HIGHER EDUCATION AND AFRICA'S ECONOMIC DEVELOPMENT: CHALLENGES FOR THE NIGERIAN ECONOMY

Abstract

The paper tried to determine the impact of higher education and Africa's economic development: challenges for the Nigerian economy,. It was observed from the study that high quality and of course market relevant education is capable of providing a genuine cure to economic problems. The paper employed the Solow growth model where on the process to promote economic growth and development, factors of production like capital and labour are employed. However the efficient use of these factors (capital and labour) demands that the workers are well trained and skillful through education. This study assumes a straight forward production function in which changes in output are due to changes in the quantity and quality of inputs, economies of scale and advances in knowledge. The findings of the study suggest that some of the chosen variables conform to theoretical predictions and as such affect economic development. The researcher recommends governments can induce changes in labour demand and supply through specific labour market policies and social protection programmes and offering opportunities for workers to upgrade their skills, and offering education and training at an affordable cost, help raise a corporation's and an economy's productivity and also Educational budget allocation stakeholders should focus more on increasing capital expenditure, recurrent expenditure, and human capital development to foster economic growth in the country.

Key words: Economic Development, Higher Education, Nigeria Economy and Economic Growth.

1. Introduction

In the first place, it must be acknowledged vividly that education at all levels is a strategic ingredient for human development. The developed economies unceasingly preach that formal education is the sure foundation for human-capital accumulation through on-the-job and out of job training. It will be of utmost importance to state that human-capital has two components in economic literature:- it is the total stock of human resources that a country has from which it can pool skills (know-how) and knowledge (know-that). In fact, expanding education has been said to be a hob for economic growth and development. High quality and of course market relevant education is capable of providing a genuine cure to economic problems. The big question here is, has education played her part in the growth and development of African economy and Nigeria in particular?

The argument for investment in skill acquisition could be seen from three angles.

i. There is this strong conviction that the new generation must be equipped with the adequate knowledge that previous generations have already acquired.
ii. Two, that the new generation should be taught how the established knowledge can be ofgood help in the development of new products, new processes and new production methods, improve organizational efficiency and quality social services.
iii. The third aspect is such that the young must be encouraged to expand new ideas, methods, processes, and products through hard work, creative and innovative approach. This third approach should be achieved by constant preaching that prosperity is got from industry and the introduction of carrot and stick measures. However the general expectations of what higher education should lead to are enshrined in the National Policy on Education (2020), the expectations are that they will.
iv. Provide experts and specialists in various fields who will stay and work for the benefit of the nation.

v. Produce people who will make responsible citizens and have better commitment to the development of the nation and
vi. Provide the needed manpower in all the sectors of the economy.

However, for the individual undertaking higher education, his expectations may be different. His expectations may include: increased earnings, better employment and income and improvement in the living standard. It must be stated that investment in education should revolve around profitability. This is because economic theory reveals that any investment is worthwhile if the rate by which the expected benefits exceed the costs of investment. However, evaluation of public goods points that investment in this category of goods (public goods) bear both direct (private) and the indirect (social) cost and benefits of the investment. According to Foundation Level (2018), stakeholders will always want to know which type of education benefits society by:

i. providing greater earnings
ii. enriching the quality of life
iii. promoting equal opportunity
iv. maintaining a free market economy
v. enhancing personal fulfillment
vi. ensuring world leadership and
vii. preserving democracy

Drawing from above, one will infer that structural changes in any economy, shifts in demographics and changes in policy may bring about a divergence between education and development. This paper is calibrated into: Statement of the problem, theories of education, methodology, Empirical result, public policy Agenda for positive change and recommendations.

