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ARTICLES

Full Length Research Paper

Causes of poverty in Sub-Saharan Africa: A layered theory approach to understanding significant factors

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Majority of studies on Sub Saharan Africa approach poverty solely as a lack of income. We believe that poverty is more than an economic status and is inclusive of educational attainment and gender inequality, for example. Our study analyzed poverty under a unique approach, and in a departure from previous studies, delineates between economic factors; political factors; health factors; educational factors; cultural factors; and agricultural factors of poverty. The research span over a 20-year period (1990 to 2010) based on five-year intervals with a sample size of 46 Sub- Saharan African countries. We found factors such as female literacy and corruption as key variables to poverty alleviation in Sub Saharan Africa over the last two decades.

Key Words: Poverty, Sub Saharan Africa, layered approach, corruption, female literacy.

INTRODUCTION

The combined gross domestic product (GDP) of Africa is 15 times less than the GDP of the USA and 7 times less than the current GDP of China. Forty-eight percent of Sub Saharan Africans live on less than $1.25 a day while sixty-nine percent live on less than $2 a day. Sixty percent of countries in Africa are considered to have low human development. However one may look at poverty, as an ever present situation in Africa. These statistics should undoubtedly arouse no wonderment since Africa, the second largest continent has always been known to be the poorest continent. Yet, the question development economists have struggled to answer over the past decades lingers on: "Why is Africa poor". Perhaps, the more relevant question is "What are the key determinants of poverty in Sub Saharan Africa?" Many economists postulate and aver that the indigence in Sub Saharan Africa is largely due to the region's venality and impuissant economic and social policies. Others assert Africa's economic woes lie in the lack of well-structured institutions. While economists focus on economic status or progress as a measure of poverty, few use human development, contentiously the most important part of economic progress as a measure of poverty. We strongly adhere to the multi-dimensional theory of poverty and believe that such a theory is appropriate for our model on Sub Saharan Africa.

The measurement of poverty has different facets. There are the one-dimensional approach and multi-dimensional approaches. Some economists use a one-dimensional approach in measuring poverty and for ascertaining the determinants of poverty. For instance, an income based poverty measure is seen in some literature. Although this

measure of poverty is not entirely wrong, it is inadequate. Inefficacious anti-poverty policies may be due to the use of the income based poverty approach (Watts, 2003). We postulate that the multi-dimensional approach, which is common in contemporary literature, is an adequate and a better approach for analyzing poverty. The harbinger of this approach and prominent economist, Armatya Sen, believed that the poverty head count ratio, for instance, is a crude index of measuring poverty due to the insensitivity towards the distribution of income to the poor. He advocated for poverty to be not only ordinal in nature but cardinal in nature as well (Sen, 1976). Sen (1976), further argued that policy makers should measure, analyze, and collate development not only by economic advances but also by improvements in the well-being of others. Harold Watts, a proponent of this approach, asserted that poverty is multidimensional and has both economic and various aspects to it (Watts, 2003).

We realized that not only is a vast preponderance of literature using income as the measurement of poverty when analyzing Sub Saharan Africa, most do not isolate the factors that cause poverty as if those are the only factors to have an effect on poverty. Our study analyzes poverty under a unique approach, and in a departure from previous studies, delineates between economic factors; political factors; cultural factors; agricultural factors; educational factors; and health factors. Huang (2010), used such an approach in finding the determinants of financial development. He investigated the political, economic and geographic determinants of the development of financial markets. In using a similar approach, Gregory Jordan argued that theorists and policy makers are primarily divided as to whether poverty is mainly structural, economic or cultural (Jordan, 2004). His paper examined the relevancy of each view and helped in gauging what the key determinants of poverty are. Not only have we added a few categories to this approach, our research focuses solely on Sub Saharan Africa over a 20 year period (1990 to 2010). With our model, comparative analyses between time periods are made to determine what categories or factors have had the most impact on poverty in Sub Saharan Africa. Our model would assist policy makers in enacting the right and appropriate anti-poverty programs that are specific and relevant to Sub Saharan Africa.

The paper is structured as follows. Section II consists of the literature review on measurements of poverty and the various determinants affecting poverty in Sub Saharan Africa. The data description and methodology is in Section III. Section IV analyses the results and policy implications. Section V presents the conclusions.

Literature review

We begin by averring that the definition of poverty is very paramount when research on poverty and its

determinants and perhaps effects are conducted. The literature is abound with GDP per capita and the growth of GDP as poverty measures and although they may be good measures, GDP per capita or the growth of GDP as poverty measures are too narrow in scope and lack any form of comprehensiveness since poverty is a broad concept. In light of this limitation, economists have begun to take a multi-dimensional approach to the measurement of poverty. A ubiquitous example may be that of the Human Development Index (HDI). Batana (2013), in his research postulates that the measurement of poverty should consist of an individual's assets, health, schooling and empowerment. He noticed that Sub Saharan African countries ranked very differently when their GDP was compared to their HDI values (Batana, 2013).

Although this may seem trite, the different rankings could have massive policy implications especially when determinants of poverty are being considered. Also, the quality of income/expenditures data is often poor in many developing countries especially Sub Saharan Africa. Well-being has a multi-dimensional nature and in accounting for poverty, different facets of well-being should be considered. However, weighting issues may arise since dimensions or measurements may be influenced by the size and the composition of the household (Batana, 2013). Other studies and eminent economists agree with Batana's assertion on the multi-dimensional approach to poverty. Alkire and Foster (2011), argue that measurement methods on poverty are largely cardinal in nature instead of being ordinal or categorical. Many countries are seeking multi-dimensional poverty measures to supplement official income poverty measures. In our analysis, we use such a view where we compare the results of two different dependent variables namely GDP and HDI. Alkire and Foster (2011) also agree that the multi- dimensional approach differs from the income based approach and perhaps may be a better measurement. Others such as Hutto et al (2011), posit that measurements of poverty should include child care, out of pocket medical expenses and variation in regional cost of living. In their research, when they accounted for all these factors, Hutto et al (2011), found that the rate of poverty tends to be higher than normal income based poverty measures. It can be concluded that existing income based poverty measurements do not adequately gauge the needs and resources of people. Batana and Duchos (2010), argue that although the multi-dimensional approach of measuring poverty is more adequate, the indicators used in the measurements tend to be quailtative, and hence, very difficult to measure.

Research on poverty reduction and development in Sub Saharan Africa is extensive and almost catholic in nature. We decide to approach the literature by looking at the economic, health, political, cultural, educational and agricultural impacts on poverty in Sub Saharan Africa in that order. In their research on aid in Africa, Nicholson and Lane (2013) confirm already existing theories that aid

has a significant impact on foreign investment flows to Africa and as such, helps in alleviating poverty in Africa. Foreign aid in the form of debt relief conditional on improved economic governance has led to increased foreign investment and capital formation on the continent. Debt relief through aid initiatives have been successful and have been a major factor of Africa's development (Nicholson and Lane, 2013). However, the theory of foreign development aid improving the well-being of people in Sub Saharan Africa is rejected by other development economists. Elbadawi et al (2009), aver that foreign aid can lead to an exchange rate overvaluation curtailing exports, a crucial component of Africa's growth.

