

INVESTMENT IN EDUCATION AND CAPACITY DEVELOPMENT, NIGERIAN'S ANSWER TO LONG-TERM GROWTH

Lawal Faith Chidinma

Department of Business Education, Kogi State College of Education, Ankpa. Nigeria.

Corresponding Email: talktofaith2008@gmail.com

Adejoh John Abimaje

Department of Business Education, Kogi State College of Education, Ankpa. Nigeria.

Email: adejohabimaje@gmail.com

Bello Fatimat Ozavize

Department of Business Education, Kogi State College of Education, Ankpa. Nigeria.

Email: fatimahozas@gmail.com

ABSTRACT

This study examines the investment in education and capacity development: Nigeria's answer to long-term growth. While it concentrated on the empirical investigation of the investment in education and capacity development for a new Nigeria. The investment channels are capital expenditure and government recurrent to the education sector, deposit money bank loans to education, and poor budget percentage allocation to the education sector. Annual time series covering 1990-2020 was adopted and the data collection was secondary in nature which was from the quarterly publications of the Central Bank of Nigeria and National Bureau of Statistics while the method of analysis is the application of ordinary least squares technique, Augmented Dickey-Fuller technique in testing the unit root property of the series, co-integration test, and variance decomposition. The study finds that both capital and recurrent expenditures of education have a positive significant effect on education and capacity development in Nigeria. Also, budgetary allocations to the educational sector have an insignificant negative effect on education and capacity development in Nigeria. A major policy implication of this result was that government should spur education and capacity development through increased investment in education in Nigeria to 26% as recommended by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as well as ensuring that, anti-corruption agencies such as independent corrupt practices commission (ICPC) and Economic and Financial Crimes Commission (EFCC) should monitor closely the disbursement and utilization of tertiary education trust fund (TETFUND) and Universal Basic Education (UBE) fund at all levels of government to arrest and penalize those who divert and embezzle public funds.

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1. INTRODUCTION

The high rising trend in the number of educational institutions in Nigeria has led to a persistent increase in school enrolment at all levels with an insignificant increase in budgetary allocations to educational sectors from the inception of the Structural Adjustment Program. Education is the main object of development and of huge importance in sustaining any economy. As an input and output to development, education is fundamental to the wider notion of expanding human capabilities that support development. In the same manner, education plays a key role in the ability of a developing country to absorb modern technology and develop the capacity for self-sustaining growth and development (Todaro and Smith, 2009). This is to say that education is considered the bedrock of a country's potential for national transformation, and sustainable human national development. Development remains the eclectic paradigm of social change aimed at improving the condition and quality of life of the people, especially that of the majority of the poor and vulnerable people in society. For development to make sense, it has to be sustainable, that is. It should continue for a very long time without causing damage to the environment and for the benefit of present and future generations. As Jhingan (2007) posits, sustainable development means that development should "keep going". It emphasizes the creation of sustainable improvement in the quality of life of all people through increases in real income per capita, improvements in education, health, and general

quality of life, and improvements in the quality of natural environmental resources. At the 1992 United Nations Conference on Environment and Developments (UNCED), of the Earth Summit held in Rio de Janeiro, Brazil, the role of education in promoting sustainable development was made explicit by Agenda 21, the global action plan for the 21st Century (UNCED, 1992):

Developed countries have made huge investments in quality education as stipulated by the United Nations Educational Scientific and Cultural Organization (UNESCO) that a minimum standard of 26 percent annual budget should be given to education. It is for this reason coupled with responsible leadership and good governance that the developed countries occupy high rankings in United Nations Development Program (UNDP), Human Development Index (HDI), and UNESCO's Global Monitoring Report (GMR). Often at time, economic growth and development are used interchangeably like they mean the same thing. Economic growth is relatively easier to accomplish than trying to put development in a precise definition. Economic growth is ordinarily defined as a persistent rise in the per capita income of a country over a fairly long period and the measuring rod is income growth. Development can simply be defined as growth plus change and for development to be sustainable via education there are certain questions that a country needs to answer:

- What has been happening to underemployment?
- What has been happening to poverty?
- What has been happening to inequality?

If these questions have been less severe, then, there's no doubt this has been a period of development for the country concerned and we can say that such development via education is sustainable. If one or two of these central problems have been growing worse, especially if all three have, it would be strange to call the resulting development, even if per capita income is growing. For an economic development to be sustainable, it must be centered on human resources which base of this research. The objectives of this research include:

- 1) To find out the impact of Investment in education and capacity development on sustainable growth in Nigeria.
- 2) To find out the effect of primary, post-primary, and tertiary school enrolment on sustainable growth in Nigeria.
- 3) To determine the effect of total educational expenditures, recurrent and capital expenditures on sustainable growth in Nigeria

