4	985.4	180.7	56.2	240.9
1986	5445.9	892.5	442.0	81.2	516.1
1987	4759.4	365.1	139.1	69.5	375.1
1988	10,588.6	595.7	281.8	183.2	NA
1989	9297.1	981.5	221.9	126.0	NA
1990	12,655.6	1758.5	331.7	257.0	NA
1991	13085.4	551.2	289.1	137.6	NA
1992	15975.9	763.0	384.1	188.0	NA
1993	18600	1820.0	1563.0	352.9	NA
1994	31,000.0	2800.1	2405.7	961.0	NA
1995	44,559.0	4691.7	3307.4	1725.2	NA
1996	48,000	3892.8	3215.8	223.8	NA
1997	115,690	6,247.4	38080.0	223.8	NA
1998	185,375.0	8876.0	12,793.0	7123.8	NA
1999	136,904.0	6912.6	8516.6	7386.8	NA
2000	311,608.0	5,7617	23,342.6	6569.2	NA
2001	438,696.5	57899.0	19860	20,128.0	NA
2002	321,398.1	32,364.4	9215.0	12,608.0	NA
2003	241,688.6	8510.9	14680.0	6431.0	NA
2004	393,576.0	48047.8	21550.0	26410.0	NA
2005	706,884.2	79939.4	27440.8	21652.6	NA

Source: Central Bank of Nigeria (CBN) 2005

budgetary allocations to the selected sectors. Prior to these reforms, these sectors have suffered seriously from poor budgetary allocations and this largely due to economic conditions such as debt service burden and competing claims from recent emerging social sectors (Adenuga, 2002).

MATERIALS AND METHODS

To achieve this research, time series data for period 1977-2005 were obtained from Central bank of Nigeria (CBN)'s Statistical Bulletin. These data were subjected to Vector Auto-regression Estimation. The Vector auto-regression is commonly used for forecasting system inter related time series and analyzing the dynamic impact of random disturbances on the system of variables. The VAR approach is used for modeling every endogenous variable in the system as functions lagged value of all the endogenous variables in the system. VAR has been used widely by many researchers (Zellner and Palm, 1974; Richard, 1996; Levine and Zervcos, 1995; Palm, 1983). Coporal *et al.* (2003) Relevant to this research is the model:

$$GDP = f(Ag, Tr, Ed \text{ and } Ht)$$

With linear relationship such as:

$$GDP = \beta_0 + \beta_1 Ag + \beta_2 Tr + \beta_3 Ed + \beta_4 Ht + U$$

where:

GDP	=	Gross Domestic Product
β_0	=	Intercept
(β_1, β_2, β_3 and β_4)	=	The estimation coefficient
U	=	Error term

The beauty of VAR model is that given the simultaneity of the four variables in each case, they (the variables) are treated equally with no distinction between endogenous and exogenous variable in system (Sims, 1980).

VAR models constitute the best method of investigating shock transmission among variable since they provide information on impulses responses. Any linear structural model can be written as a VAR model. VAR model serves a flexible approximation to the reduced form of any wide variety of simultaneous structural models.

RESULTS AND DISCUSSION

The Augmented Dickey-Filler (ADF) stationarity test was used to test stationarity of the data used for this research. The result shows that the data is relatively

Table 2: Johansen co integration test

Normalized Co integrating coefficients: 4 Co integrating equation (s)

GDP	Agric	Transport	Education	Health	C
1.000000	0.000000	0.000000	0.000000	-169.9739	4582660
				(43.4307)	
0.000000	1.000000	0.000000	0.000000	-0.731449	16270.40
				(0.24126)	
0.000000	0.000000	1.000000	0.000000	-0751301	19021.16
				(0.149.08)	
0.000000	0.000000	0.000000	1.000000	-1.457851	30707.59
				(0.50057)	

Log likelihood -1017.244

Table 3: Regression results of selected sectors contributions to GDP

Variables	Coefficient estimates and t-value
Intercept (t)	281,050.20 (2.14)
Agriculture (t)	-79.63 (-4.83)
Transport (t)	12.24 (0.56)
Education (t)	83.94 (10.68)
Health (t)	2.14 (1.65)
R^2 (F)	0.95 (86.56)

stable. This model did not suffer serial correlation since it is not a trended data as shown from Jahansen Co-Integration test (Table 2).

The Table 2 shows that the results are satisfactory. The R^2, which is the coefficient of determination shows that the model has high degree of explanatory power as about 95% of variation in GDP is explained by the selected sectors. The F-statistics shows that the model is useful in determining the contribution of these selected sectors to GDP as the computed F-statistics is 86.56 greater than the tabulated F-statistics.

There are positive relationships between GDP and the selected sectors analysed since they are positive as shown by high R^2-value (Table 3).

Based on the vector Auto-regression Estimates of this predictive VAR model.

$$GDP = 281.050.2 + 79.63Ag + 12.24\ Tr + 83.94Ed + 2.14Ht + U$$

It shows that all the sectors analysed contributed to the GDP.

This is visible from their t-statistics as shown in Table 3.

CONCLUSION

This study concluded that even though the selected sectors contributed to the development of the Nigerian economy, but it is important to improve and monitor the allocations to these sectors in order to meet up with the international standard.

RECOMMENDATIONS

Agricultural sector provide over 60% of employment opportunities in Nigeria. This research has shown that adequate financial attention has not been given to the sector when compared with international standard. Therefore, there is need to stimulate the sector by increasing the financial attention and monitoring of funds allocated to the sector to ensure judicious use of the funds. If this is done, it will have multiplier effect on the economic growth and development of Nigeria.

The educational sector shows high propensity to contribute more to GDP, therefore more funds should be given to the sector. Since it is the life wire of social and economic development.

For any meaningful economic development, there is need for vibrant Health sector, especially with the recent scourge of HIV/AIDS. I therefore suggest that more attention should be given to the Health sector especially in the area of preventive awareness programmes.

Transport sector being central to economic activities, it is paramount that this sector should be given more attention than the government is currently doing and encourage private sector participation as recommended in the current transport sector reform.

Budgetary implementation commission should be instituted to monitor the use of funds allocated to various sectors of the economy. This is because research has shown that funds allocated to these sectors were not actually spent for the purpose of which the funds were meant for.

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