CHALLENGES AND PROSPECTS OF EDUCATION IN NIGERIA: AN EMPIRICAL EVIDENCE

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Abstract

We investigated the existence of interdependence between educational funding, economic growth, gross fixed capital formation and primary school enrolment. Further we looked at the investment trend already in place and made a projection analysis, to ascertain the future, the prospects and the role education has to play in national building. With this study we were able to determine how much work remains to be done. The results also revealed that Expenditure on education is positively related to the GDP (Gross Domestic Product) while Gross Fixed Capital Formation is negatively related to GDP. In other words, previous year`s GDP tends to increase expenditure on education in the current year and previous year`s. Gross Fixed Capital Formation is negatively related to Education expenditure in the current year with statistically insignificant coefficient. Based on these findings, the study recommends that Government should increase her budget allocation to the sector which is far below the UNESCO recommendation of 26% of total budget because of the important role of the education sector to the nation's economic growth and development.

Keywords: Education, Financing, Human-Capital, Economic Growth.

We live in a new age, variously characterized, but probably aptly described as the knowledge age. Human capital refers to the knowledge, information, ideas, skills, and health of individuals. This is the "age of human capital" in the sense that human capital is a vital form of capital in modern economies. The economic success of individuals, as well as the economy of the nation, depends on how extensively and effectively the governments invest in human capital. Although human capital includes; education, health, and aspects of "social capita". While all forms of capital are important, including machinery, factories, and financial capital, human capital is the most significant. The Nigerian economy which is a capitalist economy could well accurately be called a knowledge capital economy or a human capital economy.

High rate of return to education, investment in training, and other sources of knowledge would be likely to show even higher returns in national development. The global economy cannot succeed without considerable investment in human capital. Richer countries specialize in high-knowledge products and services, while poorer nations specialize in lower-skilled and raw material– intensive products. Still, investments in human capital are also necessary in poorer nations if they are to have a chance of growing out of poverty.

Funding in Nigerian Education

No nation can develop beyond the quality of its education, as a nation's overall advancement is a direct function of the quality of the educational attainment of its citizens. Quality of education depends on a nation's funding of the sub-sector. Education is supposed to attract considerable portion of public expenditure because of its position, as a social service with direct economic significance, with generally acclaimed positive spillover effects. According to the Igbo man, education is considered as a long term investment that leads to a high production for a country in the future. Economists argue that advanced education sector will certainly lead to successfulness of a country's economic and social development. But in Nigeria there is no denying the fact that education is poorly funded, because it is yet to comply with the UNESCO recommendation that 26% of annual budget be spent on education. Nigeria spends less than 11% of her total annual budget on education. Ghana spends 31%, Uganda spends 27%, and Kenya spends 23%. After more than a decade of unprecedented expansion in education, Nigeria has come to a period of review and re-assessment. A few years ago, the main problem being faced was 'how to get it on the ground' and since then throughout the nation; primary schools, secondary schools, technical centers, as well as universities, have been built. Now, Nigeria operates an extensive system of modern formal education requiring for its yearly development and running costs a significant

proportion of the nation's available resources. New problems are at hand; new questions are being asked. Policy-makers are now asking leading questions. How high a proportion of national and regional incomes can reasonably be spent on education? How much can be expected from external sources? What types of education now require priority? Are there indications that the economy is not growing fast enough to absorb the output from certain stages in education? How can this formal educational system be more closely matched with economic development? How can existing educational programs be operated with greater efficiency? And lots more. Education is among the factors creating social change and, consequently opportunities for economic development. Hence, government at all levels must commit vast resources towards the school infrastructures and the education of manpower to the extent that the propagation of worthwhile knowledge can be guaranteed. How can we arrive at a more dynamic concept of the role of education in national development? First we must think of Education Financing. Finance is of paramount importance to education and economic growth (Sheehan, 1973; Eaton, and Nofsinger, 2000; Taggert, 2003).For Nigeria the question of Vaizey is still being asked by many, Vaizey (1961) however raised the question, "how can education be financed?" We may turn to the experience of the OECD Mediterranean Regional Program on "Education and Economic Development" to answer this question. Years back, J. R. GASS would argue that education should be developed for economic purposes alone. UNESCO (1968) remarked that in developed countries, education is entirely financed by taxation, but in developing countries other sources could be explored. Thus, Thorniley (2003) recommended the use of graduate tax in the UK.