Statement of the Problem

Before 1970, skill development and social capital were not seen as development issue in Africa and Nigeria in particular. As a matter of fact, having seen that all efforts at development failed woefully in the less developed economies especially in Nigeria, serious attention was paid to the part played by skill acquisition in the development process. However, many events affected the economy as a result of the oil boom in Nigeria, particularly human and physical investment spending. The positive oil shock of 1973/74 and 1979 which multiplied the terms of trade more than five times between 1973 and 1981(World Bank 1993b). This positive oil shocks triggered massive savings and created investment boom for adequate skill development. Investment expenditure if measured in current prices, increased at an annual average rate of 73. 0 percent between 1970 and 1975; mean while the highest rate of growth was achieved when investment in Education commands about 43.2 percent of the total spending in 1974(World Economic Survey, 1975).Various five year development plans were drawn and they exhibited investment in large projects, health and educational sectors. The administrative staff college of Nigeria (ASCON) was established to train middle and high level manpower for the public sector and public enterprise. The national Youth service scheme (NYSC) was also put in place to train the youths for national service and forge national unity. The public sector automatically became the dominant sector in the provision of health and education. In addition, there was astronomical increase in the number of primary schools, secondary schools, polytechnics and universities, colleges of education, school of nursing and colleges of Agriculture to mention but a few. In 1981 the government introduced the 6-3-3-4 system in the academic secondary school. This is to make introductory technology mandatory to all students in the first three years of

secondary education. On this note, specialized universities of technology were established by the federal government across the country. It was believed that high-skilled-technology-based manpower will be produced. The notion was that, human resource system that will seek white collar jobs be replaced with one that will encourage self employment and acquisition of technical skills. How true is this notion?

Skill Development

The concept of development is today a multi- facet type in economic literature. For instance, the classical economists saw development as growth; again that it has link with westernization backed up by industrialization and its active promoter is the government. In the word of Ohiorhenan (2000).

> *"Development is (essentially, or comes with growth, second that it meant westernization, third that industry was fundamental to development and fourth that the development of industry required its active promotion by the state "*

The modern view of development entails dynamic changes*in the structure of production and the character of economic institutions as well as more or less profound transformation of social political and cultural institutions and norms (Ohiorhenuan 2000). In what follows, both the old and new views of development point on the fact that skill acquisition assumes relevance in economic development. Skill is a stock variable and not a flow type of variable while skill acquisition is the flow variable. According to Dingyong, Karina, Joost, and Jennica (2021),skill is synonymous with manpower and human capital. In other words "skill is the managerial, scientific, engineering, technical, craftsman and other manpower which are employed in creating, designing, developing , organizing managing and operating productive and service enterprises and economic organizations.

Victor and Olarewaju (2022) Skill is the ability to acquire practical knowledge in new conditions and on the basis of the abilities and experiences a person had previously. This indicates that skill is formed through investment in education, training, health promotion and investments in social services that influence man's productive capacities (Anumala, 2019).

The review of empirical work by Bah (2023) shows that education significantly enhances economic growth and have higher returns for low- and middle-income countries compared to high-income countries. Korman and Martin (1997) carried out a study of Austria and Germany over the 1962-92 period, using different estimates of human capital stock based on year of schooling shows that without human capital accumulation the two countries would have grown far more slowly than they did. It was observed that technical progress, which is facilitated by skill acquisition is still the primary engine of growth in the regression.

Ahmodu, Egbewole, Salaam (2022), examined educational budget allocation and economic growth in Nigeria. From their findings, they recommended that education finance stakeholders should encourage massive training and development through the public-private partnership (PPP) in the human capital sector of the national economy-education and increase the funding of capital projects. Recurrent expenditure on administration cannot be avoided by the government.

Theories of Education and Economic Development:

Recent studies on education and economic development identified three distinct theories and they are the modernization, economic dependence and human-capital theories.

The Modernization Theory

This theory focuses on how education transforms an individual's value, belief and behavior. Exposure to modernizing institutions, such as schools, factories and the mass media, inculcates modem values and attitudes. These attitudes include openness to new idea, independence from traditional authority, willingness to plan and calculate future exigencies and a growing sense of personal and social efficacy. According to the modernization theorists, these normative and attitudinal changes continue throughout the life cycle, permanently altering an individual's relationship to the social structure, once a critical segment of the population changes in this way, the pace of society's modernization and economic development quickens. Thus educational expansion through its effects on individual values and benefits sets in motion the necessary building blocks for a more productive work force and for sustained economic growth.