Nigeria is richly blessed with abundant natural and human resources. Despite these abundant resources, the economy over the years has been growing at a very slow rate and this can be attributed to neglect and failure to invest in the human capital of the nation. Capitals are used to demonstrate the differences people make in the performance of a manager and consequently the enterprise. Emphasizing the importance of Human Resources to an organization, Thomas J. Watson, (1965) who is the founder of IBM remarked, according to Watson, you can get capital and erect buildings, but it takes people to build a business". The renewed emphasis on employees as human capital is to re-emphasize that success in organizations depends mainly on the ability to manage human capital. As budgetary allocations to the education sector declined particularly since the introduction of the Structural Adjustment Program (SAP, 1986), school enrollment at all levels recorded an increasing trend and the number of educational institutions increased tremendously. The development created severe infrastructural gaps in schools, per capita school infrastructure has declined as lack of frequent training of workers to update them on the modern educational trends, no new structures are built and old ones are not always renovated. These features in the education sector have manifested in several problems. First, the classrooms are overcrowded; teaching aids are in limited quantity, unequipped, and a gradual showdown of technical colleges, and inadequate or conducive learning facilities among others. The scenario is not different in secondary and tertiary institutions where in addition to rusty and cranky classroom facilities, science laboratories are either non-existent or dilapidated Nwaogwu (1997), Sambo (2012), Douglas (2015).

The huge investment gap in the education sector in Nigeria is not limited to inadequate infrastructure alone but also to the incentive structure of staff in the school system. Teachers are in limited numbers and underpaid in the entire public service in Nigeria, an indication of the nonchalant attitude of the government with regard to the education sector. The study seeks to evaluate the adequacy of government expenditure on the education sector and the level of literacy in the Nigerian economy. It is based on these, that the study will be focusing on appraising the efficacy of investment in education and capacity development, Nigerian's answer to long-term growth.

2. REVIEW OF RELATED LITERATURE

2.1 Investment Channels in Education

There's a contribution from all levels of education to economic development through imparting general attitudes and discipline and specific skills necessary for a variety of areas of specialization as it majorly contributes to the economic development of every nation by improving the health and standard of living of the citizens of a particular nation. The major importance of the educational system to any labor market would depend majorly on its ability to produce a sound and disciplined literate who can add value to society in return. With economic development, new technology is applied to better production, which increases the demand for workers and a sharpened educational system. The statement in this

regard is the work of Lucas (2018) which revealed that the growth rate of human capacity development is also dependent on the amount of time allocated by individuals to acquire skills while Rebelo (2015) also extended the model by introducing physical capital as an additional input in the human capacity accumulation function. Furthermore, the model of endogenous growth by Romer (2017) assumes that the creation of new ideas is a direct function of human capital which manifests in the form of knowledge. The most productive investment any country can make toward the development of the economy is in education. Education is one of the key pathways through which sustainable development could be secured and maintained. The launch of the United Nations (UN) Decade of Education for Sustainable Development (2005-2014) activated a global initiative to reorient the education system to address the challenges of sustainable development (UNESCO, 2018). Investment in education has been discovered as a critical enabler for growth by various studies in both advanced and developing countries.

According to Emmanuel Onwioduokit, (2020), Development entails a free release of the energy of a people. Education, especially qualitative education, has been discovered as the only vehicle that can facilitate the emergence of a political structure that will produce the right kind of leaders. For a country to develop, education (human capital) is needed in addition to investment in physical infrastructure. Boyi (2013), rightly noted that Education shall continue to be highly rated in all countries' development plans because education is the most important instrument for change. In Nigeria, the broad educational objectives, include the inculcation of national consciousness and unity as well as the right type of values and attitudes for the survival of the individual in Nigerian society; training of the mind in understanding the world around, and the acquisition of appropriate skills, abilities, competencies for contributing to the general development of the society. Similarly, Umo (2012) contended that one must remain a life-long student or learner. The unique property of the educational production function is that it is an input not only for the production of other items but also for the production of education itself. Kenneth Arrow (1962) averred that knowledge cannot be absorbed unless some knowledge is already possessed. The initial possession of knowledge is therefore a prerequisite for gaining the ability to learn further. In modern pedagogic, a teacher is expected to impact his/her students' ability to 'learn how to learn. Thus, the educational enterprise is adjudged successful if its products acquire the ability for self-learning or self-instruction. It is the only attribute that would enable one to use education to unlock the inscrutability of his/her environment.

Everyone everywhere should be able to build their literacy and numeracy skills since Education is one of the sustainable development goals (SDGs). Apart from being one of the sustainable development goals itself, education has a transformative characteristic that, if delivered properly, can meaningfully facilitate economic development, enhance social inclusion, foster environmental sustainability, and improve governance. Undoubtedly, quality education is what is needed to achieve sustainable development Emmanuel Onwioduokit, (2020). Be that as it may, the system of education in Nigeria has not been able to play this stimulant development role. Umo (2012) attributed the failure of the Nigerian education system to funding deficit in the educational sector, leading to deterioration in quality, uncontrolled growth in educational institutions, failure to concoct a match between labor needs and the educational curricula, inadequate research funding, etc.