In recent years, in Nigeria, the burden of its financing has increasingly been carried by the governments, federal and states. Nigeria's formal education has to a large extent become a publicly controlled service. The financial crisis of educational systems in developing countries is a compound of growing constraints on revenues, inexorably growing demands for more and better education as the population increases, and the fact that education appears to be what economists call a "rising cost industry". Faced with this inexorable finance and cost squeeze, educational authorities have only two possible avenues of escape and they will be well advised to pursue them both rigorously. One is to seek out new sources of revenues, from both public and private sources. The second is to spur educational innovations which will, without impairing quality, hold down unit costs, or at least keep them from rising as rapidly as otherwise. The present study is designed not only to provide insight as to the funding issues of the educational sector in Nigeria, but to provide aggregate analysis of the financing process of education in Nigeria for 15 years during a period of critical expansion period: from 1999 through to

2013 commensurate with Nigeria's growing population. This study is based on a set of relationships which make up total expenditures on formal education: we look at the contributions made by such expenditure by the government. We look at the amounts spent on different types and levels of education. We also try to establish the relationship between our educational budgeting and literacy level in the country. We try to convert these relationships into meaningful and working procedures to guide future policies and education plans. The quantitative picture that emerges from this assembly of data reveals changing patterns in the financing of formal education during this fifteen year period. These patterns are evident in the amounts and the directions of expenditure: for the federation as a whole and for the federal and state governments separately; for each type and level of formal education; and with respect to both capital and recurrent payments. From this layout of expenditures various proportions are obtained, e.g., of national product, of federal and state budgets. The span of years for this study was chosen as being sufficient to enable observed trends in expenditures and sources of funds to be meaningful as a guide to future policy decisions. The trends, therefore, are examined in terms of their components. Since these trends and costing is analyzed on a federal and regional basis. Use of comparative method, which can be helpful in establishing various standards of economy in particular lines of education, is made possible in this paper. First we must explore the following observations below, and make deductions as to how much work remains to be done.

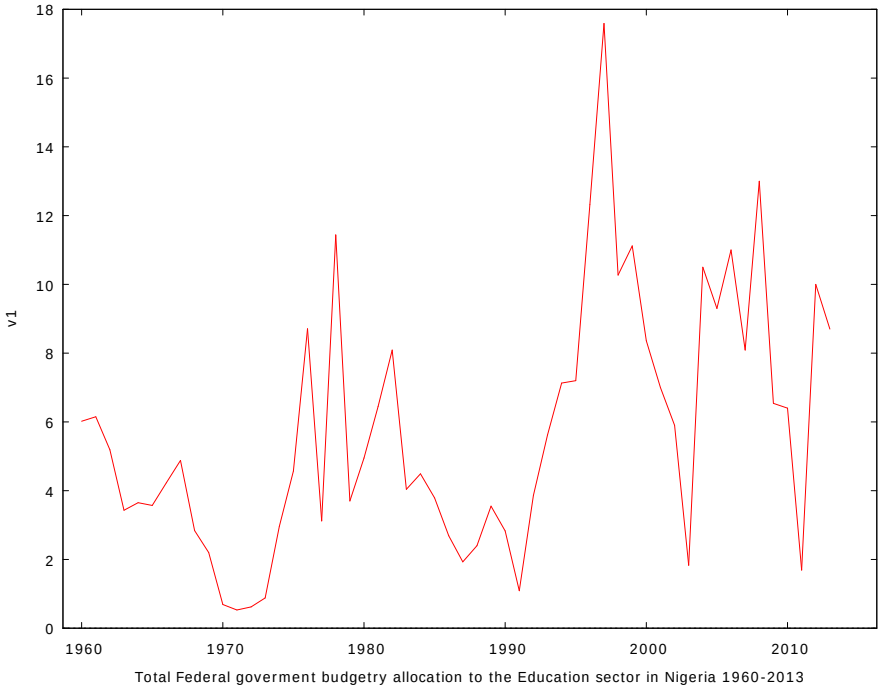
Historical Educational Expenditure and the Budgets