The Dependence Theory

This theory was coined from Marxist conceptualization. The proponents were of the theorization that prevalence of foreign investment capital, the presence of multinational corporations, concentration on exporting of primary products and the dependence on imported technologies and manufactured goods constrain long-term economic development. It was also pointed out that educated individuals with modern attitudes and values are causes of brain drain and negative impacts on the pool of trained personnel, potential entrepreneurs and economic growth.

The Human Capital Theories

According to Adedji and Campbell(2013)people invest in education to increase their stock of human capital. Human capital could be seen as the stock of economically productive human capabilities. Hence this theory emphasizes how education increases the productivity andefficiency of workers by increasing the level of their cognitive skill. The provision of education is seen as a productive investment in human capital. Human capital theorists established that basic literacy enhances the productivity of workers in low -skill occupations. They equally added that an instruction that demands logical or analytical reasoning, or provides technical and specialized knowledge, increases the marginal productivity of workers in high-skill or professional positions As a result, the greeter the provision of schooling, the greater the stock of human capital in society and consequently, the greater the increase in national productivity and economic growth.

Economics of Education in Nigeria

In Nigeria education has been seen as an end in itself. This is the reason why so much importance has been attached to it since independence in 1960. According to CBN (2000), Education has been seen as means for understanding, controlling, altering and redesigning human environment with a view to achieving and sustaining a better quality of life. The huge capital outlay and heavy recurrent expenditure requirement on education is often justified as investment for the future. The philosophy of education in Nigeria has lend credence for the huge massive expenditure on education as investment for the future. As a result, education eats up large amounts of the country's resources and this affects the well -being of the population. Education in Nigeria attracts considerable portion of public expenditure because of its position as a social service with direct economic significance and generally acclaimed positive spillover effects. According to Suwandaru, Alghamdi and Nurwanto (2021) public expenditure on education has an insignificant relationship in the long run and short run estimation, they went further to attest that both have different directions, which is a positive

relationship in a long run and a negative relationship in a short term estimation, nevertheless gross fixed capital formation shows a positive relationship, and the labour variable has a negative relationship in the short and long terms. Given all these huge investment inculcation, the question is what is the contribution of education in Nigerian economic development. Is the expected result in tandem with the actual result? The answer is no. The reasons for the low quality of education in Nigeria tertiary institutions has little to do with curriculum but the delivery of the curriculum is the main area of challenge . The curriculum is of high quality. However, there exists, a wide gap between the existing curricula and classroom teaching with the attendant outcome that students are half baked. This development also affects productivity in the labour market.

2. Methodology

The researcher adopts the Solow growth model where on the process to promote economic growth and development, factors of production like capital and labour are employed. However the efficient use of these factors (capital and labour) demands that the workers are well trained and skillful through education. This study assumes a straight forward production function in which changes in output are due to changes in the quantity and quality of inputs, economies of scale and advances in knowledge. The production function as expressed by Solow is as follows:

$$Y = f(K,L,t)$$

Where Y = output, K = capital input, L = labour t = technical change. Following Chu (2018) and Gundlach (2007) the Solow model could be extended to include educational capital as the technology for a constant capital-output ratio. Under the assumption of constant returns to scale, the share of physical capital, labour and the technical change add up to 1. Such that, if a- (t) is the capital share and B(t) is the labour share, then the share of the education capital is given as:

$$Y(t)=1-\partial(t) - B(t)$$

Definition of Variables

As per measurement of the variables, the dependent variable is the real growth rate of the gross domestic product (RGDP) measured in percentages (%). The explanatory variables are real gross fixed capital formation (GFCF) measured as percentage of GDP, aggregate labor force (LABF) as proxy for labor input is measured in millions of people and real budget allocation to education (REDUB) which represents educational capital is measured in billions of US dollars. The longitudinal data ranging from 1970-2021 were derived from the central Bank of Nigeriastatistical Bulletin and international monetary fund (IMF) publications (see Appendix 1). The method of analysis for the study is the ordinary least squares (OLS) approach. For the economy of time and space, the researcher did not employ any data transformation or higher econometric analysis. This is because OLS is the best least unbiased estimates (BLUE).