In recent times, some studies have examined different ways in whereby human capital can affect economic development. Gupta and Chakraborty developed an endogenous growth model of a dual economy where human capital accumulation is the major source of economic development in a nation. They argued that the duality between the wealthy individual exists in the mechanism of human capital accumulation. Wealthy individuals allocate labor time not only for their production and knowledge accumulation but also to train poor individuals. Noticeably, in a different view, Bratti, Bucci, and Moretti (2014) estimated a model of economic development and human capital accumulation based on a sample of nations at different levels of development. Their work revealed that the increase in the primary and secondary stages of education contributes massively to an increase in productivity. They concluded that human capital accumulation rates are affected by demographic variables. For instance, they established that an increase in life expectancy at birth brings an increase in primary, secondary, and tertiary education while a decrease in juvenile dependence rate negatively affects secondary education. They finalized this by adding that geographical variables have considerable importance in the human capital accumulation process.

2.2 Technical Skills in an Economy

Technical skills are sets of abilities or knowledge used to perform practical tasks in the areas of science, the art technology, and math in education while in the economy; it is used to perform economic analysis which includes analytical, communication, critical thinking, and mathematical, statistical and writing skills in addition to being detail-oriented. A country's development cannot be overemphasis since its economic contributions tend to benefit both the individuals directly and the society indirectly. A common structural pattern has been given based on the monumental definition by various scholars, Farrant (1985), Fafunwa (1974), and Anyanwu (1999). The determination is, to improve the individual to be useful and desirable in his society. In explaining some significant roles of education in nation-building, Enueme (1999) opined that technical skill has a position to play in developing countries in the appreciation and acceptance of booster of agricultural production through mechanized farming, and the use of fertilizers, crop rotation, and so on rather than belief in the in gods of harvest. According to her, education also attracts direct financial returns in the form of earnings

differential among graduates and is relatively minimal in comparison to others with lesser educational qualifications this is mostly found in organized private and public institutions.

2.3 Sustainable Development

There is no single definition for sustainable development but the key idea common to all definitions concerns resource exploitation at a rate that would not prove detrimental to future generations. According to Emeka Nwoba (2015), sustainable development could probably be otherwise called equitable and balanced. This means that, for development to continue indefinitely, it should balance the interests of different groups of people, within the same generation and among generations and do so simultaneously in three major interrelated areas: social, environmental, and others. Sustainable development has also been defined by the Nigeria Study/Action Team (NEST, 1999) in Osuji (2016) as an approach that combines the development needs and aspirations of the present without compromising the ability of the future while also maintaining ecological integrity. According to Osuji, a development process that is equitable and sensitive, resourcefulness and discipline of the human beings who are the managers of developmental programs. At the Sustainable Development Summit on 25th September 2015, UN member states adopted the 2030 agenda for Sustainable Development which includes a set of seventeen Sustainable Development Goals (SDGs) to end poverty, fight inequalities and justice, and control climate change by 2030. Furthermore, Asodika and Nnabuo (2012) described sustainable development as a construct, which envisions development as meeting the need of the future generation. It implies that while education meets the nation's present needs, it is determined by human capital and physical capital. Though, Akintoye and Opeyemi (2014) have argued that continued educational sustainability is only possible or assured when it is agreed upon and indeed concrete steps are taken to raise the level of literacy and numeracy in any society. Educational institutions and their programs are great tools by which development sustainable can be achieved. Hence! Education is the only means by which people can be concertized and positive attitudes inculcated into them since education has a central and rather crucial role to play in the mobilization of the citizens for specific national development programs.

2.4 Education for Sustainable Development

According to Leonard (2014), In December 2002, the United Nations Generally Assembly adopted resolution 57/254 to put in place a United Nations Decade of Education for Sustainable Development (DESD), spanning the years 2005 to 2014, with the United Nations Educational Scientific and Cultural Organization (UNESCO) as the lead agency for the Decade. The overall goal of the Decade of Education for Sustainable Development is the integration of the principles, values, and practice of sustainable development into all aspects of education and learning which are:

- i. Facilitating networking and collaboration among stakeholders in Education for Sustainable Development (ESD).
- ii. Fostering greater quality of teaching and learning in Education for Sustainable Development (ESD)
- iii. Supporting countries in achieving their Millennium Development Goals (MDGs) through Education for Sustainable Development (ESD) efforts.
- iv. Providing countries with new opportunities and tools to incorporate ESD in education reform efforts.

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2.5 Government Expenditure and Development of the Educational System of Nigeria

Research showed a positive relationship between the development of the education sector and government expenditure. For the education sector to develop, it means that the human capital is well equipped with the knowledge and right skills that will drive the economy from a given state to a preferred economic state. Discussions on education and investment in education have continued to receive more attention and this is because education is seen as a powerful tool for the equalization of stable economic opportunity, distribution of income, and eradication of pervers.

