

## COMPARATIVE ANALYSIS OF GOVERNMENT FUNDING ON EDUCATION AND ECONOMIC GROWTH DURING THE CIVILIAN AND MILITARY REGIMES: Lessons from Nigeria

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Education represents the bedrock of intellectual and citizen consciousness for development of any country. However, the success or failure of many education policies and programs rests on the level of funding and management, to a large extent. This study examines the level of funding and management under two different regimes in Nigeria; the civilian and military. The sources and associated problems with government funding of public higher institutions are identified as well as their possible impacts and implications. Descriptive Statistics and Ordinary Least Square (OLS) regression were employed in comparing the funding and management of education during the two regimes in Nigeria. The relationship between the government capital and recurrent expenditure on education and economic growth during the years under review, were equally established.

The study reveals that though the funding of education is under the concurrent list in constitution, it has received less than the expected funds from both the federal and the state governments under the civilian and military regimes, especially the military government. Thus, the near total of the sector and the unimaginable loss of income to other nations collapsed, through immigration of Nigerians to other parts of the world for qualitative education and the teeming figure of the unemployed.

To foster a more efficient and effective funding of education for a more robust higher learning institutions in Nigeria, the implementation of the UNESCO recommendations of twenty-six per cent of annual budget for the education sector is a necessary condition. Private corporations should be encouraged to increase their social responsibility to the education institutes.

### I. Introduction

Education is generally perceived to be an instrument for poverty reduction [Adawo (2011)]. A fundamental process in nation building should accord the needed priority in the development efforts [Risikat (2010)]. The Nigerian government recognized the importance of human capital development through education, and thus embarked on establishing and making policies for expansion of tertiary institutions which started with only one in 1948<sup>1</sup> and totaled to over one hundred

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and twenty accredited Universities, public, private and faith-based institutions [reported by the National University Commission (NUC) in 2014]. However, the education sector in Nigeria is bedeviled with numerous challenges of which poor financing is a major problem. "...the issue of poor funding has its manifestation in problems, such as, academic staff shortage, dearth of library books and journals, decline of reading culture among students, dilapidated buildings, obsolete equipment, and the desire to obtain degrees by unorthodox means..." [Ayo-Sobowale and Akinyemi (2011)] Concerted efforts by various governments to provide a sound education to teeming population of about 30 million young Nigerians who deserve to be enrolled in school has been limited because of the increasing population of the country. Nigeria is the most populous black nation in Africa with almost 168 million people, of which 30 million are students [US embassy in Nigeria (2012)].

Historically, missionaries introduced the western education system in Nigeria in the mid-nineteenth century which was embraced by the southern part of the country. There has been rapid and widespread of schooling across the country, even to the northern parts which was initially reluctant to embrace the western education.

Education is on the concurrent list and a shared responsibility of the Nigerian federal, state, and local governments. The former, formal education system in Nigeria is the 9-3-3-4 system, followed by the 6-3-3-4 system, which was recently replaced with the 9-3-4 system. This implies a 9 years (6 years) compulsory universal basic education followed by 3 years of senior secondary education and finally a four years learning period in the higher institution. The literacy rate in Nigeria is estimated at 61 per cent. Nigeria has a record of large number of out-of-school children and young adults with limited literacy, little or no numeracy skills to joining the formal workforce [US embassy in Nigeria (2012)].

The education system of Nigeria has been affected by deteriorating quality and insufficient investment in the sector, to keep pace with the country's escalating school-age population. The consequence is the continuous mismatch between the available jobs and the produced graduates. Much more is the alarming rate at which Nigerians migrate to other countries, largely on the bases of the downward trend in the quality of education rather than the other factors. It is on record that a sizeable number of Nigerian students are in universities across the globe with largest number from the sub-Saharan Africa to the United States. There are 6,568 Nigerian students studying in the accredited universities in the US. The major source of funding to these students (abroad) is the grants and scholarships from national and international organizations, government funding, as well as, personal and family contributions (ibid).

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In Nigeria, there are 36 federal universities, 37 state universities, and 45 private universities accredited by the National Universities Commission (NUC). As meager as 8.42 per cent of the 2012 national budget was allocated to education; can this actually bridge the level of illiteracy in the regional area or be the required investment necessary for a turnaround in the education sector? On an average, 72 per cent of primary age children never attended school in Borno state. This is less than 3 per cent in most southern zones. Non-school attendance is highest among states in the Northeast and Northwest zones (ibid).

The current state of education needs a complete overhauling and fresh foundation to be laid for future generation. To this end, the paper examines the funding and management of education sector under the military and civilian regimes to understand what the problems or challenges are, while giving insight into what the current civilian government can do differently in order to bring the aching sector out of the doldrums.

There are problems in measuring expenditures to the educational sector in Nigeria. Each of the three tiers of government provides funds for education, and the problems of estimation vary across these three levels of government, especially the state governments. The focus of this paper is basically on the government education expenditures and the institutions based on the available data.

The layout of the paper is as follows: Section II gives a historical background of the study, whereas the review of relevant Literature is presented in Section III. Section IV discusses an overview of spending on education and Section V presents the theoretical framework, methodology and model specification. Section VI discusses the regression results. Section-VII enlists the strategies for better funding and management, and finally, Section VIII concludes the paper.

## II. Historical Background

The education system in Nigeria is grouped into 'kindergarten, primary education, secondary education and tertiary or post secondary education.' It is overseen by the Ministry of Education. The current scheme of education is the 9-3-4 system of education which is in line with the Millennium Development Goals (MDGs). This replaced the formal Nigeria's Universal Primary Education scheme of the 6-3-3-4 system of primary education and the Universal Basic Education, (UBE).

Historically, the earliest and oldest form of education in Nigeria is the traditional mode of education. This indigenous education is a life-long training which was meant to make individuals fit perfectly into his or her environment. It preceded the religious influence of education. This is a form of education by which traditions are handed down from one generation to another as the older ones assume the role of a teacher to the younger children or youth.

