The Nigerian University System in a Recessionary Economy

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Abstract

Adopting the political economy review framework, the paper notes that government support for University education in Nigeria over time has plummeted as a result of long term non-democratization of the country. To ascertain the arguments that University education can drive growth of nations, the paper adopting the Ordinary Least Squares (OLS) methodology, found that the effect of contemporaneous graduate output on total national output is positive and significant and that Federal allocation to education affected national output more significantly with a lag. The unit root result indicated that graduate output, gross domestic product, federal allocation to education, gross fixed capital formation and foreign direct investment were integrated of order one 1(1). The co-integration test indicated absence of long-run relationship between real output and education performance indicators. Summarily indicating that the more a nation spends on University education, the more her output will grow. After establishing the positive link between University funding and national output, the paper considered the dwindling earnings of the country resulting from recessionary pressure that had caused further decline in University funding and suggested options that could reverse the recessionary trend to encourage improved funding to University education. The paper further suggests alternative strategies for raising funds for University education in Nigeria to reduce the pressure on government.

Keywords: Recession; Nigerian Universities; Human Development; Economic Growth

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1. Background

1.1. A brief historical perspective

A University is an institution of higher (or tertiary) education and research which grants academic degrees in various subjects. Universities typically provide undergraduate education and postgraduate education (Encyclopaedia Britannica, 11^{th} ed. 911).

The word University is derived from the latin words universitas magistrorum et scholarium, which roughly means "community of teachers and scholars". In modern usage, however, University has come to mean "an institution of higher education offering tuition in mainly non-vocational subjects and typically having the power to confer degrees (University, n" OED online, 2010).

Although there are contentions on the origin of University education in the world, more authors are of the opinion that Universities were created in Italy and that they evolved from the Cathedral Schools for the clergy during the High Middle Ages. Many of these authors argue that the Bologna University established in 1088 was the first established University (Maksidi, 1989; Reugg, 1992; Sanz and Bergan, 2006). The other side of the argument has been that Medieval Universities in Europe were inspired by Islamic Madrasas – although smaller with individual teachers, they granted license or degree (Prydes, 2000). Green (1978) and Hossein (1987) have also argued that starting in the 10^{th} Century; some medieval Islamic Madrasahs became Universities, among other contending views. However, UNESCO (2016) and the Guinness Book of World Record have recognized the University of Al-Qarawiyyin, Morroco, as the oldest and first degree-awarding university in the world – sometimes referred to as the oldest University. This University which was founded by Fatima al-Fihri in 859 with an associated school, or Madrasa – subsequently became one of the leading spiritual and educational centers of the historic Muslim world. It was incorporated into Morroco's modern State University system in 1963.

The University of Paris established in 1150 and University of Oxford established in 1167 later joined the European University revolution. The common feature among the European Universities were that Latin was the language of instruction (lectures and examination) as well as the langauge of daily communication. With the deepening desire for knowledge globally, University education started spreading from Europe and the Arab world to other parts of the world even as new lands were discovered.

University education birthed in 1948 in Nigeria, with the establishment of the University College, Ibadan. Five Universities were established between 1948 and 1965, following the recommendation of the Ashby Commission set up by the British Colonial Government to study the necessity of university education for Nigeria. These included the University of Ibadan; the University of Nigeria, Nsukka; Ahmadu Bello University, Zaria; Obafemi Awolowo University, Ife; and the University of Lagos. They are today known as the first generation Universities in Nigeria. The inspiration that was drawn from these early institutions gave the spurt for the establishment of the second, third and fourth generation Universities in Nigeria by the Federal government as well as the licensing of State governments and the Private sector to also establish Universities (Table 1 shows Nigerian Universities Commission (NUC) statistics on tertiary education funding in Nigeria).

The main motivation for establishing these Universities was to produce qualified for the labour market and to establish standard for the university education system in Nigeria. According to Saint, et al., (2003), notwithstanding the apparent fall in education standard in the country, these first generation Universities have indeed continued to these roles and have continued to set standard and support the establishment of Universities of subsequent generations in Nigeria.

1.2. The importance of university education

Fafunwa (1974) defined education as what each generation gives to its younger ones, which makes them to develop attitudes, abilities, skills and other behaviours that are of positive value to the society in which they live. This position reflects the sociological perspective.

Education in general and higher education in particular, are fundamental to the construction of a knowledge economy and society in all nations (World Bank, 1999). University education is widely recognized as an important part of human development. It is not just the next level of education after high school. It is instead, the level of education that affords the society the opportunity to train professionals such as nurses, teachers, doctors, scientist, social scientists and other personnel. These professionals are the ones who will, in turn, lead a committed government, build the local economies and support the entire society.

An educated populace is important in today's globalized world as an engine of growth and development. This is particularly so with the current wave of revolution in Information and Communication Technology (ICT). The achievements made in the areas of increased computing power as improvement of wireless and satellite technologies have resulted in falling prices of hardware and narrowed the barriers hitherto created by space and time in information exchange and access (Graduate Destinations, 2010). In a related and recent World Bank study on Globalization, Growth, and Poverty, Dollar and Collier (2002) document how increased economic integration among 24 developing countries led to higher economic growth, reduced incidence of poverty, and increased rates of participation in higher education.

The important role of the University in building knowledge that determines and guarantees the future of individuals and nations when enthralled in dire condition like economic recession is what motivated this paper. This paper seeks to investigate how the University system, which is accepted as the sector that provides the framework for building of nations, is thriving in an economic situation where its owner is in serious distress. What hopes or guarantees are there for its survival? This paper is divided into sections thus:

1- Background
2- A Political Economy View of Government Policies on University Education in Nigeria
3- The Issue with Funding of University Education in Nigeria
4- Empirical Assessment of the University Education and Growth in Nigeria
5- Nigeria's Economic Recession
6- Stylized Facts on the Nigerian Economy
7- Suggestions on some Funding strategies for Nigerian Universities
8- Summary and Conclusion

2. A political economy view of government policies on university education in Nigeria

Given the nationalistic instincts that birthed the much desired independence of Nigeria, the early progenitors of the new nation were desirous of achieving immediate growth and development with the expectation of a transition from a rural agricultural economy to a more prosperous industrial economy. For this to be achieved, they opted for the Import Substitution Industrialization (ISI) strategy.

The ISI strategy was expected to make Nigeria produce, even for the domestic market, those goods and service she had hitherto been importing while developing the industrial sector of the economy. This, the government then believed was the only way to spur and engender sustainable growth and development of Nigeria.