2.6 Policies of Education in Nigeria

Education policy consists of the principles and policy decisions that influence the field of education, as well as the collection of laws and rules that govern the operation of education systems. Education policy analysis is the scholarly study of education policy and education is guided by the national policy on education several coordinating mechanisms have been put in place to ensure that the highest standards are maintained in curriculum, manpower development, and infrastructure. In Nigeria, education policy at independence was aimed at using the available, schools to develop manpower for economic growth and development. The policy was narrowed and did not meet the aspiration of Nigerians. The criticism of the policy includes a high rate of repetition and dropouts, irrelevant curricula, obsolete methods of teaching, and the fact that graduates were dependent on low creativity and above all, without a functional education.

2.7 The National Policy on Education (NPE)

Nigeria is approved and followed national guidelines for the effective management, administration, and implementation of education at all tiers of government since 1977. The orientation of the policy was geared towards self-realization, individual and national, social, cultural, economic and political, scientific and technological development. The policy was revised in 1981 and 1998. The objectives of the policy were broadened to include free primary education among others. Before this time, the structure of the education system in Nigeria was six years of primary school, five to seven years post-primary education (secondary teachers training and sixth form and four to six years of tertiary education (colleges of education, colleges of technical, polytechnics, and universities). During this period, the pattern changed into a 6-3-3-4 system. The system consists of six years of primary education, three years of junior secondary school education, three years of senior secondary school, and four years of tertiary education (Anyanwue et al, 1997). At the beginning of the Obasanjo-led administration, Universal Basic Education (UBE) scheme was launched in 1999. The specific targets of the scheme are a complete eradication of illiteracy by 2010 and an increase in adult literacy rate from 57% to 70%. (FRN, 2000, 53). The main aim of this program was to finance a functional universal and quality education for all Nigerians irrespective of gender, age, race, religion, tribe, or occupation.

Nigeria presently operates an educational policy called Universal Basic Education (UBE). The policy/ law stipulates a 9-year formal schooling, adult literacy, and non-formal education, skill acquisition programs, and as a matter of law the policy is all-inclusive, and so the education of special groups such as nomadic children, as well as migrants, girl child and women, Al-majiri (Northern street children who study Islamic laws), street children and also disabled people. This scheme is monitored by the Universal Basic Education Commission, UBEC, which is an arm of the Nigerian Ministry of Education, that is backed by international agencies. UBEC is empowered to take proactive measures to ensure that Universal Basic Education is made “free”, “compulsory” and a right of every child. This power comes from the UBEC law section 15 which defines Universal Basic Education as early childhood care and education. The UBE system may also be referred to as the 9 3 4 system of education, which stipulates a mandatory 9 years of primary and junior secondary education (this is officially referred to as basic 1 to 9), which is then followed by 3 years of senior secondary education, and then capped by for years in a College of Education, College of technical, Polytechnic or University for the finishing touches. Before this, it was the 6334 system of Education, which was a national policy that stipulated six years of Primary Education, Three years of Junior Secondary School, Three years of senior secondary school, and then Four years of University Education. It should be noted that as good as a policy may be, without adequate implementation of necessary funding, such policy will amount to nothing even if the same policy worked in other countries.

2.8 Education Funding Challenges in Nigeria

According to Eravwoke Kester Erhieyovwe (2017) Funding challenges in Nigeria's educational sector in particular have been traced to policy and strategy instability and inconsistency, inefficient management, wastages, and leakages thereby overriding macroeconomic conditions that have determined the fate of the sector. Where the poor economic growth is stagnant at a reasonably high and sustainable rate, it will not have the resources to fund a large social service sector such as education in Nigeria. A high rate of population growth alongside a lackluster growth rate of the GDP would imply severe resource constraints which could lead to the epileptic funding of a social sector such as education. The problem with this revenue structure is that oil revenue on which the Government depends heavily is highly exposed to the volatiles of the price of oil in the international market. Such derived fluctuations in the major revenue item of government means that without careful planning and rationalization of expenditure of the revenue, the implementation of government projects and programs would be subject to frequent disruptions and distortions. (Debie 2012). An examination of the records shows that the Nigerian Government has tended to embark on ambitious education programs in spontaneous response to oil booms. In 1973-1979 Nigeria experienced the first oil boom as a result of the Arab oil embargo against the U.S.A. In 1990 there was a second oil boom because of the Gulf war and the United Nations trade embargo on Iraq and Kuwait.