Economic growth in Sub Saharan Africa largely depends on the fate of the exporting sectors which provide substantially to government finances, attract foreign investment and eventually lead to productivity gains. Unsustainable amounts of foreign aid can lead to disequilibrium, an appreciation of the real exchange rate, and this can have harmful effects on the export sectors (Elbadawi et al., 2009). Gatune (2010), argues that aid might not be central to development in Africa. He further posits that Africa needs to think beyond aid as the central plank of its development plans since development is more about mobilizing resources, having the capacity to use resources, and the proper allocation of resources. Through borrowing, Sub Saharan Africa, at times, has conceded policy space to its lenders who have forced it to implement deleterious policies (Gatune, 2010). Foreign aid in Sub Saharan Africa often comes with conditionality attached amounting to substantial encumbrances that outweigh possible benefits. Aid can discourage indigenous entrepreneurial initiative, weakening the necessity for these countries to outgrow the dependency on aid (Ilorah, 2008).

In terms of other economic factors such as foreign investment (FDI), economists such as Gohou and Soumare (2012) have found a rather significant relationship between foreign direct investment and poverty reduction in Africa. They admit that although the relationship is significant in parts of Africa, the positive relationship between foreign direct investment and poverty reduction is not significant in other parts of Southern and Western Africa. Over the last decades, FDI to Africa has increased on average. At the same time, HDI has been improving (Gohou and Soumare, 2012). On the other hand, Kobonang (2006) believes that FDI can equally be a source of economic harm. FDI may crowd out domestic markets and have a damaging effect on growth in developing countries. FDI may also lead to exploitation where well developed and industrialized countries prey on the least developed countries (Kobonang, 2006). The last economic component that is ubiquitous in the literature is that of the relationship of financial development and private credit in Sub Saharan Africa. Financial openness and private credit has a positive and significant relationship to poverty and economic growth. Overall,

better institutions are associated with higher income levels and lower levels of poverty (Imaiet al., 2010). In Sub Saharan Africa, private credit is not a significant determinant of poverty reduction. Perhaps the channel through which financial development affects poverty in developing countries is probably not through private credit (Fowowe and Abidoye, 2013).

There is widespread agreement that health is an important component of human development and a central part of the Human Development Index (HDI) (Canning, 2012). Healthy citizens, skilled or unskilled, enhance an economy's productive capacity by being both physically and mentally apt (Jaunky, 2013). Canning (2012), argues that health is a cause as well as a consequence of income growth. Jaunky (2013), asserts that there is a U-shaped relationship between health and wealth. This relationship however, varies over different stages of economic development. The period 1970 to 2005 has seen large improvements in life expectancy in most countries. However, in Sub Saharan Africa, high prevalence of Human immunodeficiency virus infection (HIV) has mitigated and stagnated life expectancy rates (Canning, 2012). Arimah (2004), argues that prevalence of Human immunodeficiency virus infection/acquired immune-deficiency syndrome (HIV/AIDS) is associated with increasing levels of poverty due to the reallocation of scarce financial resources from productive areas to the treatment of HIV/AIDS related ailments thereby reducing funds to fight poverty. Salinas and Haacker (2006), also agree that there is evidence that the fall in average income because of HIV/AIDS is significant in those African countries with high HIV prevalence such as Swaziland and Zambia. Another issue concerning poverty in Sub Saharan Africa has to do with poor governance and inefficacious policies drafted by feckless officials. There is no doubt that corruption is rife in Sub Saharan Africa. As of 2012, according to the Corruption Perception Index, 90% of African countries were deemed as highly corrupt. According to Szeftel (2000), the World Bank estimates that if only 5 percent of direct investment and imports into countries perceived to be extremely venal were lost through corruption, the take would be $80 billion a year.

Gyimah-Brempong (2011) and Guisan and Exposito (2007), suggest that education has a positive and significant impact on development. Education improves development by increasing the productivity of existing resources, creating and rapidly diffusing new technology and lastly, increasing the quality and efficiency of institutions (Gyimah-Brempong, 2011). In his research, Gyimah- Brempong (2011) found that all levels of education have significantly positive impacts on income growth rate in Africa with tertiary education having the most effect.

During 1970 and 1990, several countries in Africa experienced real declines in agricultural growth and showed the lowest growths in national Gross National

Product (GNP), and increase in poverty. Small-scale farmers and irrigators may be influential in alleviating poverty. For instance, irrigated agriculture has been a strategy for poverty reduction and there is evidence that this can be achieved. Yeh (2012), believes rural sector agriculture can lift some countries out of poverty. Income generated in the rural sector would be multiplied by increases in income from induced consumption expenditures in Sub Saharan Africa. About 63% of the population in Sub Saharan Africa lives in rural areas and depends largely on agriculture as the main source of income. As such, agricultural incomes must be increased in order to generate the growth in aggregate demand that powers economic development (Yeh, 2012).

DATA AND METHODOLOGY

This section describes the sample of the countries on which our research is conducted, the measures of economic, political, geography, health, education, cultural and agricultural factors/ (determinants of poverty) across the five time periods, and the empirical framework employed.

EMPIRICAL FRAMEWORK

Layered approach

In deviating from the literature, we developed an approach we coined "layered approach" which uses a comprehensive analysis of poverty. Our layered approach is simple. It is quite evident from the review of the literature that there are many determinants of poverty. We determined that a good model would include all the major determinants across different time periods, specifically, five year periods. We use this approach in order to give policy makers and researchers a "time travel" analysis of the significant determinants of poverty through the comparison of determinants across the time periods. With such an approach, one can assess factors of poverty once significant in the past and not in the present, the degree to which factors have changed, and the magnitude of these factors on poverty. As such, we run a simple Online Learning Support (OLS) for each category and for every time period. Our only limitation was the availability of certain variables over the time periods. To make the analysis comprehensive, we use both HDI and the natural log of GDP as dependent variables in separate models. The model is used for every time period.

Sample

The sample consists of all countries in Sub Saharan Africa. This means North African countries such as Egypt, Libya, Tunisia, Algeria, Morocco and Western Sahara were ommitted. However, islands such as Cape Verde, Seychelles and Mauritius were included. Due to the availability of data, some countries were ommitted over the time periods. During the 1990 period, there were 31 countries, 34 countries in 1995, 39 countries in 2000, 45 countries in 2005, and 46 countries during 2010 when HDI was used as the dependent variable. When using GDP as the dependent variable, there were 42 countries during 1990 and 1995 and 46 countries in 2000, 2005 and 2010. It is evident that using GDP as the dependent variable produced the most sample size due to availability of data.