In order to achieve the above, the early nationalist that formed the immediate post-colonial government in Nigeria realized that they needed to create the 'letters' (appropriate manpower). They realized that to get high quality man power for the kind of industries they anticipated, they needed more university graduates. With this realization, the government, apart from awarding scholarships for deserving Nigerians to go abroad for studies pushed for increased number of universities in Nigeria.

This noble educational policy aimed at creating the desired "letters" (manpower) that will anchor the expected industrialization goal of the Country was marred by regional political imbalance and suspicions and was truncated by the military interruption in 1966: a situation and confusion that led to the Civil War in 1967 which lasted till 1970.

Struggling out of a war-torn economy with mutual mistrust among regions strongly marred the earlier dream of positioning education at the top of the country's priorities. Rather, building new alliances and allegiances as well as re-integrating the estranged parts of the country become top of the priority chart.

In early 1970's after the war, Nigeria crude oil had become the bride of the world's energy market. Crude oil's rising price, popularity and power, was immense. Export earnings from this product had already placed Nigeria as a top middle income country like Brazil and the Asian Tigers.

With this unprecedented increased income earning from crude oil, Nigeria was able to start implementing its ISI strategy. Big industries Iike Ajaokuta Steel Rolling Mill, the Refineries, NAFCON, NNMC, Aluminum Smeller plant, the Nigeria textile Mills, the Nigerian Airways, were established. However, these good intentions were not preceded by the earlier intended educational policy that would have provided the local "letters" for these industries. Almost all of the technical manpower employed by these industries was foreign, with only very few Nigerians sprinkled amongst the dense expatriate population. Also, the foreign firms built these industries with tacit technology leaving themselves as the only experts who can resolve issues that will arise from the operations of the plant.

The Nigerian government policy to fight apartheid in South Africa and to place Africa as its Foreign policy objective led to the withdrawal of many technical experts of the established industries in the country. The Nigerian government (now military) realizing that it failed in following through the earlier nationalists education policy, as the country had no letters to replace the exiting foreign experts, decided to return to the earlier educational policy by establishing more Universities (the second and third generation universities) to train local experts that will fill the manpower needs of the industries and government.

With tumbling oil prices in the international market that led to reduced earnings in late 1970s, Nigeria was advised by the IMF and the World Bank to restructure her economy. The key issue in the restructuring was for government to reduces expenditure (fiscal deficit), especially subsidies. Targeted of course, was funding of education. Many battles ensued between government, ASUU and NANS in this period as government struggled to introduce tuition fees in Nigerian Universities. However, from the 1983 Austerity measures of Nigerian government, funding for education was drastically reduced.

In 1986, the IMF advised structural Adjustment program (SAP) was adopted and implemented in Nigeria. This program saw a monumental reduction in government funding of University education. Infrastructure was dilapidated, laboratories had no re-agents and working tools, libraries had no books and journals, teachers were no more attending seminars and workshops for refreshers, teaching materials were unavailable, there was dearth of research, among others. The crushing condition famished University education in Nigeria, culminating in unprecedented brain drain from Nigeria. Many scholars and professionals migrated from Nigeria to America, Europe, Asia and the Arab world for greener pastures. This left the Nigeria Universities almost empty, while the industrial sector saw a return to pre-independence manpower structure. Between 1988 and 1990, over 1000 lecturers left the federal university system (Bangura, 1994), and this trend has continued. By 2002, an estimated 30% of approved academic positions were vacant. Using its staffing norms per academic discipline, the NUC calculates a staffing shortfall of 51% within the system (NUC 2002). Since the SAP era, funding of Nigeria Universities had been epileptic as successive governments enthroned by Western interests were never again interested in the vision of a Nigeria the founding fathers saw and expected. Succeeding military governments saw the earlier improved quality of education as one of the greatest reasons for the motivation and aura that gave courage to these educated Nigerians to challenge them and their policies, notwithstanding their guns. Thus, the military governments' new vision was how to reduce the quality of education in order not to raise the "letters" so needed to resurrect Nigeria and leap-frog her into the developed nations stands, to challenge their policies.

We had governments that ran down the Nigeria universities, who made education to be seen as an elitist affair, who preferred imports even of raw food against providing local alternative (ISI), who made and entrenched corruption and stealing of Nigeria's oil money as a way of life, who contended among themselves using religion and ethnicity not for the purpose of saving or working for the nation but for selfish reason to steal Nigeria oil money. The military who ran the affairs of the country for most of this period saw the audacity of ASUU and NANS in speaking up for education as confrontation and as such to whittle down their advocacy powers the educational sector was to be starved of funds.

To weaken the University system and totally discourage the Professors, who were ranked among the best in the world, they restructured their salaries and returned them to earning less than the Permanent Secretaries and other lower ranking officers in the Military and Public Service, which the reverse had earlier been the case. This led to significant and strategic brain drain in the Nigerian Universities, while opening the gate for the military to infiltrate the Universities with 'journey-men' who had no business in academics except to turn the Universities into a corruption heaven – sorting, sex and money for marks, and 'pimping' innocent young girls for the military their military masters, while encouraging prostitution in our Universities.

Also of note was the time and possibility where those unworthy entrants into the University system in Nigeria, who had no business being there, were appointed into leadership of the Universities as Vice-Chancellors and Registrars. These Vice-Chancellors and Registrars were forced by their military masters to fight ASUU and whoever in the University system in Nigeria that would raise any dissenting voice against their autocratic rulership in the country. Vice-Chancellors were promoted and protected to mismanage and loot the Universities once they accepted to be preys to be used by their pay Masters. University autonomy was withdrawn as University Councils and Senate had no business in taking decisions about University governance in Nigeria. These exacerbated the decay of the management of the Nigerian Universities. Vice-Chancellors who had no prior knowledge or training on management of resources were foisted on Universities with damaging managerial consequences.

It is worthy of note that these same corrupt Nigerian officials who collaborated with some interests to kill the country's efforts at developing its indigenous Universities and making University education affordable to Nigerians have returned with the stolen monies to establish private universities, putting fees at exorbitant rates, with no guarantee of quality education.