A third oil boom started in 2003 fuelled mainly by galloping economic growth and attendant high energy demand in several emerging economies. It was in response to the windfall revenues resulting from the 1973-1979 oil booms that the Nigerian Government 1976 introduced Universal Primary Education. This laudable program caused a dramatic expansion in the demand for educational services at the primary level. But the financial resources became inadequate, particularly! following the collapse of oil prices. Orka (2008) reports that the four best Nigerian Universities Obafemi Awolowo University, Ile-Ife, University of Ibadan, University of Benin, Benin City, and University of Lagos, Lagos were ranked 5834th, 6809th, 7,318th, and 7,601th respectively in the world Universities ranking order. It is further regrettable that no Nigerian University was rated among the World's Top 500 Universities in the Third World Countries, and none could be rated among the first 40 best Universities in Africa. Orka (2008) report further revealed that Nigeria has only 15 scientists and engineers engaged in research and development per million persons as against 165 in Brazil, 459 in China, 158 in India, and 4.102 in the USA. This explains why our mineral deposits are under the control of other multinational companies and powers.

2.9 Empirical Review

Substantial numbers of empirical evidence suggest that most governments in developing countries are directly responsible for spending or investing in education at both higher, middle, and lower levels of the educational system. Several relationships between government spending on education and economic growth point in different directions. For example, there are ample studies that demonstrated the existence of a long-run relationship between government spending on education and economic growth in the country. Obi and Obi (2019) found using Johansen co-integration that long-run relationships do not exist between 1981 and 2012. Hussin, Muhammed, and Razak (2018) used Vector autoregressive regression (VAR) to show evidence of a positive relationship between economic growth proxy by GDP and fixed capital formation, labor force, and government expenditure on education in Malaysia. Tamiang (2018) applied the Johansen co-integration test to support the presence of a long-run relationship between government spending on education and economic growth in India. On the other hand, in contrast, there are some studies that either do not support the existence of a long a long-run relationship between government spending on education and economic growth or have revealed a weak relationship. Omojimi (2016) conducted both the co-integration and Granger causality tests to investigate whether there is a strong relationship between public expenditure on education and economic growth in Nigeria using time series of data from 1980-2005. The results revealed that public expenditure Granger causes economic growth, but the reverse is not the case. The causality test also discovered that there is bi-directional causality between public recurrent expenditures on education and economic growth. From the output, it was discovered that no causal relationship was established between capital expenditure on education and economic growth, as well as between primary school enrollment and economic growth.

Furthermore, Bosworth, Collins, and Virmani (2007) assessed sources of growth in the Indian economy; the authors concluded that education's contribution to India's economic growth has been negligible. Babatunde and Adefabi (2005) using the Johansen co-integration approach examined the long-run relationship between enrollments in primary, secondary, and tertiary levels of education and the average years of schooling with output per week. Musila and Balassi (2004) using annual data from 1965 to 1999 in Uganda, revealed a positive and significant impact between education expenditure per worker and economic growth including the work of Bils and Klenow (2000), Pritchett (2001), Bosworth, Collins, and Virmani (2007). For instance, Bils and Klenow (2000) using a panel of 52 countries between 1960-1990 argued that it was too weak to conclude that education or school achievement significantly contributed to economic growth. Often a time, the empirical study conducted by Devarajan, Swaroop, and Zou (1996) on a panel of 43 developing countries is used by those in this line of argument to support their fact. In the Devarajan et al study, government expenditure on education is found to negatively correlate with economic growth. While other studies confirmed it as De Meulmester and Rochet (1995) argued that the relationship between education and economic growth is not always positive. This probably cannot be unconnected with the previous argument presented by Blaug (1970); and Sheehan (1971) that an investment in education is nothing but a mere consumption because investment in acquiring knowledge or skills is only for individual interest and does not contribute to economic growth.

3. METHODOLOGY

The study adopted an *ex-post facto* research design because it is a quasi-experimental study that is usually difficult to control. It is a time series study whose data is historical and not randomly assigned but helps the study to examine investment in education including the independent variable, which affects economic growth as the dependent variable. This is following Eravwoke (2017), which posits that already exist are compared on some dependent variable. Also known as “after-the-fact” research. An *ex post facto* design is considered quasi-experimental because the subjects are not randomly assigned. They are grouped based on a particular characteristic or trait. The choice of this research approach is based on its advantages as supported by Adedoyin, Sanni, Puke, and Akubo (2020) which is by manipulating pre-existing statistical data using computational techniques.

3.1 Sources/ Method of Data Collections

There are two sources of data collection, primary and secondary sources. However, this study employed only the secondary method of data collection. The method of data collection was time-series which was derived from the Central Bank of Nigeria Statistical Bulletin. The data covered a total period of 31 years that is between 1990-2021. Various statistical techniques were adopted to test the dynamic properties of the variables and the stability of the model structure and functional form. Unit root and Johansen co-integration tests were used to investigate the stationary properties of the variable, while the ordinary least square regression technique which was aided by EViews 7 software was used as the statistical tool to analyze the influence of various educational investments in education and capacity development, Nigeria's answer to long-term growth.