It is obvious that the growth of an economy can be retarded by having a formal education program which is too small or emphasizes the wrong types of education. It is equally evident that the growth of an economy can be hindered by having an education program which is too large for requirements, or too costly for the economy to bear, or obtains results at an unjustifiably high cost. The importance of adequate financing of education cannot be over-stressed. Ezigi and Sharm (2000) argued that no organization could carry out its functions effectively without adequate financial resources at its disposal. But we must ask questions such as; how must the available financial means be distributed over the different levels of the educational system: pre-primary schools, primary schools, secondary schools and universities and next how to distribute the funds devoted to the two higher levels of education over the different branches of study? Here a conflict may arise between economic needs on the one hand and the social demand on the other. The policy maker has to find a compromise taking into consideration the requirements for economic growth and the preferences of the people in relation to the set-up of the educational system. Supporting this point, Adesina (2002) reported that expenditure on education is determined by budgetary allocations. He described a budget

as an estimate of revenues and expenditures for a given period of time, usually a twelve-month period called a financial year, Adiele and Elem (2011), described a budget as a document containing recurrent and capital expenditures.

After October 1954, when the regional governments became autonomous, they had to meet their financial obligations towards the educational system, consisting mainly of the grants-in-aid allocations, from their own internal sources of financing. The education grant they had received between 1951 and 1954, and which was proportionate to their grants-in-aid commitments, was discontinued and the federal revenue was reallocated on different criteria which did not give special consideration to such commitments.

In Nigeria, a critical insight into the estimates of recurrent expenditures reveals that the private contribution to costs was higher in the western States and this partly explains why their public costs are lower in the Northern States. Contrary to what operates in many countries, it is clear that although enrolment is increasing at the primary, secondary and tertiary levels of Nigerian educational system, government's expenditure is decreasing proportionately.



Total Federal goverment budgetry allocation to the Education sector in Nigeria 1960-2013

Fig 1: graph of total budgetary allocation to the education sector in Nigeria 1960-2013

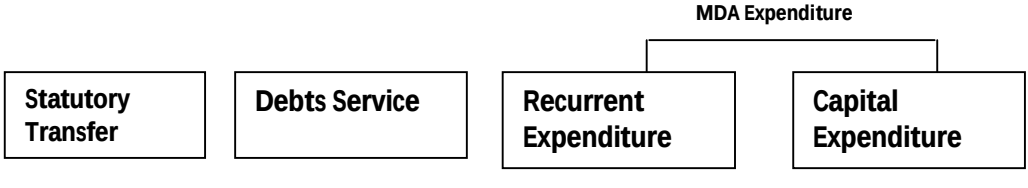
TABLE 6. Expenditure of Regional Governments, 1955/56 to 1962/63 (in E Million)

			Recurrent			Capital
Financial Year	**Northern Region**	**Eastern Region**	**Western Region**	**Northern Region**	**Eastern Region**	**Western Region**
1955/56	8.3	5.7	10.4	3.6	1.1	4.6
1956/57	9.5	10.8	12.8	5.9	1.8	3.6
1957/58	10.6	11.8	12.0	6.8	2.1	4.1
1958/59	11.6	10.3	14.0	6.9	3.4	6.4
1 959/60	13.3	12.8	17.3	7.1	4.4	11.8
1960/61	16.9	15.1	20.8	5.9	4.2	13.7
1961162	18.5	16.8	20.1	9.0	9.0	13.3
1962163	20.9	17.7	20.5	7.4	9.9	14.4