By 1842, the trend of education on the landscape of Nigeria was to take a new dimension. The Christians missionaries came to southern parts of Nigeria and in-

roduced the western education system; later, the Roman Catholics and Protestants joined the Missionary Society in 1845. The western education spread rapidly in this region (western and eastern parts of Nigeria); and at the onset, there was no government involvement. However, it was between 1870 and 1881 that the colonial government made some irregular grants to the three major missions towards education. [Thankur and Ezenne 1980] This marked the beginning of government participation in the education as the initial focus was to ensure that the colony is brought under total control of the British rule, without any resistance.

Another major milestone was recorded under the Governorship of Lord Lugard, 1914 to 1919. An education code was passed and more grants were made available to the missionaries who went ahead to establish more schools. At this stage, the southern parts of the country were seen to have immense benefits of western education in the provision of jobs and improvement in social welfare, among other benefits. The demand for education increased, thereby leading to the proliferation of schools without adequate facilities and teachers. To stop further growth of such inferior schools, Sir Hugh Clifford, the Governor General after Lord Lugard, passed a code in 1926 to ensure that schools having proper facilities and teachers would be given permission by the director of education, to operate.

At this period though, there was an increased funding from the government to the mission schools, the 1930 economic depression adversely reduced the available finance for education. The consequences were the reduction in teachers' salaries due to which some teachers found their way to take up other jobs. The government owned schools were relinquished to voluntary organizations. To worsen the situation further, the Second World War broke out in 1939. The schools were negatively affected. (ibid) However, in 1948 when Nigeria became a federation, comprising of three regions vis-a-viz west, east and the north. The publication of Grants-in-aid of Education in Nigeria made provision for grants to educational institutions.

Another dimension to the funding of education in Nigeria to attend challenges is the education under regional governments. With the establishment of regional governments, the race for educational development in each region began in 1952. The main feature of the educational programme embarked on, was introduction of the universal primary education (UPE) in the western and eastern regions. The northern region was hesitant in tolling the same part. This could be argued from the point of view of inadequate administrative funds and weighing the benefits of western education and the Islamic education by the northern leaders. The UPE which started in the western region in 1955 recorded tremendous success. It should be noted that the western region government committed 40 per cent of her annual budget to education and 90 per cent of it was spent on primary education. The eastern regional government saw the recorded success of the UPE in the west as a challenge, and thus, the policy was formulated in 1957 to commence and bring the programme (UPE) on board. As noted by Thakkur and Ezenne (1980), although the



eastern region government committed almost 48 per cent of her budget for the programme but there were some setback due to poor preparation, lack of teachers and limited funds in relation to the ambitious plan.

A new horizon to education came in 1960 when Nigeria became an independent state. The Ashby Report (1960) - Investment in Education was a lift and gift to education in Nigeria. Remarkable progress was made in education sector with available resources and newly developed programmes. Higher institutions of learning were established to provide higher level of manpower. Interestingly, there was a giant stride in education in Nigeria in the seventies with discovery and exploration of crude oil. There was a real explosion in the education sector.

Thus, the second National Development Plan 1970-74, allotted Naira 277.786 million at federal and state levels as capital expenditure on education over the plan period, [Thakkur and Ezenne (1980)]. There was a significant increase in the amount budgeted for the third development plan of 1975 to 1980. A sum of Naira 2.463 billion was allocated for capital expenditure. This was about 700 per cent increase when compared with the second national development plan. The government was committed to the education and development of the younger generation. The oil boom provided the financial support for the realization of this singular objective.

Therefore, what could account for numerous challenges that have set back the realization of the visions of the founding fathers? What has been the role of the military and civilian governments in educational development of the country, since its independence? Has funding and management of education been given priority under the two different regimes? This is what this paper set out for comparing the funding and management of government higher education under the military and civilian regimes in Nigeria.

### III. Literature Review

Segun Adesina (1988) noted that the second republic which came into being in 1979 was a unique experience in many respect. It was a period of return to civilian administration after an uninterrupted thirteen years of military rule. This is a period that witnessed within a short period which varied educational activities in the history of the country. Yet, the education sector experienced shocks and instability because of the political rivalry. The national educational plans were abandoned; instead, various educational programmes of the five political parties were implemented. Ordinarily, this should have contributed to development of the sector; but however, the case was reverse.

Ogunlade (2002) studies the military and civilian regimes in Nigeria (1966-1983) and their impacts on Nigerian educational system in the 21st century. The paper is a historical analysis of the Nigerian education situation over a period of about seventeen years. The purpose was to undertake a view and draw an intercon-



nection between the past and the present. The author posited that history, as a catalogue of facts and an exciting academic pursuit, concerns itself with the success and failures of our antecedent, not merely for its own sake but for the present generation to learn from them, avoid their pitfalls and forms the bases upon which the future can be built.

Some lessons from the historical survey from 1966 to 1983 shows that in Nigeria, centralized control under the Military, helped in the rapid educational advancement to a large extent. The leadership style of the military during 1975-76 worked with demonstrated commitments and hard work to a cause they believed; was bound to yield positive results. Moreover, the military was surrounded by men as Chief Obafemi Awolowo, Alhaji Aminu Kano, Chief Anthony Enahoro, Okoi Arikpo, among others, who believed in the ideal of the military in the education sphere and were prepared to work for its achievement. Summarily, the paper emphasizes inter alia; that there is a correlation between leadership style and educational advancement. While bad leadership has tendency of ruining the educational system, as only the responsible leadership can facilitate the educational progress. This is an important lesson for the government that is really committed to the present and future Nigerian educational system. As such, for substantial and sustained educational growth in 21st century, only the right leadership can save the system from retrogression or even total collapse.