3. Empirical Results

Table 1: Regression Results

Variable	**Modelling RGDP by OLS without Time Trend**			**Modelling RGDP by OLS with Time Trend**		
	Coefficient	std Error	t-value	Coefficient	std Error	t-value
Constant	173.93	545.235	0.319	188.85	586.825	0.332

LABF	4.0626** 1.8670 2.176	3.9499** 1.8244 2.165
REDUB	0.01053** 0.0042 2.499	-0.10140** 0.0444 -2.282
RGFCF	4.4484 2.40454 1.850	-0.010442 0.02189 -0.477
TREND	- - -	88.283** 30.04867 2.938

R^2 = 0.8748; F = 22.71 DW = 2.36R^2= 0.8752 F= 16.902DW = 2.40

4. Discussion of Findings

The study investigated the effect of higher education on real growth rate of the gross domestic product. The findings of the study suggest that some of the chosen variables conform to theoretical predictions and as such affect economic development. Specifically, the study showed that aggregate labor force and real budget allocation to education, have positive and significant effects on economic development in Nigeria. This implies that 1 million increase in aggregate labor force as well as $1 billion increase in real budget allocation to education, on the average, will increase domestic investment by 4.06% and 0.01% respectively in Nigeria.

Contrastingly, real gross fixed capital formation has no significant effect on real gross fixed capital formation in Nigeria. Also, from the regression result, the various tests (R2 and F-statistic) on the model showed good result. The R2 of 0.87 indicated high explanatory power of the independent variables. The remaining influence must reflect some combination of measurement errors, random walk/fluctuations, temporary disequilibria and or net influence of other factors that also systematically affect the growth of economic productivity in Nigeria. F-statistic which measures the overall significance of the model suggests that all estimated regression model is statistically significant.The outcome of the Durbin Watson statistic is within the acceptable region. However, the coefficients of educational capital (REDUB) were negative and statistically significant in the second model. This outcome is in tandem with the outcome of a similar work done by Pritchett (2001). Pritchett argued that three possibilities could account for such results

i. The newly created educational capital has gone into piracy or
ii. There has been slow growth in the demand for educated labour, such that the supply of educational capital has outstripped demand and returns to schooling have declined; or
iii. The education system has failed such that a year of schooling provides few (or no) skills.

In addition, the researcher may suggest that the outcome of the coefficients of educational capital were negative because:

i. Emphasis is on paper qualification in Nigerian labour markets. People struggle to obtain certificates by all means, sometimes with the aid of their parents or examination officials hence, employment is based on whom you know and not on merit, training, competence

and experience. Thereby flooding the labour market with misfits and incompetent workers.

ii. Another issue is the refusal of the ageing workers to retire from public service through age under declaration and redeclaration and they remain redundant.

iii. Again, is the issue of job mismatch where a qualified medical doctor may be employed as a school teacher in order to survive.

iv. Over - involvement in business and other non-academic activities such as buying and selling, farming and fishing, travelling, community meeting etc during school hours can breed half-baked graduates which are infection in the value chain. The above activities during working hours are counter- productive.

v. Strike action by workers, agitation for salary increases and improved condition of service create a non- integrated educational system that have negative impact on Nigeria's educational system and the economy at large.

On the other hand, coefficients of aggregate labor force (LABF) was positive and statistically significant in the second model, which shows a similarity with Adepoju & Odunitan; where they were of the opinion that the possibilities for such results were as follows:

i. Human capital development would remain a mirage and not accumulated if there is no reform in the structure and operation of higher education institutions to meet the global best practices

ii. Propensity for normal urban migration in less-developed countries (Nigeria inclusive) is especially high among the more educated and among the young

iii. An effort to strengthened higher education would no doubt have positive and multiplier effects on economic growth and development in any nation

Policy Directions on Tertiary Education for Economic Development in Nigeria

The leaders of the country should adopt a multi- faceted measure to achieving a committed, coherent and comprehensive vision of sustainable development and nation-continent building. This implies that for reasonable outcome to be achieved in education, changes must be made nearly in all fronts of the economy. To achieve this, a four- part strategy need to be devised. The strategies consist of improving governance and resolving conflicts: investing in people: increasing competitiveness and diversifying the economy; and reducing aid dependence and debt while strengthening partnerships. There is also need for massive investment in information and communication technology (ICT). There should also be reorientation of the citizenry to participate in political activities which will open the way to greater accountability and transparency.