For instance, over the period 1990-1997, the real value of government allocation to higher educational system in Nigeria plummeted by over 27%. This is notwithstanding the fact that school enrollment rose by nearly triple times (79%) over the same period. The inevitable consequence the decline in the standard of education in the country as reflected in the over 62% fall in per student expenditure (recurrent) on education (see Hartnett, 2000). There were also the issues of deterioration in working condition, decline in real value of salaries (occasioned by inflationary spree within the period) and political repression in University campuses in the country. As we see in (Oni, 2000), this provoked and culminated in a year-long comprehensive strike and closure of Nigeria universities at various times in 1992 and 1996. Over the same period, growing corruption and violation of human rights by the military dictatorship in power triggered international sanctions that made overseas travel by Nigerian citizens difficult. One unintended consequence of these was the isolation and exclusion of the country, including Nigerian universities, from global intellectual tides and access to knowledge during much of the 1990s.

3. The issue with funding of university education in Nigeria

As we had noted earlier, funding of University education in Nigeria had ever been dismal, be it public or private. w will, however, restrict our discussion here to the funding of public Universities. The various episodes of improved funding of the Nigerian Universities had been preceded by either Academic Staff Union of Universities (ASUU) or National Association of Nigerian Students (NANS) strike. The Nigerian government had only responded to agitations to fund a sector as critical as the University.

In many works I have read many authors have used budgetary provisions to measure government spending for University education in Nigeria. The question then is how much of that budget was implemented? How come those infrastructures in the Universities were either not there or are not maintained? Why are salaries of workers in the sector delayed or paid in fractions? Where are the research results? Where are the ICT facilities that would have made studying easy and affordable? These and many other questions beg for answer before I can agree with conclusions that government funding to education in Nigeria is improving, just because budgetary provisions have been nominally increased.

Table 1. Some Facts on Funding of Nigerian Universities

Year	Nig. Univ. Graduate Outturn as a % of Total Univ. Enrolment	Fed. Govt Allocation to Univ. Edu as a % of GDP	Number of Univs in Nigeria
1980	14.6	1.2	24
1981	18.7	1.1	26
1982	17.7	1.1	26
1983	12.4	1.2	27
1984	10.6	0.8	27
1985	10.4	0.6	28
1986	9.5	1.1	28
1987	9.9	0.4	28
1988	7.4	0.6	31
1989	8.7	0.3	34
1990	13.2	0.6	35
1991	12.8	0.7	36
1992	18.6	0.9	41
1993	12.1	0.7	41
1994	12.3	0.8	41
1995	12.4	0.7	41
1996	8.7	0.7	41
1997	9.2	0.9	41
1998	6.9	0.8	41
1999	8.9	0.7	45
2000	7.7	1.3	49
2001	10.6	1.2	50
2002	10.3	1.5	56
2003	10.3	1.2	57
2004	14.3	1.3	61
2005	29.3	1.4	79
2006	16.4	1.2	84
2007	23.9	1.1	91
2008	27.6	1.2	96
2009	39.8	1.1	105
2010	49.4	1.4	105
2011	53.2	1.3	120
2012	63.5	1.2	125
2013	74.3	1.3	130

Source: National Universities Commission, NUC (2002); World Bank (1999); Nigerian Bureau of Statistic (NBS).

An on the spot analysis of the public funding spectacle of the Nigerian Universities depicts a very dismal performance, except those funds were spent on abstract sources. Data on funding of tertiary institutions in Nigeria is very suspect. Patches of information locating around TETFUND were sourced, but one cannot conveniently use this to measure how well the Universities are funded. A case where enrollment increases at a geometrical rate while funding increases at an arithmetical rate, leaves a lot to be questioned. For the past 10 years, the percentage increase in University enrollment and out-turn far outstrips the similar increase in government funding of Universities.

From Table 1, we see measurements conducted in real terms to assess performance of key variables in University education sector. Graduate outturn is measured as a percentage of enrolment into the University. This tells us in real terms an idea of the percentage of students who enroll into and complete their programs. Also Federal Government allocation to education is measured as a percentage of the GDP to enable us know per capita spending on education by government.

Although we notice a somewhat unsteady trend in Table 1, the SAP years between 1986 and 1989 saw a deep fall in graduate outturn from the Universities compared to increasing number of established Universities. Also Federal allocation to education as a percentage of GDP was declining between 1986 and 1989.

Even while stability seemed to have been attained between 1990 and 1995 as graduate outturn hovered between 13.2% in 1990 and 12.4% in 1995, peaking at 18.6% in 1992, Federal Government allocation as a percentage of GDP was still below 1% while Universities established had increased to 41 by 1995.

Between 1996 and 2000, graduate outturn fell again to single digit figures; government expenditure was still below 1% while established Universities had increased to 49 by 2000.

An increasing trend is noticed from 2001 where graduate outturn grew to 10.6%. That growth momentum was maintained to 73.4% in 2013. Government spending was, however, crawling as it averaged 1.2% for the period 2000-2013. Interestingly, the number of Universities had grown from the 49 in 2000 to 130 in 2013.

4. Empirical assessment of the university education and growth in Nigeria

4.1. Theoretical framework

In an attempt to empirically validate the importance of education in the economic growth of Nigeria, this paper employed the neoclassical growth model as in Solow (1956) and extended further by Romer (1994), Baro and Sala-i-Martin (1995, 2004) as its basics methodological framework.

This neoclassical growth model (endogenous growth model) is basically the result of endogenous rather than external forces (Romer, 1994). According to the Endogenous growth theory investment in human capital, innovation, and knowledge are the major drivers of growth. The theory also holds that the long run growth rate of an economy depends on policy measures such as subsidies for research and development (R&D) or education which increases by increasing the incentive for innovation (Wikipaedia, 2011).

However, due to the growing dissatisfaction among researcher in the mid-1980s for common accounts of exogenous factors in determining long-run growth, the endogenous growth model became increasing replaced with a model in which the key determinants of growth were explicit in the model. The work of Arrow (1962), Hirofumi (1965), and Sidrauski (1967) formed the basis for this research. Romer (1986), Lucas (1988), Rebelo (1991) and Ortigueira and Santos (1997) omitted the role of technological change. in the new model, growth became much more a function of human capital which had a spillover effect on the economy and reduces the diminishing return to capital accumulation.

4.2. Methodology

Our empirical strategy follows the neoclassical growth model. We set out from the standard production function, which extends Solow's (1956) original approach to the growth accounting process. We model the aggregate production function thus:

$$\mathrm{Y_{it}} = \mathrm{A_{it}}F(\mathrm{K_{it}}, \mathrm{L_{it}}) \qquad 1; \quad \text{or}$$

$$\mathrm{Y_{it}} = \mathrm{A_{it}}\ \mathrm{K_{it}}^{a}\ \mathrm{L_{it}}^{1-a} \qquad 2$$

Where $\mathrm{Y_{it}}$ is the aggregate output, $\mathrm{A_{it}}$ is the total factor productivity (TFP) that is reflected in skill and knowledge or technology, $\mathrm{K_{it}}$ is the capital stock, $\mathrm{L_{it}}$ is the quantity of labour. The parameter 'a' measures the share of capital and '1-a' measures the share of labour in total output.