Hinchliffe (2002) examined the public expenditures (issues, estimates, and some implications) on education in Nigeria. It is noted that estimates of public expenditures on education are made on partial and often inadequate data. Overall, in 1998, which was the end of military rule in Nigeria, expenditures on education were equivalent to 2.3 per cent of GDP and 14.2 per cent of the total expenditures of the three tiers of government. A similar exercise undertaken for 1962 indicated a GDP share of 3.6 per cent and total government expenditure of 18.2 per cent. Furthermore, on an average for 19 sub-Saharan African countries in the mid 1990s, education expenditures were equal to 19.6 per cent of government expenditure and 4.7 per cent of GDP.

The shares across education levels for Nigeria were compared to those in other countries, in 1996. Across the 18 sub-Saharan African countries, the shares were 48 per cent primary, 31 per cent secondary and 21 per cent tertiary [UNESCO, (2000)]. The allocation to tertiary education rose significantly, as compared to primary schooling which was significantly lower in Nigeria. Another set of comparison could be made with the assessment of education financing in Nigeria for 1962 and 1998. The share of GDP in 1962 under the civilian governments and first republic, education expenditures were equal to 3.5 per cent of GDP. The estimates for 1998 on the other hand, suggested a share of mere 2.3 per cent. The obvious inference is that education expenditures in 1998 were a smaller share of GDP than they were in the early 1960s. Further, the share of total government expenditures

in 1962, on education expenditures were 18.2 per cent of the total, whereas, in 1998 the overall share on education expenditures were estimated at 14.3 per cent. Again, the education expenditures in 1960s were a larger share of GDP than they were in 1998.

Breaking down the analysis into the regional and state levels in 1960s and 1998, respectively, the federal government share was 15.5 per cent and the three regional governments' shares were 21.5, 26.9 and 29.5 per cent. However, in 1998, the education expenditure for the Federal government was 9.6 per cent, 17.0 per cent for the state governments and 25.0 per cent for the local governments. It is obvious that both the overall share and the federal government share were reduced notably.

Assessing the distribution of government expenditure among education levels in 1962, the distribution was 50, 31 and 19 per cent for primary, secondary and tertiary education, respectively. Estimates before 2003, reflects a distribution of 36, 29 and 35 per cent for primary, secondary and tertiary education, respectively. The share for primary appears to have fallen significantly, while that for tertiary has increased appreciably. Hinchliffe (2002), opined that attention needs to be given to causes and implication of trends in the fall of education share of GDP and of the total government expenditure plus changes in distribution away from the primary schooling towards tertiary education, despite the large increase in funds distributed to states and local governments from the Federation Account in 1999 and 2000 due to high oil prices that accrues to the government.

Omotor (2004) studied the federal government expenditure on education sector in Nigeria and its implication for development. The objective of the study was to examine the profile of educational expenditure in Nigeria from 1977 to 1998. The education expenditure model was constructed and tested using the ordinary least squares (OLS) technique. The results of the estimates were not robust, however, it was discovered that federal government revenue was the singular significant determinant of educational expenditure in Nigeria. Being a mono product economy, increase in government revenue from oil, seems to have positive effect in funding to this sector. The paper concluded that there is a need for other sources of financing education such as, Education Tax Fund, and policies which should be aimed at diversifying and broadening the Nigerian economy.

Ighodaro (2008) established a relationship between education expenditure and the economic growth in Nigeria, from 1970 to 2003 using a multivariate causality. The author observed that national expenditure falls short of the UNESCO recommendations, except in 1995 when there was a 2 per cent increase above the 15 per cent recommendation. The empirical result of the study shows that there is unidirectional relationship between education and economic growth. The causality runs from education expenditure to economic growth. The paper suggests that policy makers should increase expenditure on education, to improve economic growth further, in Nigeria.



Similarly, Dauda (2010) provided evidence on the impact of investment in education on economic growth in Nigeria, using the standard growth-accounting model which coupled with co-integration and error-correction techniques. The study found that investment in education in Nigeria is quite low and far from recommendations of the United Nations. Again, it was found that investment in education contributed positively to economic growth in Nigeria. The study suggested that if Nigeria is to achieve sustainable economic growth rate, it is of utmost significant to improve the quality of education and invest heavily in this sector. The study therefore recommends an increase in budgetary allocation to the educational sector.

However, on the contrary, Odubunmi (2010), shows that the shortfalls in manpower supply in some priority sectors point to the fact that education subsector has failed in its role in human capital development in Nigeria. The study reveals that there is no correlation between education expenditure and human capital development in Nigeria. The paper recommends proper design and planning of the educational system. Furthermore, the budgetary allocations to education should be higher and properly monitored so as to minimize the difference between budgetary allocations and the amount actually released.

Ayo-Sobowale, et al. (2001) observed the problem of funding and financing universities in Nigeria as a reoccurring decimal has often times resulted into strikes and closures of the ivory towers. The paper examines the funding pattern in relation to qualitative university education in Nigeria, using alternative strategies in generating additional funds. It recognizes funding as an external factor in achieving quality university education. The study recommended some funding strategies with emphasis on the principle of fairness as a tuition fee strategy and private sector participation, as well as, the macroeconomic strategies as panacea to the problem of funding education in Nigeria.

Uzochukwu and Kanayo (2010) assessed how equitably public expenditure on education and health-care have been targeted by gender. The study employed the welfare dominance tests to determine the incidence of expenditure and subsidy on men and women alike. The study found that primary education was absolutely progressive for both genders. Secondary education was only progressive for females, while tertiary education for both males and females were regressive and not pro-poor.

The poor knowledge of data on educational expenditures in Nigeria is not a recent phenomenon [Hinchliffe (2002)]. A detailed and comprehensive effort was made in 1965 to describe the situation, utilizing data up to 1962 [Callaway and Musone (1965)]. The findings among other things, reveals that total expenditures on education by all governments [federal, states and local governments (combined)] were equal to 3.5 per cent of gross domestic product and 15.2 per cent of total government expenditure. On regional level, 21 per cent of the total of Northern government expenditure was spent on education. The total expenditure by the Eastern and Western Regional Governments was 27 per cent and 29 per cent respectively.