Economic variables

To examine what siginificant effect economic factors have on poverty reduction and development, we decided to include three major economic variables in our analysis. These are *net_official_aid*, *fdi_inflows*, *private_sector_credit* (%). *Net_official_aid* involves development assistance, the disbursements of loans made on concessional terms, and grants by mulitlateral institutions to promote economic development and welfare in countries and territories. It is measured in current US dollars(World Bank). *Fdi_inflows* involves the net inflows of investment to acquire a lasting management in an enterprise operating in an economy other than that of the investor. It is the sum of the equity capital, reinvestment of earnings, other long term capital and short-term capital as shown in the balance of payments measured in current US dollars. *Net_official_aid* and *fdi_inflows* are in natural log. The *private_sector_credit* (%) involves financial resources provided to the private sector by financial corporations such as through loans, trade credits, and the pruchases of nonequity securities. We included *private_sector_credit* (%) in our analysis since it indicates the financial development of a country. Developemental aid and foreign direct investment in Sub Saharan Africa have increased over the years hence their inclusion in our research.

Model: $HDI = \beta_0 + \beta_1 net\_official\_aid + \beta_2 fdi\_inflows + \beta_3 private\_sector\_credit + \varepsilon$
$GDP = \beta_0 + \beta_1 net\_official\_aid + \beta_2 fdi\_inflows + \beta_3 private\_sector\_credit + \varepsilon$

Political variables

Our political variables are: *one_party*, which is a dummy variable, *corruption_index*, and *press_freedom_index*. The *one_party* dummy serves as a control for countries that are under one party rule or under a dictatorship. *Corruption_index* ranks countries based on how corrupt their public sector is perceived to be. Countries with higher scores are percevied to have low levels of corruption while countries with lower scores are perceived to have high levels of corruption. Finally, the *press_freedom_index* measures the attitudes and intentions of governments towards media freedom in the medium and long run. Countries with low press freedom scores had governments that encouraged press freedom while countries with high scores had goverments that restricted the press.

Model: $HDI = \beta_0 + \beta_1 one\_party + \beta_2 corruption\_index + \beta_3 press\_freedom\_index + \varepsilon$
$GDP = \beta_0 + \beta_1 one\_party + \beta_2 corruption\_index + \beta_3 press\_freedom\_index + \varepsilon$

Geography

To assess the role of geography and poverty in Sub Saharan Africa, we picked a key variable namely, *landlocked*, a dummy variable indicating countries that are landlocked and have limited access to the sea or ports.

Health

In examining what role health plays in poverty and development in Sub Saharan Africa, we use four major health varaibles. They are: *access_to_water*, *HIV_prevalence*, *infant_mortality* and *health_per_capita*. *Access_to_water* refers to the percentage of the population using an improved drinking water source. *HIV_prevalence* looks at the percentage of population affected with HIV/AIDS. *Infant_*

mortality is defined as the number of infants dying before reaching one year of age per 1000 live births in a year (World Bank). *Health_per_capita* involves the sum of public health and private health expenditures as a ratio of total population measured in constant US dollars.

Model: HDI = β_0 +β_1 *access_to_water* + β_2 *HIV_prevalence* + β_3 *infant_mortality* + β_4*health_per_capita*+ ε
GDP= β_0 +β_1 *access_to_water* + β_2 *HIV_prevalence* + β_3 *infant_mortality* + β_4 *health_per_capita* + ε

Education

We know education plays a crucial role in analysing poverty and as such, we chose our variables carefully. We decided to use *female_literacy*, *tertiary_nrllmnt*, *studnt_tchr*, *public_spend_educ* and *sec_nrllmnt*. *Female_literacy,* involves the percentage of females age 15 and above who can read and write a short simple statement on their everyday life.It is important to note that literacy also involves numeracy, the ability to make simple arithmetic calculations. *Tertiary_nrllmnt,* another key component on education, is defined as total enrollment in tertiary education regardless of age, expressed as a percentage of the total population of the five year age group following on from secondary school leaving. *Studnt_tchr,* is the number of pupils enrolled in primary school divided by the number of primary school teachers. *Public_spend_educ,* is the total public expenditure on education expressed as a percentage of the GDP in a given year. Public spending on education includes government spending on educational institutions, education administration, and transfer/subsidies for private entities. *Sec_nrllmnt,* involves the total enrollment in secondary education, regardless of age, expressed as a percentage of the population of official secondary education age.

Model: HDI = β_0 +β_1*female_literacy*+ β_2*tertiary_nrllmnt* + β_3*studnt_tchr*+ β_4*public_spend_educ*+β_5*sec_nrllmnt*+ ε
GDP= β_0 +β_1*female_literacy*+ β_2*tertiary_nrllmnt* + β_3*studnt_tchr*+ β_4*public_spend_educ*+β_5*sec_nrllmnt*+ ε

Cultural

Cultural factors are major determinants of poverty in Sub Saharan Africa. To capture the relationhip between culture and poverty, we included the variables: *fertility_rate*, *ethnic_diversity*, *religious_diversity* and *age_dpndcy*. Our *ethnic_diversity* and *religious_diversity* were obtained from Alesina and Ferrara's (2003) analysis on ethnic and religious fractionalization. Countries with high scores are highy ethnically or religiously diverse. *Fertility_rate,* represents the number of children that would be born to a woman if she were to live to the end of her child bearing years. *Age_dpndcy,* looks at the ratio of dependents(people younger than 15 or older than 64) to the working population (ages 15-64).

Model: HDI = β_0 +β_1*fertility_rate*+ β_2*ethnic_diversity*+ β_3*religious_diversity*+ β_4*age_dpndcy*+ ε
GDP= β_0 +β_1*fertility_rate*+ β_2*ethnic_diversity*+ β_3*religious_diversity*+ β_4*age_dpndcy*+ ε

Agriculture

With the agriculture category, we restrict our analysis to two key varaibles namely *agric_value* and *food_prod*. *Agric_value,* is the percentage of GDP added by agriculture. In defining agriculture, the World Bank includes forestry, hunting and fishing, the cultivation of crops and livestock production. *Food_prod,* is an index that covers food crops that are considered edible and that contain nutrients.

Model: HDI = β_0 +β_1*agric_value* + β_2*food_prod* + ε
GDP= β_0 +β_1 *agric_value* + β_2 *food_prod* + ε

Data was obtained from the World Bank[1], the United Nations[2], and the IMF[3].

EMPIRICAL RESULTS

We begin by looking at interesting relationships over the time periods. Figure 1, shows a scatter plot for the relationship between HDI and percentage of people enrolled in secondary education in 1990. Figure 2, shows a key scatter plot in 1995; the relationship between HDI and infant mortality. It can be argued that infant mortality reduces HDI values. Appendix 1-6, show the results when HDI is used as a dependent variable. Appendix 7-12, shows the results when the natural log of GDP is used as the dependent variable. Both multicollinearity and heteroscedasticity were controlled for and corrected.

From Appendix 1, it can be extrapolated that *private_sector_credit* has a positive relationship with HDI and it is significant. Moreover, this significance has been consistent for the last two decades in Sub Saharan Africa. The model controls for 'landlocked' and 'one party regime' countries as well. Although, foreign direct inflows have some positive impact on HDI, the effect is not as significant as expected. It is interesting that *net_official_aid* has a negative relationship with HDI and although not significant in the 1990s as determined by our model, it is significant in later years. The relationship confirms theories held by some economists that Africa needs to be independent from foreign aid as it curtails the continent's development. When GDP is used as the dependent variable, *net_official_aid* still has a negative relationship with HDI with the coefficients all being significant over the years. In addition, on average, countries in Sub Saharan Africa that are landlocked have a lesser GDP. Our results also show that countries with one party rule on average have a higher HDI and GDP than countries with a multi-party system.