We set out to analyze the effect of education and government policy stance (measured respectively by graduate output as a percentage of total enrollment and government expenditure on education) on total national output. Abstracting from the neoclassical growth model, therefore, these variables which capture the effect of knowledge are exogenized in the growth model. The estimable regression model also incorporates some control variables, namely: gross fixed capital formation (GFCF) and net inflow of foreign direct investment (FDI).

Our estimable regression model (OLS) is specified as follows:

$$\text{Log (GDP)} = \text{GOE} + \log(\text{FED}) + \log(\text{GFCF}) + \log(\text{FDI}) + \text{Ui} \qquad 3$$

where:

GDP = gross domestic output

GOE = graduate output as a percentage of total enrollment

FED = federal government's allocation to education

GFCF = gross fixed capital formation

FDI = foreign direct investment (inflow)

NU = number of Universities in Nigeria

UN = Unemployment rate

4.3. Findings and results

The result from equation 3 shows that whereas the effect of contemporaneous graduate output on total national output is positive and significant, federal allocation to education affects total national output more significantly with a lag as indicated in Table 2 below.

Table 2. OLS Estimate of GDP and Selected Education Indicators

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9840.967	2012.580	-4.889727	0.0000
GOE	190.7853	97.86821	1.949411	0.0617
FED	4502.702	2271.641	1.982136	0.0577
FED(-1)	5063.724	2263.705	2.236919	0.0337
GFCF	9.31E-08	8.45E-08	1.102361	0.2800
FDI(-1)	2.402381	0.463119	5.187398	0.0000

R-squared	0.964381	Mean dependent var	11147.17
Adjusted R-squared	0.957785	S.D. dependent var	14085.91
S.E. of regression	2894.140	Akaike info criterion	18.94173
Sum squared resid	2.26E+08	Schwarz criterion	19.21382
Log likelihood	-306.5385	Hannan-Quinn criter.	19.03328
F-statistic	146.2039	Durbin-Watson stat	1.522204
Prob(F-statistic)	0.000000		

In other words, past values of federal government allocation to education has more significant impact on total national output than contemporaneous allocation to education. The result is not surprising given the time lag in the passage of the national budget, disbursement and actual implementation of education programmes. The result also shows that inflow of foreign direct investment holds enormous potential to contribute positively to the growth of Nigeria's economy. Next, we examine some time series properties of the regression that as a prelude to further probe of potential long term relationship between education and Nigeria's growth performance. We set out with the unit root test, employing the Augmented Dickey Fuller Test.

4.4. Unit root result

The result of the unit root indicates that graduate output (as a percentage of total enrollment), gross domestic product, federal governments allocation to education, gross fixed capital formation and inflow of foreign direct investment are integrated of order one, I(1) as we were unable to reject the null hypothesis of a unit root at levels. In other words, these variables became stationary at first difference (Table 3).

Table 3. Result of ADF Integration Test

Series	Levels		1st Diff.		Order of integration
	ADF	5% critical value	ADF	5% critical value	
GDP	3.22*	-2.95	0.72	-2.97	I(0)
GOE	-2.42	2.95	-5.54*	-2.95	I(1)
FED	-1.28	2.95	-9.767*	-2.95	I(1)
GFCF	0.99	-2.95	-5.2*	-2.95	I(1)
FDI	-2.19	-2.96	-4.2*	-2.95	I(1)

*Note: * indicates significance at 5% level of significance. See E-Views output in the Appendix*

However, gross domestic product turned out to be I(0). Having examined the integration properties of our regression variables; we turn to the important issue of a test of potential long-run relationship between the variables specified in our estimable regression model, the co-integration test.

4.5. Co-integration test

As the result of Jonasen and Juselius (1990) co-integration test indicates, there is the absence of a co-integrating vector in the relationship.

Table 4. Co-Integration Test Result

Unrestricted Co-integration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.632816	78.03375	79.81889	0.0095
At most 1	0.505661	45.97318	47.85613	0.0743
At most 2	0.341580	23.42813	29.79707	0.2257
At most 3	0.264345	10.05495	15.49471	0.2765
At most 4	0.007198	0.231155	3.841466	0.6307

Trace test indicates no co-integrating equation(s) at the 0.05 level
** denotes rejection of the hypothesis at the 0.05 level*
***MacKinnon-Haug-Michelis (1999) p-values*

This suggests absence of long-run association between real output and education performance indicators. In other words, the result suggests that the impact of the regressors on real output are of short run dimension; hence, there is no justification to implement a vector error correction model (VECM).

In summary, our empirical findings indicates clearly the positive and significant relationship between graduate outturn and national output, as well as between federal government allocation and number of Universities to national output, indicating that the more a nation commits to University education, the more her output will grow. This justifies our hypothesis that public funding of Universities education will bring about growth.

5. Nigeria's economic recession

In economics, the word 'recession' generally implies a situation of negative economic growth for two consecutive quarters. Technically, it refers a business cycle contraction with associated general slowdown in economic activity. Recession is often characterized by low growth, decline in investment spending, low capacity utilization, fall in household income, decline in business profit and fall in general price level. In many cases of recession, unemployment and bankruptcy would increase as inflation decline. There are, however, special cases of recession in which high unemployment is associated with rising prices; this is often described as stagflation.

5.1. A brief theoretical view on causes of recession

Mainstream economics (neoclassical economics) postulates that recession is caused by insufficient aggregate demand. Expectation of stock market behaviour has potential to caused recession. Declined in prices of real estate is known to often precede recession but most times last longer than recession too. Interestingly, because political leaders often get credit or backlash for cyclical downturn, there often disagreement on when recession actually sets in particularly in the case of less developed countries.

In Capitalist economies, however, recession is unavoidable, and its causes are varied. Consequently, modern government administrations attempt to take steps, also not totally or commonly agreed upon, to soften a recession (Krugman, 2016; Krugman, 2013; Wickens, 2016; Chugh, 2016).