Public Policy Agenda for Positive Change

From the points on public directions above, the one that is directly relevant to this discourse is investing in people. This makes the educational sector a provider of training directly relevant.

Public policy agenda for positive changes are manifold below: funding, management, student and environment.

Funding: Funding is the hub of the problem of higher education and higher education institution in Nigeria. Funding is paramount in the sense that the production function in economics states that there could be no output without inputs. The quality of the output is directly related to the quality of inputs that go into the production process. The education in Nigeria is being under funded. Funding of

education should start with the minimum unit quality desired. As this will be a guide to determining the minimum quality of the inputs required. As a result the minimum unit cost can be determined. This is the practical step to be taken there by applying the marginal analysis which stipulates marginal cost equal to price (MC=P).This should be the efficiency rule of thomb. But then, should this rule be applied to funding of education? No. This is because of spill- over effect of education. Education carries along itself some positive externalities. The benefit of education is not necessarily for the holder alone.

As a result the optimal rule for the funding of education should be based on average cost pricing. This is another way of saying that funding of education will not be optimal if only one stakeholder finances it.

The challenge here is that equitable and effective cost sharing formula based on benefit principle by which all stakeholders shall contribute equitably be defined for efficient funding of education. All hands must be on deck. All the stakeholders; the government (three tiers of government), parents and guardians of the students and the private sector must be involved in the funding. This is because all benefit from a pool of knowledgeable human beings. However, the unit cost need to be calibrated into, tuition, accommodation, utilities, clothing, feeding, transportation and define who pays what and apportion it to the stakeholder for cost recovery.

Funding must be increased to sustain and improve upon staff and student welfare.

Students' Affairs

Here emphasis is on the welfare of the intakes. This cuts across, their accommodation, health facilities, recreational facilities, social facilities and other attributes that make an environment conducive. The requirement for peace, security, stability and decency to human activities in the hostels impel adequate provision of portable water and uninterrupted power supply as well as intra-campus transportation.

Quality Issues

The quality issues should be traced down the pre-tertiary education which is later aggravated by the tertiary education. In the first place, because the intakes do not have smooth grounds to absorb what the tertiary institutions are offering. Secondly, because there are inadequate information being distributed. Thirdly, there exists lack of facilities. These call for education reform which should cover the three major levels of primary, secondary and tertiary education.

Environmental Issues

According to Chamberlain (2017), economists have long argued that pay alone does not result toJob satisfaction. The university environment need to be suitable for work in the area of infrastructure: classroom blocks, varied sized lecture theatres, well-stocked and up-to-date departmental, faculty and university libraries, well-equipped labouratories must all be in adequate supply. Academic staff should be supported to work in relative peace and tranquility, so as to make important decisions at national, institutional and academic levels (Palamarchuk, 2018), and not dissipating all their energies in preparing papers to persuade governments to fulfill their role by funding universities appropriately for which they are the proprietors, and agitating for better conditions of services.

Management Issues

The management of universities and higher education institutions should follow the spirit of the laws establishing the institutions they are privileged to lead, and work within the provisions of the laws proactively and creatively.

The concentration of power, budgeting and financial management characteristic of many universities and higher education institutions are not healthy for peace, stability, transparency, accountability, probity and efficient performance. There is a minimum amount of decentralization that is called for by the laws establishing the universities and higher education institutions. Management should at least respect those provisions.

Policy implications and recommendations in order that Nigeria universities should be in the position to fulfill then" mission and fundamental obligation to the people of Nigeria, the researcher recommends as follows:

Universities in Nigeria must strive to create an institutional environment that fosters the development of the mind and ennobling of the spirit, including responsible citizenship and the will to serve.

Realizing the critical role of the universities in national development, Nigeria government must continue to assume the prime responsibility for sustaining her universities, in partnership with stakeholders, private sector and cooperating partners. To ensure these, Nigeria universities must continue to engage her governments, communities and other stakeholders in dialogue aimed at arriving at appropriate understanding on the issue of diversification of sources of funding including cost-sharing initiatives.

While recognizing the accountability of universities to various stakeholders, including governments, a large measure of institutional autonomy is critical if they are to fulfill their historic mission.