Although this may seem strange, due to the fact of one –party regimes being tyrannical, in terms of productivity and efficiency, one party system may perform better than multi-party systems. The results also show that the more corrupt a country is, the lesser the country's economic productivity or human development. Access to drinking water does improve GDP and HDI as our results show, although this may not have been significant over the years. On the other hand, infant mortality rate has been

1World Bank Development Indicators at
http://devdata.worldbank.org/dataonline
2UNESCO at http://en.unesco.org

3International Monetary Fund at http://http://www.imf.org/external/data.htm
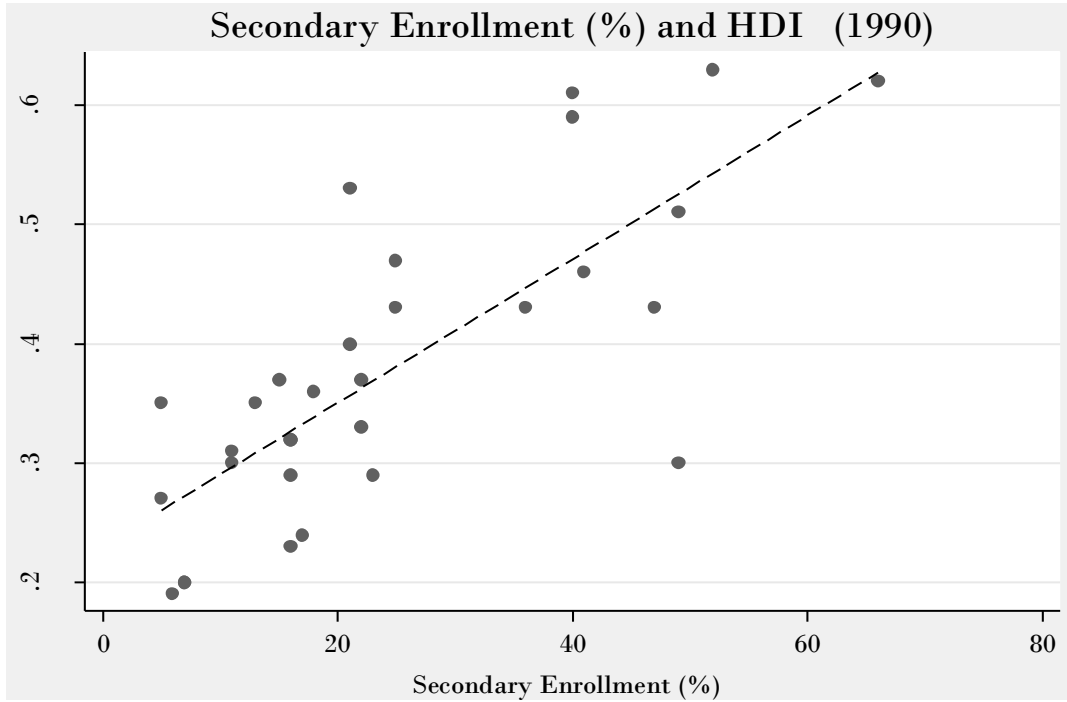
Figure 1. The relationship between HDI and the percentage of school going population enrolled at the secondary level.
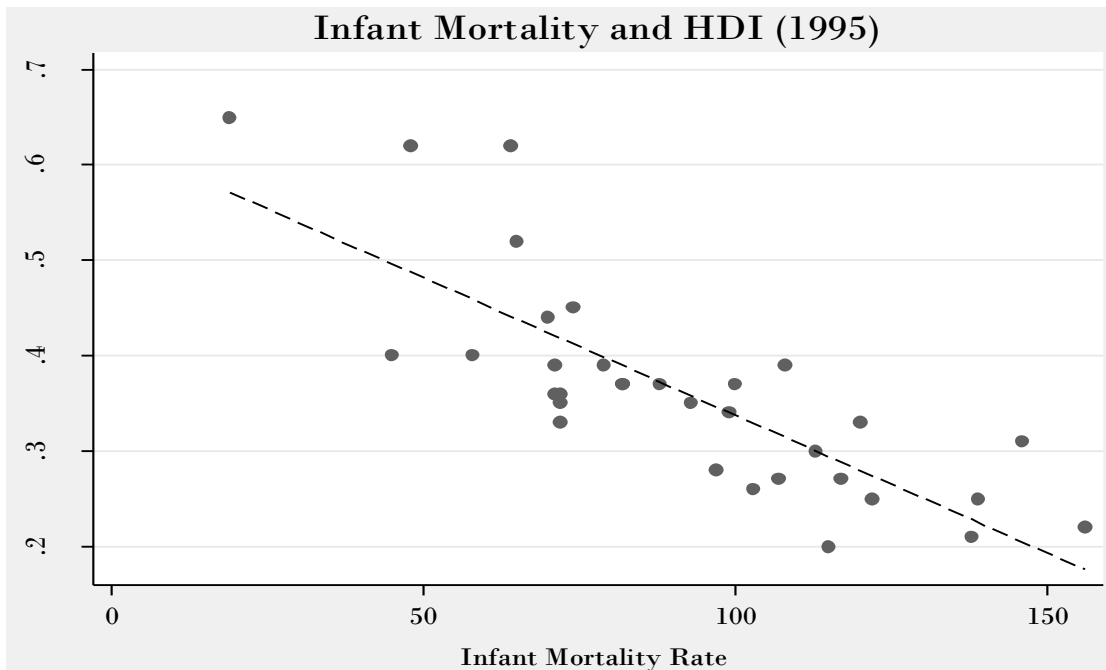
Figure 2. Higher infant mortality rates lead to lower HDI values.

largely significant in reducing HDI and GDP over the last two decades in Sub Saharan Africa. In relation to policy implications, governments should increase their health implications, governments should increase their health

expenditure as it helps in increasing HDI and GDP. In looking at education, it can be inferred that female literacy rates and the percentage of tertiary enrollment

have the most effect on human development and the reduction of poverty in Sub Saharan Africa. Our culture model shows two key variables that affect economic growth and human development in Sub Saharan Africa and they are fertility rate and the age dependency ratio. Both have a negative effect on HDI and GDP. Finally, agriculture through the value added per worker, and food production plays a significant role in poverty and human development in Sub Saharan Africa as well.

CONCLUSION

This research investigated the significant determinants of poverty in Sub Saharan Africa over the years. Poverty was measured by both the HDI and GDP values of a country. Our research utilized the "layered approach" where different categories and models affecting poverty were analyzed over periodic years. The analysis was done to find the impact of certain factors on poverty overtime in Sub Saharan Africa.