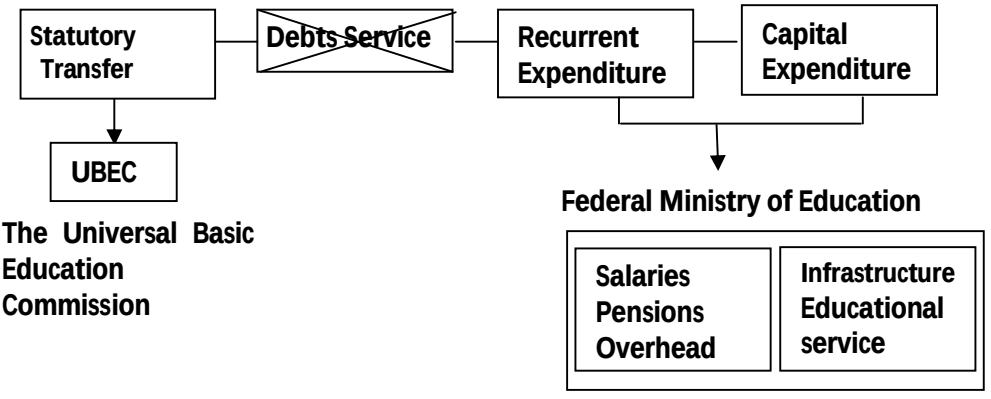
Source*: International Development Association, 'Report on Proposed Development Credit to Federal Republic of Nigeria', 1964.*

Statistical Analysis of Government Expenditure

As already explained; the quality of life of any nation cannot be expected to be more than the quality of the education of its citizenry and the international investment in the education sector. As earlier stated Nigeria's education system and budgetary allocation is part of the focus of this study with the intention to extract some sense from available data as relating government budgeting. This analysis is in five fold. (1) to reveal the budgeting trend of the education sector in Nigeria; (2) to determine the budget priorities, growth rate and annual growth rate; (3) to perform a gap analysis and project on possible budget value (4) to investigate for possible existing relationships in our budgeting and educational progress (5) to propose possible synergy among all arms of government. We proceed by taking an insight into the components of Nigerian budgeting in order to understand education budgeting in Nigeria. According to the 1999 constitution education is a right which government pledge to its citizens. Nigerian budgeting components are given below as follows.

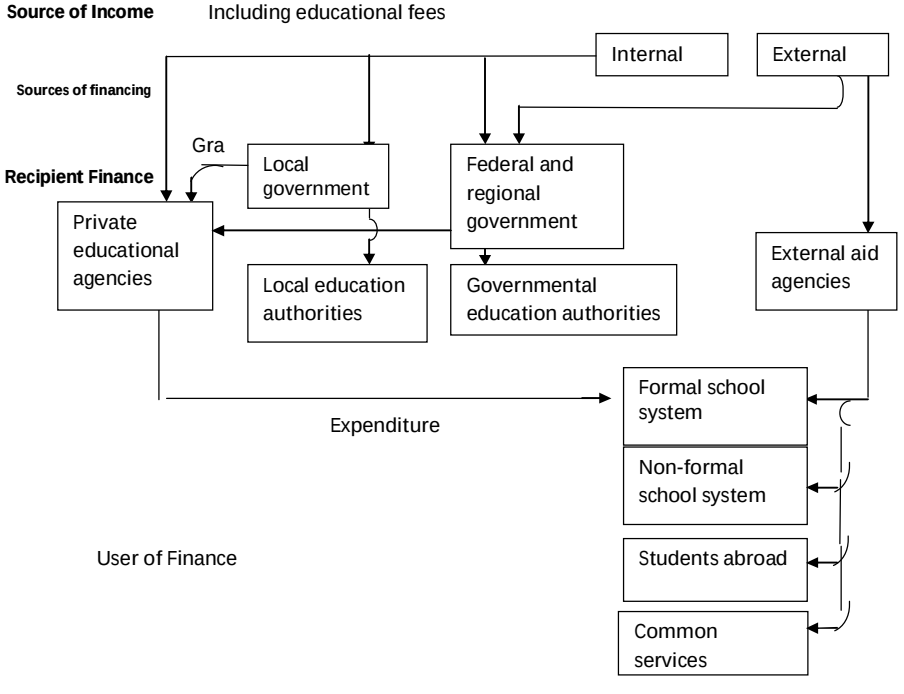


Of these components: education is funded by statutory transfers, recurrent expenditure (non-profit) and capital expenditure. The budgeting allocation is given below as:



Budgetary Allocation= UBEC + Recurrent+ Capital

Source: Nigeria Budget office (www.budgetoffice.gov.ng)



Source: United Nations Educational, Scientific and Cultural Organization 1968

The Finance Flow

A schematic view of the flow of finance to education is shown in the page above. We have distinguished sources of income from sources of financing-though the distinction might appear irrelevant-in order to maintain the terminology in use which indicates the sources of financing as government-central or local-and private. Sources of income indicate, therefore, the income flow to the sources of financing. The sources of financing are also the allocators of finance and the recipients of finance are the public authorities and private agencies or individuals engaged in educational activities. The distinction between sources of financing and recipients of finance, however, does not apply in the case of private agencies and individuals. The recipients of finance are also the spending bodies, and the users of finance the final consumers. Income flows to the financing bodies through the usual channels which are represented by (a) the collection of taxes and other forms of internal revenue and by loans and other transfers received from abroad, by central and local governments, and (b) fees and other income paid to public educational authorities and private agencies and individuals. The amount devoted to education from aggregate (a) has been regarded as financing from internal public sources and the amount of aggregate (b) as internal private sources. In practice, from total disbursements for educational purposes made by public authorities the amount of educational fees paid to them has been subtracted and added to the expenditure aggregate of private educational agencies and individuals. The part of external income disbursed through aid agencies has been considered as the aggregate of external sources of financing. In order to understand the exact content of these aggregates, the following remarks are necessary: (a) internal public sources include the part redistributed to education of (i) loans and grants received from abroad (i.e., colonial grants), (ii) funds raised from Marketing Boards, and (iii) funds raised from education rates by local government authorities ; (b) internal private sources include funds received by private agencies and individuals from abroad directly and not through an external aid agency; (c) external sources include only disbursements of external funds made through external aid agencies. A further distinction has been made between government and local sources. Government sources are the aggregate of the disbursements for educational purposes made by federal and regional government authorities. Local sources are the disbursements made for educational purposes by local authorities and private agencies and individuals. As regards the use of educational finance, this has been distinguished between formal- and non-formal school system, students abroad and common services, this latter including administration, examinations, school libraries, health services, etc., but excluding that part of such services directly carried out by educational institutions.

Now we try to reveal the correlation analysis between educational funding and economic growth, for the period under review (1999-2013).

Methodology

The data used for this work are secondary data sourced from the World Bank Data Base, 1999-2013, the statistical method used for analyzing the data was the Simple Pearson Correlation Co-efficient, which enabled us to measure for the Linear Correlation between the two variables X and Y. This will give us a value between +1 and -1. Where +1 will indicate a total positive correlation, -1 will indicate a total negative correlation and a Zero (0) will mean no correlation existing. The method was developed by Karl Pearson from a related idea introduced by Galton in the 1880 (wikipedia.org). Like many commonly used statistics, the sample statistic "r" is not robust, so its value could be misleading if outliers are present. Thus to check for this limitation, we carry out a physical inspection of the of the scatter plot between X and Y. This will typically reveal where outliers might be a problem. The scatter plot shows that there are no outliers.

Conclusions

The data used for this study were data on GDP (Y) per capita as proxy for economic growth, and data on total expenditure on education(X) (i.e. Investment on human capital), a correlation analysis was carried between the two variables, and the Pearson Correlation result of 0.982 and p-value of 0000, indicated that there exists a positive correlation (i.e. a positive linear relationship) between economic development and educational funding. However, there is still the need for an increased education funding. As this will further improve on economic growth, Nigeria still falls behind the UNESCO standard for education funding.