Further, 19 per cent of the total public expenditures on education were allocated to tertiary, 31 per cent to secondary and 50 per cent to primary education, including overseas study. For a variety of reasons, expenditures on education across all levels of government and all levels of education in Nigeria, decreased over the past four decades. [Hinchliffe (2002)]

Abu and Abdullahi (2010) examined government expenditure and economic growth in Nigeria from 1970 to 2008 using a disaggregated analysis. The study observed that rising government expenditure did not actually translate into concrete development. The results of the study revealed that the government total capital expenditure, total recurrent expenditures and other expenditures on education had negative effect on economic growth. The authors' recommendations included among others that the government should increase both, the capital and recurrent expenditures on education, as well as, ensure that funds meant for development of this sector are properly managed.

Human capital formations at both, the secondary and tertiary school levels have had little meaningful contribution to economic growth in Nigeria. This is a consequence of poor quality of secondary education that is prevalent in the society. The secondary schools are under-staffed and are poorly remunerated. There are inadequate learning facilities such as classrooms, well-equipped libraries and laboratories. Besides, the effect of poorly funded universities, the outcome of these poorly equipped universities is also poorly prevalent in Nigeria. It is also clear that the poor quality entrants of functional 'illiterate' secondary school products are fundamental reoccurring decimal of poor graduates' quality of the university Adawo (2011).

#### **IV. Overview of Spending on Education during the Military Era and the Civilian Governments**

In Nigeria there were five universities enrolling about 14,000 students, before the oil boom era (1960-1973). The upsurge in university enrolments could not match the growing manpower needs as there was acute manpower shortage in the economy. The post oil boom (1977to 1984) brought a phenomenal increase in government revenue. Crude oil export increased by 300 per cent from 1.4 billion in 1971 to 5.6 billion in 1974; a 141 per cent increase from 5.6 billion in 1974 to 13.5 billion in 1980, before declining by 23.7 per cent by 1981. This upward trend in the government revenue enabled it to focus to impact on shortage in executive manpower supply. Thus, during 1975 to 1977, the enrolment strength increased to 6,700 with the additional 7 new universities (Universities of Sokoto, Jos, Calabar, Port-Harcourt, Maiduguri, Kano and Ilorin) that were founded. A national agency - the Joint Admissions and Matriculation Board (JAMB) was established in 1978 by the military authorities, in order to facilitate access and harmonize the admission process in the Nigerian Universities.

Another notable development during the military rule between 1983 and 1985 was the review of educational policies to savage the educational sector from the graduate unemployment. This was a consequence of more access to university education, both at home and abroad without corresponding expansion in the other sectors in the economy [Tekena (1989)]. The Federal Government reduced the number of the Federal Universities of technology in 1984 from seven to three. The operation of the national Open University was also suspended. Similarly, the subsidies for students' feeding were equally withdrawn. The burden was obviously shifted to students and parents who had to increase their spending on education.

The different periods of both the civilian and military rule is shown in Table 1. This shows that the military remained in power for a period of 28 years; with initial uninterrupted 13 years (1966-1978) and another 15 years (1984-1998). However, the civilian government had equally a fair share of leadership saddle for a period of 24 years interrupted by military rules averaging an initial 6 years from 1960 to 1965, another 5 years from 1979 to 1983 and currently over 13 years to date. This provides a good base for comparison in determining if either leadership has significantly contributed to human capital development and the economic growth through capital and recurrent expenditure to the education sector.

**TABLE 1**  
Nigeria's Military versus Civilian Rules 1960 - to date

YEAR	REGIME	DURATION
1960-1966	CIVILIAN	Nigeria's First Republic 6 years
January 15, 1966-July 29, 1966	MILITARY	6 months
July 29, 1966-July 29, 1975	MILITARY	9 years
July 29, 1975-February 13, 1976	MILITARY	8 months
February 13, 1976- 1979	MILITARY	4 years
1979-December 30, 1983	CIVILIAN	Nigeria's Second Republic 4 years
December 30, 1983-August 26, 1985	MILITARY	2 years
August 26, 1985-August 26, 1993	MILITARY	8 years
August 26, 1993-November 17, 1993	Interim Govt.	Nigeria's Third Republic 3 months
November 17, 1993- June 8, 1998	MILITARY	5 years
June 8, 1998-May 29, 1999	MILITARY	1 year
May 29, 1999-2003	CIVILIAN	Nigeria's Fourth Republic 4 years
2003-April 21, 2007	CIVILIAN	Nigeria's Fifth Republic 4 years
April 21, 2007-April 16, 2011	CIVILIAN	Nigeria's Sixth Republic 4 years
April 16, 2011-date	CIVILIAN	Nigeria's Seventh Republic 1 year +