Nigerian universities must renew their commitment to helping Nigeria find effective solution to its perennial problem of poverty, hunger and disease, they must through their research and teaching, strengthen their contribution to food production and distribution, disease and control, health service delivery and general well-being of their people.

Universities in Nigeria must contribute actively to the removal of incessant social conflict, civil war, subregional disputes and the displacement of human beings, by establishing research projects and course on peace and conflict resolution, democracy and human rights, solidarity and good governance. One particular feature of Nigeria universities is the brain drain. To contain this, proper material and other conditions must be created to attract and retain qualified young scholars in academic life and to encourage experienced staff to retain then-posts and to serve as role models for younger staff.

Conclusion

It could be seen clearly from the regression results that the coefficients of educational capital were negative and at the same time statistically significant. This indicates that the educational sector in Nigeria leaves much to be desired. The education system has failed. As a result, there has been a drop in the demand for educated labour. This gives rise to the alarming rate of unemployment and underdevelopment in Nigeria today.

Recommendations

To change the coefficients of the educational capital from negative to positive in Nigeria, theresearcher recommends the following:

i. Governments can induce changes in labour demand and supply through specific labour market policies and social protection programmes and offering opportunities for workers to upgrade their skills, and offering education and training at an affordable cost, help raise a corporation's and an economy's productivity.

ii. Educational budget allocation stakeholders should focus more on increasing capital expenditure, recurrent expenditure, and human capital development to foster economic growth in the country.

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APPENDIX

Appendix 1

YEARS	GDPGR	EDUBT	AGGLF	GFCF
1970	25	1857.1	26,673,247	25
1971	14.2	1277.52	30,123,938	25
1972	3.4	3761.3	30,250,394	26
1973	5.4	4680	30,994,832	27
1974	11.2	5755.7	28,132,648	26
1975	-5.2	4613.6	23,883,499	26

1976	9	1178.13	27,803,755	26
1977	6	7489.7	32,628,931	26
1978	-5.8	1208.27	36,375,672	27
1979	6.8	1080.05	36,082,912	27
1980	4.2	1549.8	46,688,921	27
1981	-13.1	984.6	31,573,663	89
1982	-6.8	113.1	34,050,749	86
1983	-10.9	967.4	32,534,140	76
1984	-1.1	861.2	32,535,021	59
1985	5.9	850.2	33,434,100	46
1986	0.1	1094.8	45,476,218	55
1987	3.2	653.5	61,630,932	50
1988	7.3	1084.1	47,886,278	44
1989	1.9	1941.8	41,734,829	52
1990	11.8	2294.3	31,936,585	53
1991	0.4	1554.2	32,839,293	48
1992	4.6	2060.4	33,747,996	44
1993	-2	799.1	34,697,305	44
1994	-1.8	10283.8	35,674,972	42
1995	-0.1	12728.7	36,656,320	37
1996	4.2	15351.8	37,675,613	37
1997	2.9	15944	38,710,630	38
1998	2.6	26721.3	39,762,796	41
1999	0.6	31563.8	40,824,008	38
2000	5	67568.1	41,892,033	34
2001	5.9	59744.6	43,015,210	30
2002	15.3	109455.2	44,142,710	27
2003	7.3	79455.2	45,276,845	28
2004	9.3	85580.8	46,434,996	26
2005	6.4	79911.9	47,613,325	25
2006	6.1	88150.6	48,846,711	26
2007	6.6	95702.11	50,110,483	20
2008	6.8	34587.23	51,407,935	19
2009	8	22119	52,748,865	21
2010	8	24900.9	54,154,360	17
2011	5.3	30603.1	55,649,284	16
2012	4.2	40015	54,750,499	14
2013	6.7	42653.1	53,710,834	14
2014	6.3	49302	55,758,900	15
2015	2.7	55200	57,867,585	15
2016	-1.6	55710	60,073,638	15

2017	0.8	54421.02	62,423,461	15
2018	1.9	60650.3	64,865,190	19
2019	2.2	63460	67,373,496	25
2020	-1.8	68688	68,632,664	27
2021	3.6	77156.2	70,620,043	33
2022	3.3	87593.6	73,272,344	44