In our research, we found that economic variables such as net official aid, cultural variables such as fertility rate, and health variables such as infant mortality rates had a negative impact on human development in Sub Saharan Africa. On the other hand, factors such as credit to the private sector, access to drinking water, and food production have a significant impact on poverty reduction Sub Saharan Africa. In comparison, both the HDI and GDP models produced minimal differences. We can infer that the income measure (GDP) and the multi-dimensional measure (HDI) are both accurate measures of poverty. Our analysis on poverty has revealed the layered levels that characterize poverty. Poverty can and should be analyzed at the individual level, through the community, and at the national level. Policies used in alleviating poverty at the national level may not always be applicable at the individual level. We can strongly conclude that policies have major impacts on poverty and human development in Sub Saharan Africa as well.

We provide some further recommendations based on the results. Sub Saharan Africa policy makers should enact policies and programs that ensure a fair distribution of economic growth amongst its citizens. Corruption should also be rooted out not only at the individual level, but at the societal level as well. Our results indicate that high corruption levels lead to an exacerbation of poverty levels in Sub Saharan Africa. Corruption leads the funneling of scarce resources to uneconomic high projects at the expense of much needed projects such as schools, hospitals, roads and reliable institutions. Governments should also ensure broader access to education and technology among marginalized groups. Our results showed that female literacy rates and tertiary enrollments are significant drivers of economic growth and poverty alleviation. Finally, government capacity should be improved to provide universal access to services such as potable water; affordable food; primary health care; education etc.

REFERENCES

Alesina A, La Ferrara E (2004). Ethnic Diversity and Economic Performance. J. Econ. Lit. 43(3):762-800.
Alkire S, Foster J (2011). Counting and multidimensional poverty measurement. J. Public Econ. 95(7):476-487.
Arimah B (2004). Poverty reduction and human development in Africa. J. Hum. Dev. 5(3):399-415.
Batana Y (2013). Multidimensional Measurement of Poverty Among Women in Sub-Saharan Africa. Soc. Indicators Res. 112(2):337-362. http://econpapers.repec.org/article/sprsoinre/v_3a112_3ay_3a2013_3ai_3a2_3ap_3a337-362.htm
Batana Y, Duclos J (2010). Comparing multidimensional poverty with qualitative indicators of well-being.CIRPEE Working Paper10-04.
Canning D (2012). Progress in Health around the World. J. Dev. Stud. 48(12):1784-1798.
Elbadawi I, Kaltani L, Soto R (2009). Aid, real exchange rate misalignment and economic performance in sub-Saharan Africa. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1526569
Fowowe B, Babatunde A (2013). The Effect of Financial Development on Poverty and Inequality in African Countries. The Manchester School 81(4):562-85.
Gatune J (2010). Africa's Development beyond Aid: Getting Out of the Box. Ann. Am. Acad. Political Soc. Sci. 632(1):103-120.
Gohou G, Soumare I (2012). Does foreign direct investment reduce poverty in Africa and are there regional differences? World Dev. 40(1):75-95.
Guisan M, Exposito P (2007). Education, Development and Health Expenditure in Africa: Estimation of Cross-Section Model of 39 Countries in 2000-2005. Appl. Econom. Int. Dev. 7(2).
Gyimah-Brempong K (2011). Education and Economic Development in Africa. Afr. Dev. Rev. 23(2):219-236.
Huang Y (2010). Determinants of Financial Development. Palgrave Macmillan, New York City pp.1-16.
Hutto N, Waldfogel J, Kaushal N, Garfinkel I (2011). Improving the measurement of poverty. Soc. Service Rev. 85(1):39-74.
Ilorah R (2008). Trade, aid and national development in Africa. Dev. Southern Afr. 25(1):83-98.
Imai K, Raghav G, Ganesh T (2010). Is the Millennium Development Goal on Poverty Still Achievable? The Role of Institutions, Finance and Openness. Oxford Dev. Stud. 38(3):309-37.
Jaunky V (2013). The Wealth-Health Nexus: New Global Evidence. Atlantic Econ. J. 41(2):115-22.
Jordan G (2004). The Causes of Poverty: Cultural vs. Structural.<http://www.asu.edu/mpa/Jordan.pdf>
Kobonang Z (2006). NEPAD: Drawing Lessons from Theories of Foreign Direct Investment. Indian J. Econ. Bus. 5(2):255-270.
Nicholson M, Lane S (2013). The Next Step in African Development: Aid, Investment, or Another Round of Debt? Int. J. Econ. Finan. 5(6).
Salinas G, Haacker M (2006). HIV/AIDS: The Impact on Poverty and Inequality. International Monetary Fund.
Sen A (1976). Poverty: An Ordinal Approach to Measurement. Econometrica 44(2):219-231.
Szeftel M (2000). Between Governance & Under-development: Accumulation & Africa's ' Catastrophic Corruption. Rev. Afr. Polit. Econ. 27(84):287-306.
Watts H (2003). An Economic Definition Of Poverty. Econ. Poverty Inequality 2:131-144.
Yeh S (2012). A High-Value Agriculture-Based Strategy for Reducing Poverty in Sub-Saharan Africa. Poverty Public Policy 4(2):1-27.

Appendix 1. Economic Model

	1990	1995	2000	2005	2010
	HDI	HDI	HDI	HDI	HDI
Net_official_aid	-0.055	-0.032	-0.058	-0.034	-0.052
	(2.05)	(2.01)	(4.47)**	(3.70)**	(4.48)**
Fdi_inflows	0.003	0.018	0.015	0.012	0.019
	(0.29)	(1.75)	(1.24)	(1.90)	(2.84)**
Private_sector_credit	0.004	0.005	0.002	0.002	0.002
	(2.62)*	(3.15)**	(3.37)**	(3.50)**	(3.80)**
Landlocked	-0.024	-0.008	-0.052	-0.049	-0.028
	(0.51)	(0.24)	(1.59)	(1.74)	(1.04)
One_party	-0.001	0.060	-	-	-
	(0.03)	(1.69)	-	-	-
CONSTANT	0.632	0.415	0.621	0.549	0.649
	(3.57)**	(4.41)**	(9.45)**	(10.40)**	(9.62)**
Observations	31	33	39	45	46
R-Squared	0.33	0.52	0.56	0.52	0.53
Adj. R-Squared	0.19	0.43	0.50	0.47	0.49

Absolute value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Appendix 2. Political model

	2000	2005	2010
	HDI	HDI	HDI
One_party	0.113	0.036	0.059
	(3.45)**	(1.08)	(2.03)*
Corruption_index	0.089	0.062	0.079
	(5.94)**	(3.62)**	(6.41)**
Press_freedom_index	-0.000	-0.001	-0.000
	(0.17)	(0.81)	(0.74)
Landlocked	-0.097	-0.084	-0.085
	(3.57)**	(2.82)**	(3.48)**
CONSTANT	0.170	0.291	0.255
	(2.34)*	(4.29)**	(5.48)**
Observations	39	45	46
R-squared	0.65	0.41	0.58
Adj. R-Squared	0.61	0.35	0.53

Absolute value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Appendix 3. Health model