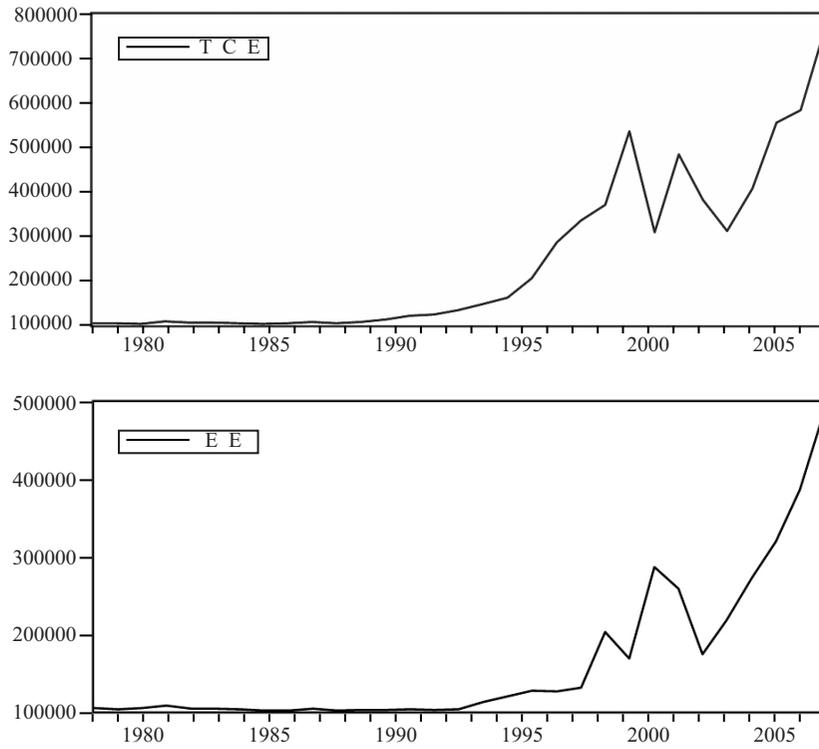
*Source: authors' compilation.*

Table 2 shows the percentage of federal government expenditure on education by levels. A quick examination of military expenditure on education between 1996 to 1998 compared with the civilian expenditure from 1999 to 2001 shows that the military government expend more funds to the tertiary institutions than the civilian government; while the civilian government tends to funds the secondary education more, in terms of total percentage of funds to the education sector, compared with the military government expenditure in the years under review. There is no significant difference in the percentage share to the primary level by both the military and civilian government.

**TABLE 2**  
Federal Government Expenditure Share  
by Level of Education, 1996–2000 (per cent)

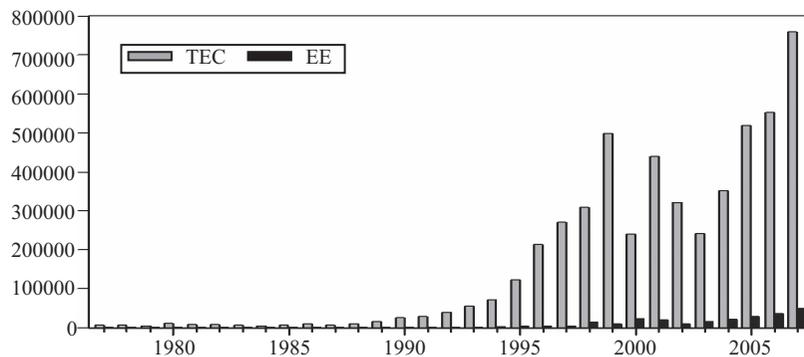
	1996	1997	1998	1999	2000	2001	2002
Tertiary	79.9	78.9	68.4	69.0	75.8	68.1	76.9
Universities	52.5	44.6	39.4	39.9	49.2	39.6	51.2
Polytechnics	16.2	23.2	17.0	18.5	17.0	16.6	16.0
Colleges of Education	11.2	11.1	12.0	10.6	9.6	11.9	9.7
Secondary	10.4	11.3	14.6	18.7	15.3	15.5	15.6
Primary	9.7	9.8	16.9	12.2	8.9	16.4	7.5

Figure 1 shows the total capital expenditure of the federal government in relation to her capital expenditure on education. The vote to both the total capital expenditure (TCE) and capital expenditure on education (EE) was minimal in the period during 1977 to 1993. There was an upward trend from 1994 to 2007. However, there was fluctuation between 1999 and 2002 which was basically the Nigeria's fourth republic. Though the TCE and EE tended to move in the same direction, Figure 2, clearly illustrates the wide gap between the total capital expenditure and capital expenditure on education. For instances, the percentage change between 2006 and 2007 in total capital expenditure and capital expenditure on education was 37.5 and 34.9 per cent, respectively. However, there are a number of years when increase in total capital expenditure did not translate increase in capital expenditure on education. On education the percentage change in TCE between 1995 and 1996 was 75.8 per cent and a reduction of -2.77 per cent in capital expenditure. Similarly, the percentage in both TCE and EE in 1998 and 1999 was 61.2 per cent and 33.4 per cent, respectively. Increase in government capital expenditure was basically in other sectors of the economy, rather than on education. This gives further credence to the fact that education sector was neglected to a large extent.



**FIGURE 1**

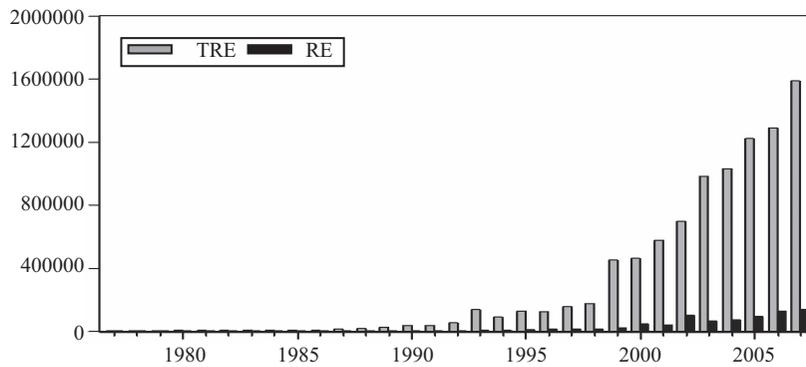
Empirical Comparison of Funding: Military Versus Civilian



**FIGURE 2**

Gap Between the Total Capital Expenditure and Capital Expenditure on Education

Comparing the total expenditure to capital expenditure it was observed that education level during the military regimes and civilian governments, and the capital expenditure on education declined (-35.4, -2.3, -23.9 per cent, respectively) in the first three consecutive years of civilian government (1980 to 1982); in spite of the increase in total capital expenditure. There was a positive trend in changes in capital expenditure on education as the total capital expenditure increased during the military regimes except for a few years -1978, 1983 and 1986, in which there was a decline in percentage change -18.9, -16.1 and -25.3 per cent, respectively. There was also a decline in 2000, 2002 and 2003 in the capital expenditure on education sector by the civilian government.