3.2 Model Procedure

An econometric model was employed for this study to investigate the effect of investment in education and capacity development, Nigeria's answer to long-term growth was formulated following the previous work of Adedoyin, Sanni,

Puke, and Akubo (2020), who investigated educational investment channels and technical skills: panacea of sustainable development in Nigeria for the periods 1986-2017. The study adopted University enrolment as the dependent variable against educational investment financing as the independent variable.

Therefore, the model specification is specified as:

$$EEL_t = a_0 + a_1 CAP_t + a_2 RCT_t + a_3 LOANS_t + a_4 BUG_t + \mu_i$$

And by log linearization the equation becomes:

$$\ln EEL_t = a_0 + a_1 \ln CAP_t + a_2 \ln RCT_t + a_3 \ln LOANS_t + a_4 \ln BUG_t + \mu_i$$

Where:

BUG = budgetary allocation to the education sector

CAP = Capital Expenditure

Ln = Natural Logarithm

EEL = Formal Education Enrolment Rate

RCT = Recurrent Expenditure

LOANS = deposit money banks loan on education

$a_1 - a_4$ = slopes or coefficients of the explanatory variables

a_0 = intercept of the model

μ_i = random variable or error term

On the apriori ground, it is expected that a_1 , a_2 and a_3 should be greater than zero i.e. positive, while a_4 is expected to be less than zero i.e. negative.

4. DISCUSSION ON FINDINGS

Considering the broad objective of this study, the study examined the investment in education and capacity development, Nigeria's answer to long-term growth. This study highlights the econometric framework, co-integration, and regression analysis used in this study. The analysis of unit-root processes and co-integrated systems have played a significant role in econometrics and data analysis in the last decades, with applications to diverse fields like macroeconomics, economic history, international economics, and finance among others. According to Onyewu (2012), the reason for such rapid expansion of the subject is its strong intuitive appeal and its highly involved technical complexity. The result of this pre-estimation tests and regression analysis are presented and discussed as:

Table 1

Augmented Dickey-Fuller (ADF) Unit Root Test at First Difference

Variable	Lag length	ADF test statistic	ADF critical value at 0.05 level	Probability	Order of integration
LnBUG	1	-4.861636	-3.052169	0.0015	1(1)
LnCAP	1	-5.383976	-3.040391	1.1030	1(1)
LnEEL	1	-2.643487	-3.040391	-1.1030	1(1)
LnLOANS	1	-4.177830	3.857386	0.0052	1(1)
LnRCT	1	-3.250338	-3.040391	0.0335	1(1)

Source: E-view 7 Researchers' Compilation (2021)

The variables in the above table were tested at the difference for the presence of a unit root using a significance level of 5%. Virtually all the variables with exception of formal education enrolment rate (LnEEL) indicate the absence of a unit root trait. However, because of the non-stationary state of LnEEL at first differencing, therefore, proceed to undertake the second differencing to determine the whether there is a linear co-integration of series at order 2 as presented in the next table below.

Table 2

Augmented Dickey-Fuller (ADF) unit root test @ Second difference

Variable	Lag length	ADF test statistic	ADF critical value at 0.05 level	Probability	Order of integration
LnBUG	1	-5.802060	-3.065585	0.0003	1(2)
LnCAP	1	-10.78694	-3.040391	0.0000	1(2)
LnEEL	1	-6.101692	-3.040391	0.0001	1(2)
LnLOANS	1	-6.700702	3.857386	0.0000	1(2)
LnRCT	1	-6.014995	-3.040391	0.0002	1(2)

Source: E-view 7 Researchers' Compilation (2021)

The above result in Table 2 shows that all variables achieved in a stationary state after the second differencing at a 5% level of significance. We then rejected the unit root null hypothesis of non-stationary and conclude that the variables were integrated at order two series. We, therefore, examine their co-integrating relationship using the Johansen co-integration procedure as follows:

Table 3

Johansen Co-integrating Test Result between the variables: LNBUG, LnCAP, LnLoans and LnRCT

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5 % Critical Value	1 Percent Critical Value
None	0.973576	137.1910	68.52	76.07
At most 1	0.897068	71.78846	47.21	54.46
At most 2	0.577414	30.86204	29.68	35.65
At most 3	0.458571	15.35754	15.41	20.04
At most 4	0.213100	4.313767	3.76	6.65

Source: E-view 7 Researchers' Compilation (2021)

The result in above table 3 suggests 4 co-integrating vectors in the model as evidenced by the trace statistic of 137.1910, 71.78846, 30.86204, 15.35754, and 4.313767 which are greater than their 5% level.