	1990	1995	2000	2005	2010
	HDI	HDI	HDI	HDI	HDI
access_to_water	0.002	0.000	0.001	0.000	0.001
	(2.27)*	(0.11)	(1.37)	(0.69)	(2.04)*
hiv_prevalence	-0.000	-0.000	-0.000	-0.000	-0.001
	(0.03)	(0.05)	(0.06)	(0.05)	(0.74)
infant_mortality	-0.002	-0.002	-0.002	-0.002	-0.002
	(4.21)**	(4.20)**	(5.10)**	(4.55)**	(4.18)**
landlocked	0.054	-0.011	-0.037	-0.058	-
	(1.94)	(0.42)	(2.00)	(3.10)**	-
one_party	-0.004	0.014	-	-	-
	(0.14)	(0.64)	-	-	-
health_per_capita		0.001	0.003	0.001	0.008
		(4.13)**	(4.61)**	(5.62)**	(5.69)**
Constant	0.434	0.484	0.503	0.510	0.440
	(4.76)**	(7.36)**	(7.68)**	(8.15)**	(6.52)**
Observations	31	33	39	45	46
R-squared	0.73	0.80	0.87	0.84	0.74
Adj. R-Squared	0.68	0.75	0.85	0.81	0.71

Absolute value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Appendix 4. Education model

	1990	1995	2000	2005	2010
	HDI	HDI	HDI	HDI	HDI
Female_literacy	0.002	0.002	0.003	0.002	0.002
	(1.30)	(2.43)*	(3.74)**	(3.41)**	(3.74)**
Student_tchr	-0.001	-0.001	-0.002	-0.001	-0.001
	(0.70)	(0.73)	(1.24)	(0.62)	(0.95)
Tertiary_nrllmnt	0.028	0.019	0.006	0.003	0.000
	(2.81)**	(3.42)**	(1.45)	(1.33)	(0.35)
Landlocked	0.020	-0.029	-0.053	-0.021	-0.022
	(0.49)	(1.01)	(1.48)	(0.98)	(0.93)
One_party	0.003	-0.006	-	-	-
	(0.08)	(0.22)	-	-	-
Public_spend_educ	-	0.005	0.007	-	-
	-	(0.77)	(0.89)	-	-
Sec_nrllmnt	-	-	-	0.002	0.002
	-	-	-	(3.48)**	(3.51)**
Constant	0.278	0.248	0.292	0.258	0.279
	(3.22)**	(3.93)**	(3.70)**	(4.47)**	(4.56)**
Observations	31	33	39	45	46
R-squared	0.50	0.67	0.62	0.77	0.71
Adj. R-Squared	0.40	0.59	0.56	0.74	0.67

Absolute value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Appendix 5. Culture model

	1990	1995	2000	2005	2010
	HDI	HDI	HDI	HDI	HDI
fertility_rate	-0.107	-0.052	-0.048	-0.027	-0.017
	(4.55)**	(2.81)**	(2.60)*	(1.52)	(0.77)
ethnic_diversity	0.123	-0.118	-0.052	-0.008	-0.003
	(1.65)	(1.37)	(0.64)	(0.14)	(0.04)
religious_diversity	0.027	0.036	-0.048	-0.024	0.021
	(0.38)	(0.49)	(0.72)	(0.40)	(0.35)
age_dpndcy	0.001	-0.001	-0.003	-0.005	-0.004
	(0.54)	(0.39)	(1.60)	(2.64)*	(2.71)**
landlocked	-0.016	-0.044	-0.039	-0.037	-0.035
	(0.48)	(1.11)	(1.16)	(1.40)	(1.22)
one_party	0.015	0.000	-	-	-
	(0.48)	(0.01)	-	-	-
Constant	0.796	0.828	0.973	0.964	0.856
	(4.86)**	(5.48)**	(10.18)**	(12.12)**	(14.35)**
Observations	31	33	39	45	46
R-squared	0.69	0.58	0.70	0.69	0.62
Adj. R-Squared	0.61	0.47	0.65	0.65	0.58

Absolute value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Appendix *6.* Agriculture model

	1990	1995	2000	2005	2010
	HDI	HDI	HDI	HDI	HDI
agric_value	-0.005	-0.004	-0.005	-0.005	-0.005
	(3.92)**	(4.57)**	(6.46)**	(6.41)**	(6.51)**
food_prod	0.000	0.001	0.002	-0.001	-0.000
	(0.17)	(1.19)	(2.49)*	(0.38)	(0.58)
landlocked	0.037	-0.031	-0.058	-0.065	-0.056
	(0.92)	(1.05)	(2.30)*	(2.56)*	(2.26)*
one_party	0.028	0.035	-	-	-
	(0.70)	(1.09)	-	-	-
Constant	0.495	0.408	0.390	0.689	0.641
	(4.01)**	(4.48)**	(4.86)**	(2.27)*	(8.40)**
Observations	31	33	39	45	46
R-squared	0.45	0.53	0.69	0.56	0.57
Adj. R-Squared	0.36	0.46	0.66	0.53	0.54

Absolute value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Appendix 7. Economic model

	1990	1995	2000	2005	2010
	LG GDP	LG GDP	LG GDP	LG GDP	LG GDP
Net_official_aid	-0.456	-0.355	-0.550	-0.368	-0.631
	(3.65)**	(2.91)**	(5.87)**	(4.40)**	(4.87)**
Fdi_inflows	0.029	0.132	0.174	0.155	0.227
	(0.58)	(1.98)	(2.71)**	(2.82)**	(3.07)**
Private_sector_credit	0.027	0.030	0.016	0.014	0.014
	(2.86)**	(2.12)*	(3.05)**	(2.39)*	(2.39)*
Landlocked	-0.250	-0.127	-0.201	-0.151	-0.057
	(1.04)	(0.45)	(0.93)	(0.60)	(0.19)
One_party	0.186	0.099	-	-	-
	(0.72)	(0.34)	-	-	-
Constant	9.318	8.367	9.180	8.646	9.969
	(12.65)**	(11.19)**	(21.63)**	(17.85)**	(13.33)**
Observations	42	42	46	46	46
R-squared	0.43	0.41	0.56	0.47	0.47
Adj. Square	0.34	0.32	0.52	0.42	0.41

Absolute value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Appendix 8. Political model

	2000	2005	2010
	LG GDP	LG GDP	LG GDP
One_party	0.548	0.676	1.033
	(2.02)	(2.11)*	(2.78)**
Corruption_index	0.482	0.457	0.629
	(3.93)**	(2.85)**	(4.00)**
Press_freedom_index	-0.014	-0.010	-0.004
	(1.37)	(1.15)	(0.47)
Landlocked	-0.508	-0.478	-0.616
	(2.04)*	(1.69)	(1.99)
Constant	6.251	6.308	5.760
	(11.93)**	(10.61)**	(9.72)**
Observations	46	46	46
R-squared	0.41	0.30	0.37
Adj R-squared	0.30	0.24	0.30