5.1.1. Theoretical Explanations for Consequences of Recession

i. Unemployment is particularly high during a recession while inflation notably falls as economic activities nose-dive.
ii. Productivity tends to fall in the early stages of a recession, and then rises again as weaker firms close. The variation in profitability between firms rises sharply. Recessions have also provided opportunities for anticompetitive mergers, with a negative impact on the wider economy.
iii. The living standards of people dependent on wages and salaries are not more affected by recessions than those who rely on fixed incomes (pension funds or fixed returns on investment in bonds, etc.) or welfare benefits. The loss of a job is known to have a negative impact on the stability of families, and individuals' health and well-being. Fixed income benefits receive small cuts which make it tougher to survive.

5.2. Characteristics of Nigeria's economic recession

The basic characteristics of Nigeria's economic recession, some of which were a bit distinct from theoretical conceptualization of the character of recession include:

i. Increasing unemployment followed by increasing inflation (a situation of stagflation) – this defies prediction of theory
ii. Serious reduction and depletion of savings
iii. Collapse of the real estate sector
iv. Increasing and sustained aggregate demand for foreign exchange
v. Non-performing production sector (even food is imported)
vi. Foreign Direct Investment (FDI) more responsive to portfolio rather than green investments
vii. Intense anti-corruption fight of government that encourages hoarding of funds (especially foreign exchange) among the corrupt class

6. Stylized facts on the Nigerian economy

In this section of the paper, we will consider the behavior and character of the key macroeconomic variables of the economy. Their pattern will help in a quick x-raying of the health situation of the economy.

6.1. Unemployment rate

The chart above (Figure 1) shows the unemployment rate in Nigeria. From 10.6% in Jan. 2013, unemployment reduced to 10% in Jan 2014 and continued that downward trend to 6.4% in Jan 2015. It spiked from 6.4% in Jan 2015 to 10.4% in Jan 2016 and 13.3% in July 2016.

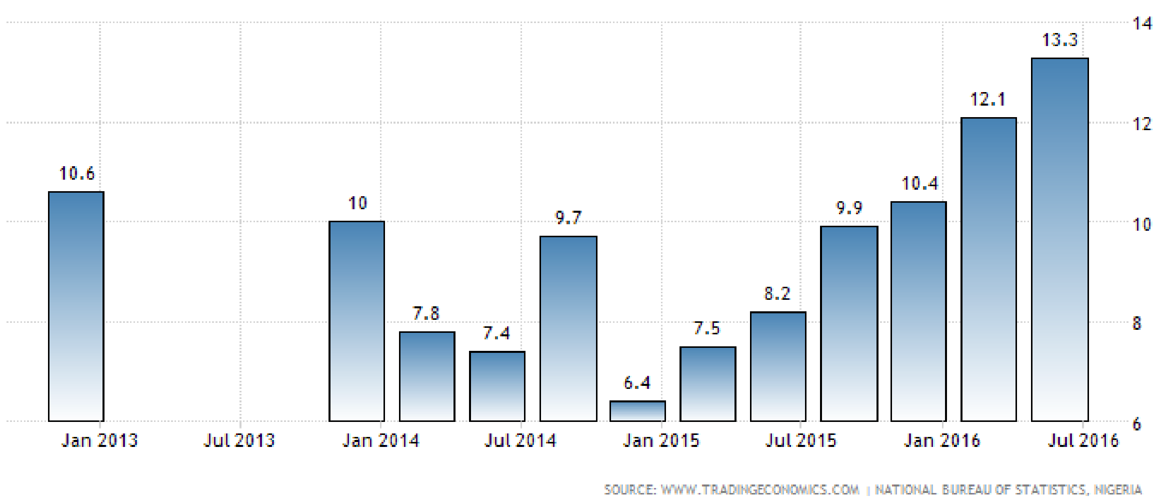

Figure 1. Nigeria's Unemployment Rate

6.2. Inflation rate

Figure 2 indicates the inflation rate in Nigeria. Notice that inflation is spiralling upwards. From an average inflationary rate of 8.7% in 2015, it moved to 13.4% in April 2016. It further soared to 17.2% in July 2016, defying theoretical predictions of depressed aggregate demand that would have driven prices down in recessions like this.

Figure 2. Nigeria's Inflation Rate

6.3. Capacity utilization

Figure 3 shows the Capacity Utilization rate of the Nigerian economy. The country witnessed an increasing trend from 57.99% in July 2013 to a peak of 60.5% in Jan 2015. Thereafter the fall started to 54.9% in July 2015 and continued to 50.7 in July 2016.

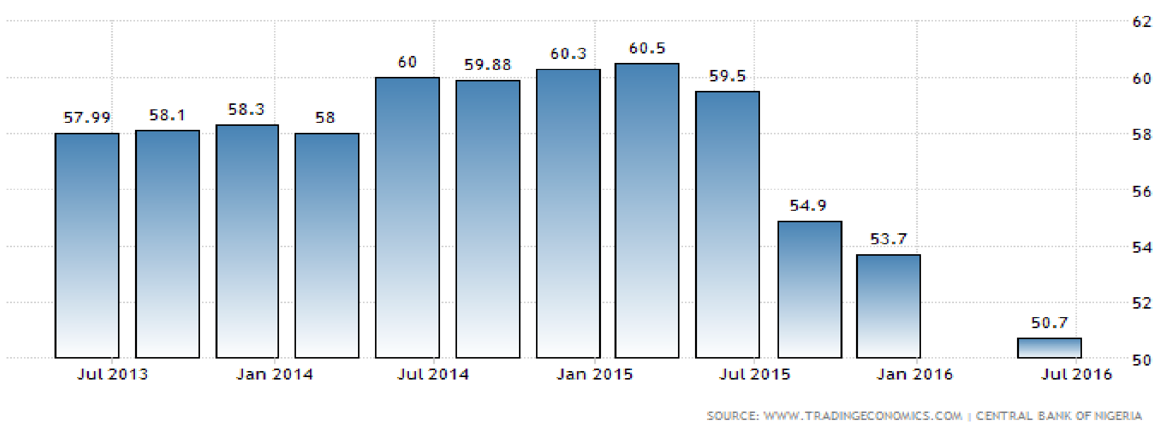

Figure 3. Nigeria's Capacity Utilization

6.4. Manufacturing production

Figure 4 depicts manufacturing production in Nigeria. It interesting to note that manufacturing production in Nigeria fell from 22.6% in July 2013, to 13.5% in Jan 2015. Thereafter manufacturing production became negative at -3.8% in July 2015. It grew to -1.7% in Dec 2015 and it became positive again at 1.7% in February 2016.

Figure 4. Nigeria's Manufacturing Production

6.5. Foreign direct investment

Figure 5 shows the trend of Foreign Direct Investment into the country. From a peak of $1,381.06m worth of FDI in July 2014, it fell to $624.87m in July 2015. It rose sharply again to $887.32 by end of 2015, but fell sharply to $673.95m in July 2016, indicating serious fluctuating business decision making arising from the nature of the recession and unpredictability of the economy.