Table 4

Regression Result

Variable	Coefficient	Standard error	T-stat	Probability	F-stat	R2	Adjusted R2	D. W stat
C	-0.0848	1.5274	-0.0559	0.9562	239.0935	0.9846	0.9804	2.0617
LnBUG	-0.0347	0.0146	-2.3831	0.0308	-	-	-	-
LnCAP	0.3468	0.0967	3.5858	0.0027	-	-	-	-
LnLOANS	-0.2499	0.1351	-1.8479	0.0844	-	-	-	-
LnRCT	0.8957	0.0793	11.2887	0.0000	-	-	-	-

Source: E-view 7 Researchers' Compilation (2021)

The result in the above table shows that the predictor variables i.e. capital expenditure, recurrent expenditure, deposit money banks credit to the education sector and budget allocation to education were significant joint predictors of technical skills development in Nigeria; as evidenced by the F-statistic of 239.09, which confirms that the model is significantly fitted. Also, the predictor variables jointly explain over 98% of systematic change in technical skills development in Nigeria, supported by the Adjusted R-squared explaining over 98% of the change in the growth of technical skills in Nigeria while the remaining 2% could be due to extraneous variables. The Durbin-Watson statistic (2.062) indicates the absence of positive serial autocorrelation among the values of the variables. Furthermore, the constant parameter, in the long run, is negative. This implies that if all the explanatory variables are held constant, the development of the technical skills will reduce by 0.085 units.

Also, CAP and RCT were positive signs of EEL. This implies that a unit increase in capital expenditure on education and recurrent expenditure on education will lead to an increase in the development of technical skills by 0.35 units and 0.90 units respectively in Nigeria. However, deposit money banks loan to the educational sector exhibit an insignificant negative relationship with EEL, specifically; a unit increase in deposit money banks loans to the educational sector will retard the growth of Eel by -0.2499. Also, budgetary allocation to the education sector has a significant relationship with EEL, but negative. This implies that a unit increase in budgetary allocation to the education sector will retard the growth of Eel by -0.0347.

5. SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Nigeria's investment in education has been engulfed in the quagmire of policy failure signaled by confused catastrophic changes in the educational sector. This has made Nigerians invest in educational policies like the judge's obiter dictum where policies are just made to satisfy the international community's demand at the moment of conception. According to Robison, Eravwoke, and Ukavwe (2014) is that the money the government spends on the educational sector in Nigeria is not large enough to transform it into growth and development of the Nigerian economy, the result is in line with the fact that the allocation in the Nigerian budget to the educational sector is below the recommended 26 percent. This is one of the major reasons why the various unions (ASUU, ASUP, COEASUU, etc) are always going on an indefinite strike regarding the just concluded ASUU 2022 strike which lasted for a total period of eight months.

5.1 Summary and conclusion

Investment in educational sectors which brings a high level of capacity development holds the key to the nation's socioeconomic development as provided by this research work. Hence, the government must tailor policies that will increase both capital and recurrent allocation to the educational sector to enhance capacity development in Nigeria. Education funding and its development are one of the greatest catalysts for the improvement of the standard of living of the people. A sustainable increase in capital and recurrent and budgetary allocations to the educational sector is required to boost the level of the human development index in Nigeria. The deposit money bank loans to the educational sector must be minimized to enhance capacity development and vocational and technical skills in Nigeria. To access the tertiary education trust fund and universal basic education intervention fund that is made available every year, states should ensure to promptly fulfill their counterpart obligations as states that are indicated over failure to forward their counterpart funds should be severely sanctioned to act as a deterrent to other states and institutions. The sustainable increase in deposit

money bank loans to the educational sectors will retard capacity development as long-term growth in Nigeria as a result of the high bounding of repayment of both capital and the high associated rate of borrowing in Nigeria.

5.2 Conclusion

The conclusion of this study can be deducted from the empirical findings. The study, therefore, concludes that Investment in educational sectors which brings a high level of capital development holds the key to the nation's socioeconomic development as provided by this research work. Hence, the government must tailor policies that will increase both capital and recurrent allocation to the educational sector to enhance capacity development in Nigeria.

5.3 Recommendation

This study was conducted aimed at comprehending investment in education and capacity development, Nigeria's answer to long-term growth. The study highlighted significant contributions to what investment in education and capacity development should be. Therefore, the research makes the following recommendations:

1. Since the position investment in education is a prerequisite in the development of any nation, Nigeria inclusive. It is evident that investment in education and capacity development is surely the nation's answer to long-term growth and stands as imperative for socioeconomic stability in Nigeria. Hence! Government should ensure that capital expenditure and recurrent expenditure are properly managed in a manner that will raise the nation's production capacity and accelerate economic growth. Government should encourage the education and health sectors through increased funding, as well as ensure that the resources are properly managed and used for the development of education.
2. The priority placed on education is very poor regardless of the United Nations specifying that 26% of the country's budgetary allocation should be given to the education sector. This needs to be addressed and reviewed as expenditure on education secures the future of the nation and the world at large. Hence! The government needs to channel more resources to the capital segment of education like the building of classrooms and laboratories, human capital development, purchase of teaching aids, etc.
3. Also, the study recommends that the deposit money bank loans to the educational sector should be minimized considering its associated high borrowing cost in Nigeria.
4. Finally, anti-corruption agencies such as the independent corrupt practices commission (ICPC) and economic and financial crimes commission (EFCC) should monitor closely the disbursement and utilization of tertiary education trust fund (TETFUND) and universal basic education (UBE) fund at all levels of government to arrest and penalize those who divert and embezzle public funds.