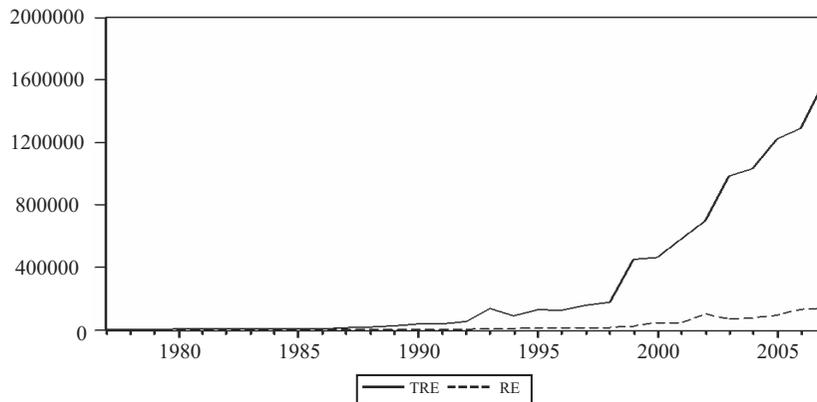
**FIGURE 3**

Contrasts Between the Two Variables

Total recurrent expenditure of the federal government is also compared with the recurrent expenditure of the government on education sector. Figure 3 shows sharp contrasts between the two variables. Also the gradual increase in total recurrent expenditure did not increase the recurrent expenditure on education. There was an upward trend in total recurrent expenditure from 1999 (as is shown on the Figure 3). The civilian government increase in revenue, (from the increase in crude oil price and external reserves) did not significantly have any impact on the recurrent expenditure on the education sector.

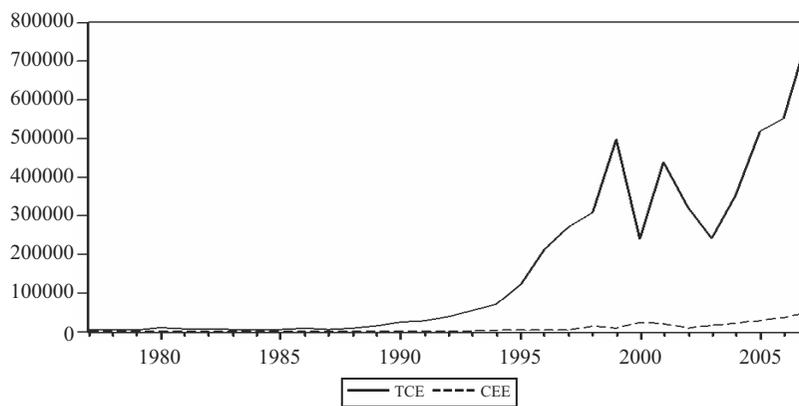
Figures 4 and 5 again summaries proportion of the total government recurrent expenditure and recurrent expenditure on education.

Figure 5 depicts the wide gap between the total government capital expenditure and capital expenditure to the education sector. It is pathetic to note that priority was not given to the educational sector that has the potential of creating enabling environment for huge growth in the economy.



**FIGURE 4**

Proportion of the Total Government Recurrent Expenditure and Recurrent Expenditure on Education



**FIGURE 5**

Gap Between the Total Government Capital Expenditure and Capital Expenditure to the Education Sector

**V. Theoretical Framework, Methodology and Model**

The study is quantitative in design and covers the period between 1960 and 2011. Data was sourced from Statistical Bulletin of the Central Bank of Nigeria (CBN) and National Bureau of Statistics. The study adopted the ordinary least

square (OLS) multiple regression analysis to determine the effect of central government expenditure on economic growth.

In this study, the independent variables are the capital and recurrent expenditure of the central government on education, the dependent variable is the contribution of education to the gross national product. The functional relationships are specified as follows:

$$Eggdp_t = f(Cgee, Rcgee) \quad (1)$$

$$Eggdp_t = f(Cgee_c, Rcgee_c) \quad (2)$$

$$Eggdp_t = f(Cgee_m, Rcgee_m) \quad (3)$$

Linearizing Equations (1) to (3), we have;

$$\ln Eggdp_t = \Omega_0 + \Omega_1 \ln Cgee + \Omega_2 \ln Rcgee + \varepsilon \quad (4)$$

$$\ln Eggdp_{tc} = \Omega_0 + \Omega_1 \ln Cgee_c + \Omega_2 \ln Rcgee_c + \varepsilon \quad (5)$$

$$\ln Eggdp_{tm} = \Omega_0 + \Omega_1 \ln Cgee_m + \Omega_2 \ln Rcgee_m + \varepsilon \quad (6)$$

where,  $Eggdp_t$  is the education sector contribution to the Gross Domestic Product (GDP).  $Cgee_c$  and  $Cgee_m$  are the federal government capital expenditure on education under the civilian and military regimes, respectively.  $Rcgee_c$  and  $Rcgee_m$  are the federal government recurrent expenditure on education under the civilian and military regimes, respectively; and  $\varepsilon$  is the error term.

## VI. Regression Results and Discussion

By examining the overall effects of government expenditure on education sector, both under the military and civilian rule can now be discussed. Thereafter, the impacts of government expenditure on education sector under different regimes are appraised separately. The unit root of the tests show that the variables are stationary at first and second differences. The regression results of the error correction model (ECM), shows that there is a strong relationship between the contribution of education sector to the gross domestic product and the government expenditure to education sector in terms of capital and current expenditures. The adjusted R-square (99 per cent from Table 3) shows that the dependent variable is almost explained totally by the explanatory variables. The government capital expenditures show an inverse relationship with the education sector's contribution to the GDP in the first and third lagged years, but a positive relationship in the second year. The overall

capital expenditure of the federal government to expansion of education in Nigeria has not significantly impacted on this sector. It is obvious in the level of infrastructural decay and inadequate structures and equipment in the ivory tower in the country. There is a demand for more capital expenditure for education sector if the human capital is going to be well developed to meet the exigencies of global challenges and to absorb the teeming Nigerians that are being denied access to functional education, not because of lack of intellectual capabilities but, because of inadequate space in the institutions.