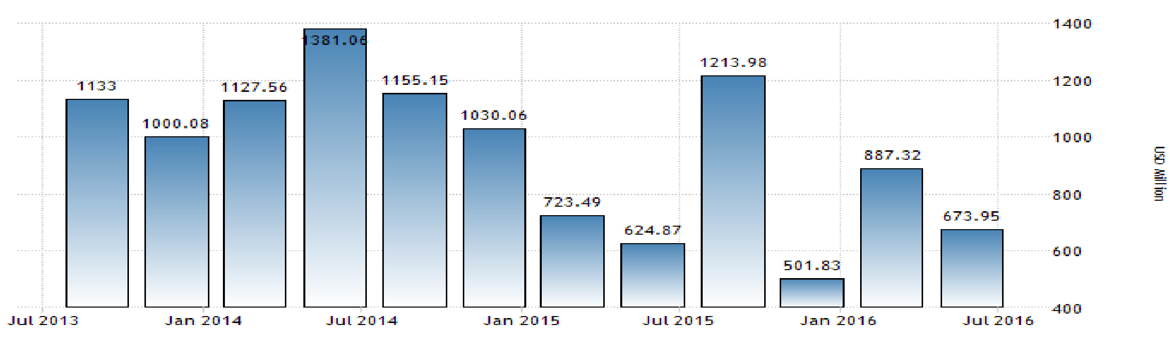

Figure 5. Nigeria Foreign Direct Investment

6.6. What caused Nigeria's recession?

The issues that instigated Nigeria's economic recession as in Ekong (2016) cannot be easily and wholly described by theoretical models. The issues were more structural than monetary or fiscal. The same author highlights those causes, thus:

i. Unwillingness to save when the country was earning so much from its export product and dis-saving by previous governments from its foreign account
ii. Plummeting price of crude oil which constitute the major export commodity of the country coupled with the large cut in production capacity that is occasioned by insurgency in the Niger Delta region, including pipeline vandalism.
iii. Falling level of food production for local consumeption resulting from insurgent activities of Boko Haram militants in the North Eastern part of the country.
iv. Corruption which is reflected in stealing of public money and misappropriation of public assets.
v. Excessive demand for foreign goods and services which killed domestic production instincts
vi. Corrupt and criminal deprivation of domestic educational institutions in order to justify the unusual demand for educational services abroad.
vii. Uncompetitive business laws, ethics and conventions (e.g., no bankruptcy law to protect investors, Joint Venture agreements that make partners cash calls on government to be a great burden, appointment of incompetent managers into government businesses to balance for ethnicity, difficult ease of doing business, total lack of infrastructure to support business, land tenure law that does not support mechanized agriculture, etc.)

6.7. How Nigeria's current recession has affected government funding of universities

With the total decline in the earning capacity of the government, the indication is that it will have less to spend on all her intentions for the economy. Therefore, government must prioritize and rationalize its spending in order to be optimal, while attaining its political goals. Since there are several competing sectors for government to spend to rejuvenate the economy and take her out of recession, a very deep prioritization process must be undertaken to identify these sectors.

Currently the University education sector is suffering as it may not be a top priority of the government whose immediate concern in rebuilding the economy, as the government always insinuate include fighting corruption, suppressing insurgency, rejuvenating agriculture, building and maintaining infrastructure, as well as building strong institutions.

The current government antics of invoking the concept of University autonomy to reduce allocations to the Universities while asking the Universities to raise funds internally without opening up the main artery for such internal fund mobilization (cost-sharing with students – tuition fees) betrays the expected laissez faire policy. If the government can garner the political will to allow tertiary education cost-sharing with students while providing scholarships, aids, and grants to buffer for indigent students, then reducing Universities' funding allocation would have been understood.

The recent reaction of Academic Staff Union of Nigerian Universities (ASUU) in declaring a one week warning strike is a call to awaken the government into putting flesh on the bones of an agreement that was signed off some years ago. Not minding the government that agreed to and signed the pact, government is a continuum and must accept the responsibility of honouring the agreement. The foot dragging by government in resolving the ASUU-Government impasse has been put on the excuse of economic recession.

In summary, therefore, the current situation indicates that the Universities' funding in Nigeria has been so negatively affected by the current economic recession the country is experiencing.

6.8. How should Nigeria react to solve the menacing recession?

Theoretical postulations in managing recession in any capitalist economy are similar from all sides of the divide. Economists, because of the trade-off between inflation and unemployment in recessionary pressures suggest a cocktail or a policy mix approach to solving the menace. In this case, a combination of fiscal and monetary policy measures are advanced for the management of recession.

On the fiscal side, it is recommended that during recession, countries should increase spending to boost aggregate demand. While on the monetary side it recommended that government should keep interest rate low to encourage borrowing while adopting other expansionary monetary policies to reflate the economy.

6.9. Implications of theory-suggested reactions to counter recession

Recall that while we were discussing Nigeria's recession earlier, we noted that this type runs counter to theoretical postulation. That instead of a negative relationship between inflation and unemployment, Nigeria's recession rather indicates a positive relationship between the two macroeconomic variables (a situation of stagflation). So what will be the implication(s) of adopting the theoretical solutions highlighted above and as canvassed by many Nigerians? The discourse below highlights my reaction to such decisions.

i. Increased spending by government may lead to increased peoples' demand structure (demand-side). Since this may not be immediately met by increase in supply side, it has a tendency of increasing demand for import and further weakening the naira (at least in the short run)

ii. Increased allocation of funds to tiers of government becomes more of a drain as such releases may only be expended on demand-side ventures (recurrent spending) and merry trips to search for non-existing foreign investors.

iii. Reduced interest will make borrowing cheap. Investors who borrow in recession may not necessarily go into green investment, rather they may prefer portfolio investment, thus borrowing to invest in market speculation and creating more bubbles in the stock market while the fundamentals remain very un-encouraging. Thus, the intention of increasing borrowing to finance the supply-side becomes obviously illusive, encouraging increased inflationary pressures as well as deepening unemployment.