6. REFERENCES

- Adedoyin, E.T., Sanni, T.A., & Akubo, D. (2020). Educational Investment Channels and Technical Skills: Panacea of Sustainable Development in Nigeria. Published jointly by KSU and ANAN: Volume 4, Number 1.
- Anyawu, J.C., Oyefusi, A., Oaikhenam H., & Dimowo, F.A. (1997). Structure of the Nigerian economy. Onitsha: *Joanne Education Publishers*.
- Babatunde, M. A., & Adefabi, (2015). The long-run relationship between education and economic growth in Nigeria: Evidence from Johannes's cointegration approach, Paper presented at the Regional conference on education in West Africa: constraints and opportunities. Dakar Senegal.
- Bhatia H.L (2002): Public Finance, 25th Edition, Vikas Publishing House, PVT Ltd, India.
- Bils, M., & Klenow, H. (2000) . Does schooling cause growth? American Economic Review, 90, 1160-1183. <http://klenow.com/BKHK.pdf>
- Blaug (1970). Introduction to Economics of Education: <http://pascal-Francis.in>.
- Bosworth, B., Collins S. M., & Virmani, A. (2017) Source of growth in the Indian economy, NBER Working Papers 12901, National Bureau of Economic Research, Inc.
- Boyi A.A (2013). Education and sustainable national development in Nigeria: Challenges and way forward. *Mediterranean Journal of Social Sciences* 4 (8), 147-147, 2013.
- Bratti, M., Bucci, A., & Moretti, B (2014). Demographic trends, human capital and economic growth in developing country theory and evidence. The University of Ancona, Department of Economics, Ancona, Italy.
- De-Meulmester, J.C., & Rochet, D. (1995). Acausality analysis of the link between higher education and economic development. *Economic of Education Review*, 14(4), 351 361.
- Devarajan, S., Swaroop, V., & Zou, H. (1996) The composition of public expenditure and economic growth. *Journal of Monetary Economics*, 37(1). 313-344.
- Douglason, G.O. (2015). An analysis of federal government expenditure in the education sector of Nigeria: Implication for national development. *Journal of Social Science*, 9(2), 105110.
- Eravwoke and Ukavwe (2014) Educational Investment As a Panacea for Sustainable Economic Development: The Nigerian Experience *Multidisciplinary Journal of Research Development*. Volume 26 No 1, April, 2017- ISSN 1596-974X

- Fafunwa, A.B. (1974). History of Education. In Nigeria. London: Allen and Unwin.
- Farrant, i.s. (1985). Principles and Practice of Education. London: Longman Pub. Ltd.
- Hussin,M.Y.M., Muhammad, F., & Razak, A. A. (2018). Education expenditure and economic growth: A casual analysis for Malaysia. *Journal of Economic Sustainable Development*, 3,7-17.
- Jhingan (2007). The Economic Development and Planning. *Indian Economic Journal* 14 (5), 621, 1967
- Kenneth Arrow (1962). Economic welfare and the allocation of resources for invention: Economic and social factors, 609-626, 1962.
- Leonard C.L, Collins C.N and Felix O. (2014) Education and Development Disconnect inNigeria: Education for Sustainable Development (ESD) as the 21st Century Imperative for Nigeria's National Transformation, Sustainable Development, and Global Competitiveness. *Journal of Economics and Sustainable Development*.
- Lucas, R. (2018). On the mechanics of economic development. *Journal of Monetary Economics*, 22(3), 28-42.
- Musila, J.W., & Balassi, W. (2004). The impact of educational expenditure on economic growth in Uganda; Evidence from time-series data *The Journal of Developing Areas*, 38(1), 123-133.
- Obi, Z, C., & Obi, C. O. (2019). Impact of government expenditure on education: The Nigerian experience. *IJBFR*, 2, 42-48.
- Omojinite, B. U. (2016). Education and economic growth in Nigeria: A Granger causality analysis. *An International Multi-Disciplinary Journal*, 4(3), 90-108.
- Sambo, M.H. (2012) Assessment of the limitations of basic science programs in Junior Secondary Schools in Nasarawa State. An unpublished Ph.D. proposal, University of Agriculture, Makurdi. Benue State-Nigeria.
- Sheehan, (1971). Economics of Education. London: Penguin Books.
- Todaro, M & Smith, C. (2007). Economic Development, (11th Ed), Singapore: Pearson
- Todaro, M. P., and Smith, S. C. (2009), Economic Development, Tenth Edition, Essex: Pearson Education Limited
- UNESCO (2015): Education for all 2000-2015: Achievement and challenges; EFA global monitoring report. English. 499.