**TABLE 3**

Parsimonious Regression Results

Dependent Variables: EGGDP				
Method: Least Squares	Coefficient	Std. Error	t-Statistic	Prob.
C	166.342500	111.560100	1.491058	0.1461
CGEE(-1)	-0.167371	0.060117	-2.784101	0.0091
CGEE(-2)	0.184786	0.061122	3.023231	0.0050
CGEE(-3)	-0.334961	0.064607	-5.184606	0.0000
RCGEE	0.082368	0.017869	4.609546	0.0001
RCGEE(-2)	0.178862	0.021335	8.383594	0.0000
RCGEE(-3)	-0.079107	0.023698	-3.338190	0.0022
RCGEE(-1)	0.268588	0.025417	10.567060	0.0000
RCGEE(-7)	-0.198841	0.031249	-6.363111	0.0000
ECM(-1)	-0.383514	0.101877	-3.764480	0.0007
R-square	0.997105	Mean dependent variables	5357.7870	
Adjusted R-square	0.996264	F-statistic	1186.2660	
Durbin-Watson Statistics	1.499085	Prob. (F-statistic)	0.0000	

Author's computation.

The recurrent expenditure however, shows a positive relationship with the *EGGDP* and it is significant. This explains the fact that the recurrent expenditure of the federal government to education is more than the capital expenditure. The *RCGEE* is positive in the current and the second lagged periods, except in the first and seventh periods when it was negative. The lagged of the error correction term ( $ECM_{t-1}$ ) has the expected negative sign (-0.38), and is highly significant (0.0007). The negative value supports the co-integrating relationship between the variables under this study.

The coefficient also indicates the speed of adjustment to about -0.38. This implies that in the short-run disequilibrium, 38 per cent of the adjustment to the long-run takes place within one period. The coefficient of determination relating to goodness of fit, measured by the  $R^2$  indicates that 99 per cent of the variations in education sectors' contribution to the gross national product are explained by the independent variables over the period under consideration. The F-statistics of 1,186.3 with a corresponding low probability of 0.0000 is an indication that the model is well specified. Finally, the Durbin-Watson statistics of 1.49 is however low.

Having presented the parsimonious regression results, other diagnostic tests are carried out in order to test for the adequacy and reliability of the model. The *CUMUM* stability test in Figure A-1 (Appendix) shows that the parameter movements were within the critical lines at the 5 per cent level of significance. The *ECM* model is therefore stable. Nevertheless, other tests such as Breusch-Godfrey (BG) and Ramsey Reset test violated the specified rules because of their highly statistically significant probability.

Tables 4 and 5 show the simple OLS results for different periods of civilian 24 years rule from 1960 to 2011 and the military rule of 28 years from 1966 to 1998. The result shows that there is an inverse relationship between capital expenditure of the government to the education sector and the contribution of the sector to GDP. The probability is highly significant. The coefficient of the recurrent expenditure is positive and significant. The result is also similar to what was obtained when distinction was not made between the different rules but a general examination of government expenditure to the education sector. The adjusted R-square is 99 per cent; 2.04 for the Durbin-Watson statistics for autocorrelation in model specification.

**TABLE 4**

OLS Results of Civilian Regime

Dependent Variables: LNEGDP				
Method: Least Squares	Coefficient	Std. Error	t-Statistic	Prob.
C	1.22	0.075	16.24	0.000
LNCGEE	-0.16	0.034	-4.68	0.0003
LNRCGEE	0.41	0.031	13.46	0.000
R-square	0.98	Mean dependent variables		3.285
Adjusted R-square	0.98	F-statistic		552.600
Durbin-Watson Statistics	2.04	Prob. (F-statistic)		0.000

Author's computation.

Under the military rule, the capital expenditure of government to the education sector was also negative, but not statistically significant. Besides, the recurrent expenditure, the federal government has a highly significant positive sign, as under the military regime. . The independent variables explained 72 per cent of the variation in the dependent variable. The Durbin-Watson statistics is low at 0.75, but the F-statistics is 32.9, with a very high significant probability.

**TABLE 5**

## OLS Results for Military Regime

Dependent Variables: LNEGDP				
Method: Least Squares	Coefficient	Std. Error	t-Statistic	Prob.
C	3.670000	0.31	11.58	0.0000
LNCGEE	-0.040000	0.11	-0.35	0.7200
LNRCGEE	0.450000	0.11	3.96	0.0000
R-square	0.720000	Mean dependent variables		5.9780
Adjusted R-square	0.700000	F-statistic		32.9000
Durbin-Watson Statistics	0.745593	Prob. (F-statistic)		0.0000

Author's computation.

The result therefore shows that there is no significant difference between the expenditure (both capital and recurrent) of the federal government to the education sector either under the civilian or military rule. The only common factor under both governments is that the capital expenditure considered inversely related contribution of education sector to the GDP on one hand; but the recurrent expenditure is positively related under both the military and civilian governments, to contribution of the sector to the GDP on the other. Forty-five per cent change in the government recurrent expenditure will bring about a one per cent change in the contribution of education sector to the gross national product. This is highly significant as shown by the probability value. The capital expenditure of the government indicates an inverse relationship of a 4 per cent fall in *CGEE*, leading to one per cent change in the contribution of education sector to the gross national products; the probability however, is not statistically significant. The coefficient of determination indicates that 72 per cent of variations in dependent variable are explained by the independent variables during the period under study. The F-statistics is 32.9 with a corresponding low probability of 0.00, which shows that the model to a large extent is well specified.

## **VII. Strategies for better Funding and Management**

There are various strategies that have been employed by different institutions and countries to improve the funding and management of education. These sources of income could be better utilized to increase the fund that is available to improve the education sector in a country. The task of funding education should not be the sole responsibility of the federal government only. The sources include:

### **1. Grants**

Special grants should be a source from the international organizations, wealthier countries and individual philanthropist with passion for education development. Besides, special grants could come from the federal, state, and local government, especially when there are windfalls. Local and multinational corporations should be encouraged by each level of government to gear their corporate social responsibility more towards the development of literacy level in the country.