6.10. Results from current government theory-based reaction

When government bowed to pressure of some Nigerians to adopt theoretical prescriptions to address the recessionary pressures, particularly adopting easy monetary and fiscal policies, the following befell the economy:

i. Free fall of the naira in the foreign exchange market as a result of sustained demand for foreign currencies
ii. Increasing inflation and increasing unemployment (stagflation)
iii. Productivity and capacity utilization in the manufacturing sector was still crawling
iv. The banking and production sectors continually experienced severe levels of insolvency
v. Foreign investors remained skeptical about green investments in the country
vi. Bitter intra- and inter political rivalry, acrimony and competition which led to de-marketing the country internationally as politicians are not interested in patriotism any longer but pecuniary interests
vii. The state of Infrastructure (power, water, roads, etc.) remained appalling.

6.11. Suggestions that can lead Nigeria out of recession

These suggestions are derived from an earlier work on recession conducted by Ekong (2016) while studying the Nigerian recession. The suggestions are disaggregated into short and medium/long term. If the suggestions are adopted or adapted by the government, it will seriously and positively impact the anti-recessionary enablers that will soon leap-frog Nigeria out of recession.

Short-Run Remedies

i. Overhaul the Nigerian military and development new strategies for the resolution/ addressing of conflict including agitation for cessation by Biafra, youth restiveness, Boko Haram insurgency.
ii. Deepen the anti-corruption war by strengthening the Economic and Financial Crime commission and ensuring its independence from executive and judicial maneuver and interferences
iii. Promulgate new law to improve ease of doing business (e.g., Bankruptcy Law, Land Tenure Act, etc.). For the government's new agriculture initiative (The Green Initiative), the government must as a matter of urgency restructure the Land Tenure Act
iv. The maritime sector has been abandoned for so long and, therefore, should be refocused to address the transportations and security need of the present Nigeria
v. There is need to re-model the NNPC ownership structure to mimic the NLNG model. This will remove the Joint Venture Cash Calls that further depletes the foreign exchange earnings of the country.

vi. All the Multinational Corporations operating in the country should be quoted in the Nigeria's Stock Exchange.
vii. establish a Sovereign Wealth Fund (see Ekong 2016)

Medium/long term panacea

i. Establish a comprehensive development plan for Nigeria's infrastructure sector
ii. Create more incentives for local production and further deepen research in our tertiary Institutions to encourage development of local raw materials inputs.
iii. Build more technical colleges than co-educational secondary schools in the country to prepare the country for technological revolution
iv. Overhaul the country's tertiary institutions and improve its recurrent funding
v. Tackle the issue of corruption in the institutions so as to reduce capital flight.

7. Suggestions on some funding strategies for Nigerian universities

7.1. Tax relief wishing to invest funds in universities in Nigeria

Government should institute as a deliberate tax reliefs and related benefits policy for individuals and corporate bodies who wants to spend on the Universities. This could be carefully minded around infrastructure, scholarships and institution of research chairs, among others that may be prioritized. This policy will serve as an incentive in encouraging both individuals and corporate bodies to invest in funding the Universities.

7.2. Alumni and friends crowd funding

This system will encourage even people with low income but philanthropic attitude to contribute to the development of the Universities where they either passed through or are friendly with. If, for instance, a University seeks to generate funds for maintenance of facilities, she can conveniently achieve this using its Alumni to raise such funds by encouraging small crowd funding. If N500 is contributed yearly by 50,000 persons, a total sum of N25,000,000 could be raised.

7.3. Introduction of electronic and internet access cards to students

Introduction of cards like this that provides access to key University information could raise funds for the University if small charges are factored into the overall structures.

7.4. Allowing and encouraging technical units of the university to bid for public works

Universities Consultancies should be supported to bid for big jobs. If we have our Engineers and Consultant being trained by the Universities, what stops them from taking the jobs the people they trained are also taking?

7.5. Reducing corruption in the university system

A total and complete eradication of corruption in the Nigerian University system will encourage academic deepening as well as optimal fund application to sectors that funds had been allocated to. It will also encourage faculty members to bring their sponsored researches to the Universities instead of working outside the University with inadequate facilities for fear of their hard earned research funds being hijacked by a corrupt University system.

8. Summary and conclusion

We have carefully discussed the essence of University education, exploring even in very brief form its historical emergence both globally and in Nigeria. We have also looked at how government funds University education in Nigeria. The paper notes carefully and distinctively that the founding fathers of Nigeria rooted for University education in order to create the 'letters' that would help the country in developing and building their planned import substitution Industrialization Strategy: a strategy which was intended to reduce our dependence on imported goods and services while deepening our technical competence and expertise to have a place in the world market as a technology producing nation. Their zeal for knowledge generation through the Universities, this paper has indicated in the quality of graduates that the first generation Universities produced in the 1960s and early 1970s. We have also shown how this vision was aborted by greed and lack of knowledge of international politics and conspiracy (the roles of the IMF and World Bank). The importance of University education was indicated from the various views drawn from literature. The paper also conducted its own empirical findings to confirm the importance of University education to economic growth of Nigeria. Using the Ordinary Least Squares (OLS) method, the paper discovered a significant and positive relationship between graduate output as well as government spending on education and growth in Nigeria, indicating that knowledge would drive growth as predicted by the neoclassical growth model of Romer (2006).

One important take that the paper has noted in government funding of Universities is the discovery that although budgetary provision for education by government is increasing over time, it is not increasing at the rate that the University system (students and number of Universities) is increasing and expanding. As such the per capita expenditure of government on students is very un-encouraging, thus affecting standard provisions for teaching and learning, even as well as curricular development and motivation.

Another important issue of note that the paper discovered in the area of funding of Universities in Nigeria was that government increased funding to the Universities was preceded by ASUU Strike. The episodes of increased wages, funding of research, establishment of TETFUND, among others all came as a result of ASUU strikes. This paper, therefore, see ASUU strike as a potent weapon to achieve improved funding for University education in Nigeria, a country that seems to be insensitive to improving its knowledge base and capacity.

The paper considered the operation of a University system that is almost totally funded by a government that is under recession. Taking its time out to explore the country's recession, the paper noticed that Nigeria's recession was different from conventional business fluctuation of capitalist economies. The core issues that caused Nigeria's recession were fully highlighted by the paper. The paper maintains that the solution to the Nigerian recession laid on the footstep of its knowledge industry, which is the University system. For instance, an in-depth assessment of the priorities of the government: fighting corruption; fighting and winning the war against insurgency; deepening agriculture; building and maintaining the country's infrastructure; providing enablers for the building strong institutions; as well as this paper's suggestions for escaping recession are all wrapped in the knowledge that could only be provided and secured from the Universities.