Appendix 9. Health model

	1990	1995	2000	2005	2010
	LG GDP	**LG GDP**	**LG GDP**	**LG GDP**	**LG GDP**
Access_to_water	0.009	0.008	0.008	0.001	0.012
	(1.37)	(1.30)	(1.57)	(0.09)	(2.07)*
HIV_prevalence	-0.016	-	-	-0.002	-
	(0.50)	-	-	(0.13)	-
Infant_mortality	-0.013	-0.000	-0.007	-0.003	-0.003
	(3.49)**	(0.15)	(1.95)	(0.66)	(0.95)
Landlocked	-.2172	-0.187	-0.214	-0.305	-0.263
	(0.85)	(1.01)	(1.24)	(1.79)	(1.61)
One_party	.1955	-0.276	-	-	-
	(0.83)	(1.34)	-	-	-
Health_per_capita	-	0.006	0.003	0.004	0.003
	-	(6.53)**	(4.42)**	(4.63)**	(6.61)**
	-	-	-	-	-
	-	-	-	-	
Constant	8.102	6.413	7.011	7.032	6.343
	(11.53)**	(12.50)**	(14.68)**	(15.31)**	(13.43)**
Observations	42	42	46	46	46
R-squared	0.51	0.72	0.65	0.73	0.70
Adj R-Squared	0.47	0.68	0.62	0.70	0.67

value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Appendix 10. Education model

	1990	1995	2000	2005	2010
	LG GDP	**LG GDP**	**LG GDP**	**LG GDP**	**LG GDP**
Female_literacy	0.000	0.008	0.014	0.012	0.020
	(0.02)	(1.25)	(2.36)*	(1.79)	(2.59)*
Studnt_tchr	-0.014	-0.003	-0.015	-0.015	-0.021
	(1.76)	(0.33)	(1.36)	(1.42)	(1.54)
Public_spend_educ	0.077	0.145	0.016	-	-
	(1.63)	(1.70)	(0.24)	-	-
Tertiary_nrllmnt	0.226	0.144	0.078	0.040	0.012
	(3.81)**	(2.02)	(2.11)*	(2.07)*	(0.72)
One_party	0.131	0.003	-	-	-
	(0.53)	(0.01)	-	-	-
Landlocked	-	-0.369	-0.126	0.120	-0.027
	-	(2.15)*	(0.42)	(0.54)	(0.08)
Sec_nrllmnt	-	-	-	0.013	0.006
	-	-	-	(1.45)	(0.62)
Constant	6.913	6.106	6.876	6.637	6.851
	(14.46)**	(9.44)**	(10.11)**	(10.10)**	(7.75)**
Observations	42	42	46	46	46
R-squared	0.47	0.51	0.44	0.56	0.44
Adj. R- Squared	0.40	0.42	0.37	0.50	0.37

Absolute value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Appendix 11. Culture model

	1990	1995	2000	2005	2010
	LG GDP	**LG GDP**	**LG GDP**	**LG GDP**	**LG GDP**
fertility_rate	-0.591	-0.472	-0.315	-0.326	-0.128
	(5.25)**	(3.12)**	(2.01)	(1.76)	(0.43)
ethnic_diversity	0.124	-0.347	0.161	0.362	0.457
	(0.21)	(0.53)	(0.27)	(0.68)	(0.57)
religious_diversity	-0.232	-0.068	-0.729	-0.846	-0.218
	(0.45)	(0.12)	(1.26)	(1.54)	(0.56)
landlocked	-0.047	-0.176	0.034	0.033	-0.070
	(0.19)	(0.59)	(0.13)	(0.12)	(0.22)
one_party	0.259	-0.150	-	-	-
	(1.14)	(0.65)	-	-	-
age_dpndcy	-	-0.006	-0.032	-0.030	-0.040
	-	(0.39)	(2.16)*	(1.68)	(2.47)*
Constant	10.666	10.877	11.946	11.684	11.117
	(18.05)**	(11.64)**	(14.23)**	(15.33)**	(16.36)**
Observations	42	42	46	46	46
R-squared	0.56	0.54	0.56	0.52	0.41
Adj. R-Squared	0.50	0.46	0.50	0.46	0.33

Absolute value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Appendix 12. Agriculture model

	1990	1995	2000	2005	2010
	LG GDP	**LG GDP**	**LG GDP**	**LG GDP**	**LG GDP**
Agric_value	-0.036	-0.041	-0.037	-0.050	-0.051
	(5.82)**	(6.81)**	(6.31)**	(7.45)**	(6.55)**
Food_prod	0.009	0.012	0.011	-0.012	-0.002
	(2.13)*	(3.25)**	(1.48)	(0.53)	(0.23)
landlocked	-0.292	-0.256	-0.299	-0.261	-0.340
	(1.56)	(1.72)	(1.62)	(1.40)	(1.28)
one_party	0.114	0.182	-	-	-
	(0.57)	(1.09)	-	-	-
Constant	7.751	7.585	7.512	9.995	9.122
	(16.99)**	(19.35)**	(11.11)**	(4.29)**	(11.16)**
Observations	42	42	46	46	46
R-squared	0.62	0.74	0.59	0.65	0.54
Adj. R-Squared	0.58	0.71	0.56	0.63	0.51

Absolute value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Full Length Research Paper

Oil price volatility and economic development: Stylized evidence in Nigeria

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The research presented in this study, investigates chiefly the causal relationship between oil prices and key macroeconomic variables in Nigeria in a multivariate framework using times series data from 1980 to 2010. To examine whether there is prediction between oil prices and macroeconomic indicators (inflation, interest rate, exchange rate and real gross domestic product) as well as the impact of oil prices on the applied macroeconomic indicators, this research adopted the Granger causality and the ordinary least squares respectively. After ensuring data stationarity, the results suggest that in the short run, changes in the gross domestic product (GDP) is not influenced by oil price volatility, nor do we find evidence of influence on key macroeconomic variables. Again the findings indicate that there is a positive but insignificant relationship between oil price and the Nigerian Gross domestic product. Overall oil prices have no significant impact on real GDP and exchange rate in Nigeria. The result suggests that Nigeria has a special case of the Dutch Disease, where a country's seeming good forutne proves ultimately detrimental to its economy.

Key Words: Oil and Gas, Gross Domestic Product, causality, macroeconomic indicators.

INTRODUCTION

The Nigerian oil and gas sector plays a very dominant role in the nation's economy with oil receipts accounting for 82.1%, 83% and about 90 per cent of the nation's foreign exchange earnings in 1974, 2008 and 2010 respectively (Ihua et al., 2009). This is an economically precarious situation as confirmed by Oriakhi and Osaze (2013). The over reliance on this wasting resource over the years, has pigeon holed Nigeria's economy as a mono-product economy with notable structural difficulties for the economy. It is worth noting that prior to 1956 when

Crude Oil was discovered in marketable quantities, the mainstay of the Nigerian economy comprised of agricultural commodities such as palm oil, rubber, cotton, groundnut, cocoa etc. Since the discovery of oil, Nigerian's reliance on income from oil and Gas has further been buoyed by an almost consistent upward movement in the prices of crude oil reaching about $147 per barrel in 2008, before averaging $90 per barrel in 2010(Oriakhi and Osaze2013).