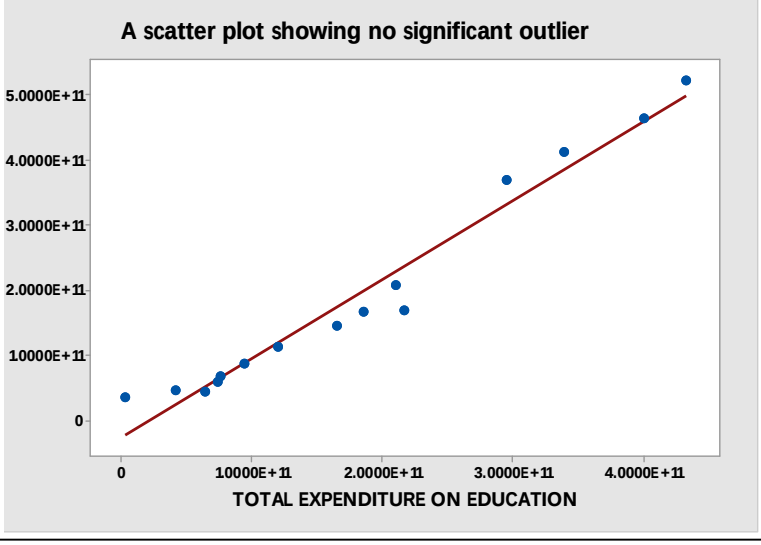
Having looked at the area of Affordability of education and funding of research programs, this factor is sine qua non to strengthening of the so called 'leaders of tomorrow' (Youths). It is sad that some political opportunists still assume that education is a privilege after two decades of United Nations Education, Scientific and Cultural Organization (UNESCO) declaration that education is a right. We must all make deliberate efforts to improve on the general wellbeing of school systems to safeguard our teaming youths from social vices. Funding of researches will help to improve the educational system, thus bringing about economic development.

Hence, an economy can develop only in step with a transforming society. A principal means for achieving these co-ordinate changes lies in a many-sided, balanced program of education, in which both formal and other types of education play their parts. With respect to capital expenditure on human capital development, a new approach, based on partnership between the private and public sectors of the economy should be put in place. This is required to enhance the necessary transparency and accountability

required for disbursement and utilization of funds for capital projects in educational development. Not putting this framework (capital expenditures on human development) in place would jeopardize economic growth. Based on the findings of this study, the following conclusions are drawn: Firstly, there exists a long run relationship between human capital development and economic growth in Nigeria. Secondly, an effective reform is required to guide the disbursement and control of funds for capital projects in the education sector. Thirdly, the Nigerian education system is faulty leading to poor quality of human capital, graduate unemployment, and un-employability of Nigerian graduates. Further studies can therefore focus on Public-Private Partnerships (PPP) and human capital investment in Nigeria with particular focus on capital projects.

However, if educational planning, integrated with economic planning, is to be a genuinely useful instrument for development, it must not only involve rigorous analytical methods and concepts but it must also take a very comprehensive view of education itself, the processes of implementation, and the whole living context in which educational development must take place. Second, to ensure effectiveness, educational planning must be realistic. It must aim to do the possible, not the impossible. In each country the techniques of planning employed, and the targets and means adopted, must be fitted to the conditions which prevail. If this is done, there should be no grounds for anyone to claim, as many do today, that educational planning is too vague, too theoretical and too impractical.

Appendix



Correlation: Between GDP and TOTAL EXPENDITURE ON EDUCATION

Pearson correlation of GDP and TOTAL EXPENDITURE ON EDUCATION = 0.982
P-Value = 0.000

Date	GDP	Education Expenditure
1999	3.58708E+10	2700000000
2000	4.63860E+10	40940663330
2001	4.41380E+10	63783776900
2002	5.91169E+10	73435499300
2003	6.76558E+10	75707827520
2004	8.78454E+10	93767886839
2005	1.12248E+11	120035527799
2006	1.45430E+11	165213672666
2007	1.66451E+11	185771774929
2008	2.08065E+11	210444818579
2009	1.69481E+11	216639437111
2010	3.69062E+11	295293389496
2011	4.11744E+11	339481528685
2012	4.62979E+11	400148037983
2013	5.21803E+11	432760713761

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