### **2. Endowments and Free Donation**

Endowments are basically charitable gifts. These are funds which an institution accumulates over a period of time for the purpose of investing it to generate proceeds that could be used for further development of the institution. Obayan (2006) identify four different forms of endowments as restricted and unrestricted endowment fund, trust fund income and expendable endowment fund. While restricted endowment funds are specifically tied by the donor to a defined project purpose, the unrestricted type could be used for educational projects or programmes as determined by the institution.

### **3. Trust Fund**

Trust-fund on the other hand, is the benefits on the invested funds of individuals or corporate body, usually bequeath as endowments for the benefits of another or institution. Expendable endowment refers to the income or proceeds from the invested fund which has been donated and is used as a source of income over a period of time and the principal could equally be utilized.

### **4. Tuition Fees**

Tuition fees are another, but minimal means of income generation, especially for government institutions. These are some of the means of increasing funds availability to the tertiary institutions in order to mitigate the problem of inadequate funding in the system.

TABLE 6

## Regional Analysis of Oil Rents and Economic Growth

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	GDP per Capita Growth						
Initial Income	-3.9060*** (0.7453)	-3.8232*** (0.7500)	-4.7827*** (0.7496)	-3.8086*** (0.7457)	-3.7317*** (0.7447)	-3.8113*** (0.7461)	-4.1587*** (0.7535)
Education	0.0364** (0.0130)	0.0362** (0.0131)	0.0385** (0.0128)	0.0359** (0.0130)	0.0387** (0.0130)	0.0356** (0.0130)	0.0341** (0.0130)
Investment	0.1741*** (0.0278)	0.1773*** (0.0279)	0.1992*** (0.0276)	0.1744*** (0.0278)	0.1783*** (0.0277)	0.1776*** (0.0278)	0.1803*** (0.0278)
Corruption	-0.6451*** (0.1566)	-0.6408*** (0.1569)	-0.7377*** (0.1551)	-0.6302*** (0.1569)	-0.6375*** (0.1563)	-0.6397*** (0.1568)	-0.6574*** (0.1565)
Openness	0.0015*** (0.0004)	0.0015*** (0.0004)	0.0016*** (0.0003)	0.0015*** (0.0004)	0.0013*** (0.0004)	0.0015*** (0.0004)	0.0016*** (0.0004)
Terms of Trade	-0.0001 (0.0053)	-0.0018 (0.0053)	0.0009 (0.0052)	-0.0013 (0.0053)	0.0006 (0.0053)	-0.0016 (0.0053)	-0.0027 (0.0053)
Oil Rent	0.2691*** (0.0407)	0.2628*** (0.0407)	0.1683*** (0.0428)	0.2304*** (0.0453)	0.3076*** (0.0436)	0.2630*** (0.0406)	0.3360*** (0.0496)
South Asia	-0.3898* (0.1924)	-	-	-	-	-	-
North America	-	-0.6921 (2.1204)	-	-	-	-	-
Middle East and North Africa	-	-	0.6054*** (0.0987)	-	-	-	-
Europe and Central Asia	-	-	-	0.1278 (0.0817)	-	-	-
Sub Saharan Africa	-	-	-	-	0.2398** (0.0853)	-	-
Latin America and Caribbean	-	-	-	-	-	1.8846 (1.4264)	-
East Asia and Pacific	-	-	-	-	-	-	-0.1908** (0.0737)
cons	24.8829*** (5.7851)	24.2966*** (5.8001)	30.8698*** (5.8018)	24.2703*** (5.7877)	23.4143*** (5.7921)	24.2578*** (5.7957)	26.9394*** (5.8392)
N	1243	1243	1243	1243	1243	1243	1243
R <sup>2</sup>	0.476	0.474	0.491	0.475	0.477	0.474	0.477

Standard errors in parentheses, \*p&lt; 0.05, \*\*p&lt; 0.01, \*\*\*p&lt; 0.001.

### **VIII. Conclusion**

The study reveals that there is no major difference in federal government expenditure on education by both the military and the civilian governments. The policy recommendation is the call on the current civilian government to do things differently and impact more significantly on the education sector which forms the fulcrum for human capital development for national development. The UNESCO recommendation of spending twenty-five per cent of annual budgets on education became more necessary at this time. Going by this, policy recommendation could completely bring about an overhauling of the decaying sector. Besides, this study also shows that the system of government is not as important as the commitment of the government to allocate more revenue to the sector, as well as, ensuring that the budget allocations are efficiently managed and utilized.

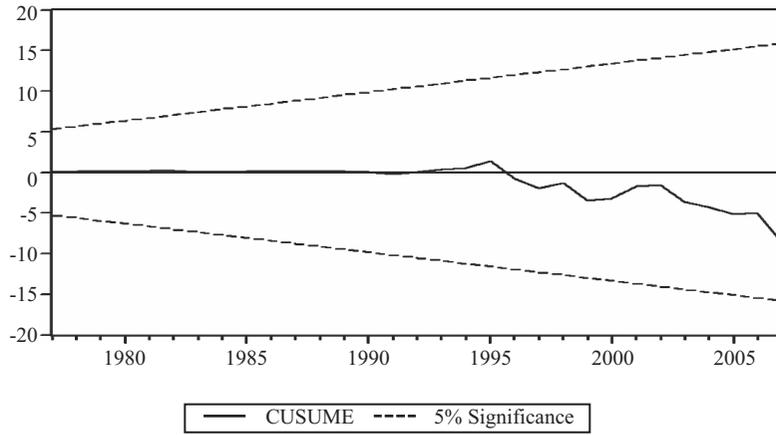
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**APPENDIX**



**FIGURE A-1**

The ECM model is stable.