This paper also discovered that a key limiting factor to the growth of Nigerian Universities to be the internal management of resources by the Universities management. It is, however, noted that it was only in 2013 that the government restored back the autonomy of the Universities, therefore, the time period was not considered long enough to deepen the expected participatory governance of the University system in Nigeria that will ensue good governance and prudent management of resources in the Universities. A situation where the Vice-Chancellors and University Councils mismanage the Universities, allowing avoidable leakages and wastages as well as outright fraud, which had been the normal practice before the return of autonomy, may take a while to be eliminated.

Therefore if the government have any reason to borrow to spend to leapfrog the country out of recession, the University system that will provide the knowledge faculty must be properly located in the funding arrangement, otherwise we will commit the same error of the first and second republic that saw us building big industries with no indigenous 'letters' to manage possible transfer of technology or take overs. The paper also made key suggestions on how funds could be generated by the Universities in Nigeria from sources outside government.

References

Arrow, K. (1962), "Economic Welfare and the Allocation of Resources for Invention", In: *The Rate and Direction of Inventive Activity: Economic and Social Factors*, Princeton Univ. Press, Vol. 62.

Bangura, Y. (1994), "Intellectuals, Economic Reform and Social Change: Constraints and Opportunities in the formation of a Nigerian technocracy" *Development and Change*, Vol. 25 No. 2, pp. 261-305.

Barro, R. J. and Sala–i-Martins, X. (1995), *Economic Growth*, McGraw-Hill, New York.

Barro, R.J., and Sala–i-Martins, X. (2004), *Economic Growth (2nd ed.), McGraw-Hill, New York.*

Chugh, S.K. (2016), *Modern Macroeconomics*, MIT Press.

Dollar, D. and Collier, P. (2002), *Globalization, Growth, and Poverty: Building an Inclusive World Economy*, The World Bank.

Ekong, C.N. (2016), Nigeria's Economic Recession. A paper presented at the Department of Economics, University of Uyo, Seminar on Economic Recession in Nigeria.

Encyclopaedia Britannica (n.d.), "Universities", (11th ed.). 911.

Fafunwa, B. (1974), *The Growth and Development of Nigerian Universities*, Overseas Liaison Committee, American Council on Education.

Graduate Destinations (2010), Graduate Destinations 2010: A Report On The Work And Study Outcomes Of Recent Higher Education Graduates.

Green, A.H. (1978), "The History of Libraries in the Arab World: A Diffusionist' Model", *Libraries & Cultural Record*, Vol. 23 No. 4, p. 459.

Hartnett, T. (2000), Financing trends and expenditure patterns in Nigerian federal universities: an update, Unpublished Report, Washington, D.C.: The World Bank.

Hirofumi, U. (1965), "Optimum Technical Change in An Aggregate Model of Economic Growth", International Economic Review. Vol.6 No.1, pp. 18-31.

Hossein, N. (1987), *Traditional Islam in the Modern World,* Taylor and Francis p. 125.

Johansen, S. and Juselius, K. (1990), "Maximum Likelihood Estimation and Inference on Cointegration – with Applications to the Demand for Money", *Oxford Bulletin of Economics and Statistics*, Vol. 52 No. 2, pp. 169-210.

Krugman*,* P. (2013), "The New Growth Fizzle"*, New York Times. August 18.*

Krugman, P. (2016), "Paul Krugman on Recession", *Harvard Business Review - Interview by Sarah Green* at ideacast@harvardbusiness.org.

Lucas, R. (1988), "On the Mechanics of Economic Development", *Journal of Monetary Economics*, Vol. 22 No. 1, pp. 3-42.

Makdisi, G. (1989), "Scholasticism and Humanism in Classical Islam and the Christian West", *Journal of the American Oriental Society*, Vol.109 No.2.

Miguel, S. (1967), "Inflation and Economic Growth", *Journal of Political Economy*. Vol. 75, pp. 796.

National Universities Commission. (2002), Academic staffing profiles, student enrollment, dropout, and graduation rates at Nigerian universities during 1995/96 to 1999/2000 academic years, Unpublished. Abuja, Nigeria: Department of Academic Planning, National Universities Commission.

Nuna, Sanz, Sjur Bergan (2006), The Heritage of European Universities. Vol.548. Council of Europe p 121.

Oni, B. (2000), Capacity Building Efforts and Brain Drain in Nigerian Universities", in Sibry Tapsoba et al. (eds.), *Brain Drain and Capacity Building in Africa* (pp. 208-227), A joint publication of the United Nations Economic Commission for Africa, the International Development Research Centre, and the International Organization for Migration. Addis Ababa, Ethiopia: UNECA.

Ortigueira, S. and Santos, M. (1997), “On the Speed of Convergence in Endogenous Growth Models”, *American Economic Review*, Vol. 87 No. 3, pp. 383-399.

Pryds, D. (2000), Studia as Royal Offices: Mediterranean Universities of Medieval Europe”, in: Courtenay, William, J.; Miethke, Jurgen; Priest, David B., *Universities and Schooling in Medieval Society, Education and Society in the Middle Ages and Renaissance*, 10, Leiden: Brill, pp 96-98.

Rebelo, S. (1991), Long-Run Policy Analysis and Long-Run Growth”, *Journal of Political Economy*, Vol. 99 No. 3, 500-521.

Reugg, W. (1992), “Foreword: The University as a European Institution”, in: *A History of the University in Europe. Vol. 1: Universities in the Middle Ages*, Cambridge Univ. Press, pp. 19-20.

Romer, D. (2005), *Advanced Macroeconomics* (3rd *Ed),* Mcgraw-Hill.

Romer, P.M. (1986), “Increasing Returns and Long-Run Growth”, *Journal of Political Economy*, Vol. 94, No. 5., pp. 1002-1037.

Romer, P.M. (1994), “The Origins of Endogenous Growth”, *The Journal of Economic Perspectives,* Vol. 8 No. 1, pp. 3-22.

Saint, W., Hartnett, T. and Strassner, E. (2003), Higher Education in Nigeria: A Status Report. Higher Education Policy, National Universities Commission (NUC), Pp.259-281. The World Bank.

UNESCO (2016), UNESCO World Heritage Centre, UNESCO. Retrieved November, 2016.

University, n OED online (2010), Oxford Univ. Press, (3rd. Ed.).

Wickens, M. (2016), Macroeconomic Theory: A Dynamic General Equilibrium Approach. 2nd Ed.

Wikipedia (2011), Education in Nigeria, available at https://en.wikipedia.org/wiki/Education_in_Nigeria

World Bank (1999), *World Development Report: Knowledge for Development*, Washington D.C.: The World Bank.