Volatility in exchange rate and oil prices was defined by

Englama et al. (2010) as the rate of change in price over a given period. Volatility may as well be expressed as a percentage and computed as the annualized standard deviation of the percentage change in the daily price. By implication, the larger the magnitude and frequency of the change over time, the higher the incidence of volatility. Fluctuations in oil prices may create uncertainty about the future path of the oil price, causing consumers to postpone irreversible purchases of consumer durable goods, and also causing firms to postpone irreversible investments (Chen and Hsu, 2012). In a well written paper, Apere and Ijomah(2013) succintly captured the nature of oil volatility as follows, ' price of oil oscillated between $17 and $26 at different times in 2002 hovered around $53 per barrel by October 2004 and moved further to $55 in 2005. They added that by July 2008, the price of oil rocketed to an all time record of $147 per barrel and thereafter, a sharp drop to US $46 a barrel and this is unending'. In an attempt to situate the oscillation in oil price, the Organisation of Petroleum Exporting Countries (OPEC) attributed the current global crude oil price volatility to continued uncertainty, stemming from the slow pace of global economic growth, continued Euro-zone debt crises, high unemployment in advanced economies and the risk of inflation in developing countries (Okere, 2013).

The Central Bank of Nigeria, the Budget and Planning Office, Federal Ministry of Finance and other agencies involved in setting monetary policies in Nigeria and globally are interested in the oil price movements in the local and international oil markets because of its direct bearing on Nigeria's annual budget. Majidi (2006) maintains that the bigger the oil-price increase and the longer higher prices are sustained, the bigger the macroeconomic impact. Nigeria became more exposed to oil price fluctuations the moment she started importing refined petroleum products due the collapse of local refineries in the late 1980's (Obioma, 2006). However, the impact of these oil price shocks as argued by Masih et al. (2010) is likely to be significantly greater in oil-importing countries, especially where policy frameworks are weak, foreign exchange reserve is low, and access to international capital markets is limited.The volatility behaviour of oil price fluctuations have been widely studied, surveyed and many stylized facts documented. A recurring stylized fact of volatility of asset prices is co-movement of exchange rate with highly volatile commodity prices as reported by Rickne (2009).

Empirical studies by Sachs and Warner (2005) and Auty (2001), on the growth rates of countries endowed with natural resources have shown the paradoxical finding that countries which are amply endowed with resources tend to grow slower than others. One economic explanation for this paradoxical phenomenon as emphasised by Rickne (2009) is that the resource exporter's real exchange rate co-moves with highly volatile commodity prices. The OECD (2004) states that for net oil-exporting

countries, a price increase directly increases real national income through higher export earnings. However, this trend gave rise to the 'Dutch Disease' which is a situation in which a country's seeming good fortune proves ultimately to have a detrimental effect on its economy. Oriakhi and Osaze (2013), believe that estimating the consequences of oil price shocks on growth is particularly relevant in the case of the Nigerian economy which uniquely qualifies as both an oil exporting and importing economy, by reason of the fact that she exports crude oil, but imports refined petroleum products. Hence, being a net importer of oil, large shifts or fluctuations in oil prices should be a matter of serious concern to the Nigerian government when taking policy decisions that affect her national economic growth and development.

In view of these developments, the research presented in this paper examines the causality between oil price volatility
and key macroeconic variables with further emphasis on how oil price volatility conforms to stylized facts established by theory and prior empirical work. As a follow up to this, the research evaluates the relationship between oil prices and key macroeconomic indices such as exchange rate, level of employment, inflationary rate, stock market development and economic development of Nigeria proxied by real GDP. The rest of the paper is organized in four sections. Section two reviews empirical literature on oil price volatility and macroeconomic variables of developed and developing economies, Section three presents the econometric model and methodology for data analysis, section four presents the empirical results and discussion, while section five concludes.

LITERATURE REVIEW

It is now well documented in both empirical and theoretical literature, that oil price shocks exert negative effects on different macroeconomic indicators through raising production and operational costs. This may affect the economy adversely because they delay business investment by raising uncertainty or by inducing costly sectoral resource reallocation (Salim and Rafiq, 2013).

Using the vector autoregressive (VAR) analysis along with the Granger causality test, generalized impulse response functions and generalized variance decom-positions, Salim and Rafiq (2013). Empirically investigate the impact of oil price volatility on six major emerging economies of Asia, namely China, India, Indonesia, Malaysia, Philippines and Thailand. Following Andersen et al. (2004), quarterly oil price volatility was measured by using the realized volatility (RV). For China, it was reported that oil price volatility impacts output growth in the short run. However, for India and the Philippines, oil price volatility was found to impact both GDP growth and inflation before and after the Asian financial crisis. In Malaysia oil price volatility impacts GDP growth, while there is a very

little feedback from the opposite side. For Thailand, oil price volatility impacts output growth for the whole study period. However, after the Asian financial crisis the impact seems to have disappeared. In Thailand, the oil subsidization of the Government by introduction of the oil fund played a significant role in improving economic performance by lessening the adverse effect of oil price volatility on macroeconomic indicators.

The impact of oil price volatility on macroeconomic activity in Nigeria has also been examined by Apere and Ijeoma (2013) using exponential generalized autoregressive conditional heteroskedasticity (EGARCH), impulse response function and lag-augmented VAR (LA-VAR) models. The paper finds a unidirectional relationship between interest rate, exchange rate and oil prices. However, a significant relationship between oil prices and real GDP was not found. The paper concludes that that oil price shock is an important determinant of real exchange rates and in the long run, while exchange rate rather than oil price shocks affects output growth in Nigeria. Hence, they found evidence that international oil price influenced economic growth in Nigeria within the sample period. Using quarterly data and employing the VAR methodology, Oriakhi and Osaze (2013) examine the consequences of oil price volatility on the growth of the Nigerian economy within the period 1970 to 2010. They found that of the six variables examined, oil price volatility impacted directly on real government expenditure, real exchange rate and real import, while impacting on real GDP, real money supply and inflation through other variables, notably real government expenditure. By implication, oil price changes determine government expenditure level, which in turn determine the growth of the economy thereby reflecting the dominant role of government in Nigeria.

Since the beginning of the 1980s a large number of studies using VAR model have been done on the macroeconomic effects of oil price changes. However, surprisingly few studies have so far focused on Russia, the world's second largest oil exporter. Anchored on this premise, Ito (2012) empirically examined the impact of oil prices on the macroeconomic variables in Russia using the VAR model. The study spanned fifteen years, from 1994:Q1 to 2009:Q3, yielding 63 observations. The paper reported that a 1% increase (decrease) in oil prices contributes to the depreciation (appreciation) of the exchange rate by 0.17% in the long run, whereas it leads to a 0.46% GDP growth (decline). Likewise, they found that in the short run (8 quarters) rising oil prices not only cause GDP growth and the exchange rate depreciation, but also a marginal increase in inflation rate.

In an attempt to investigate the causal relationship between oil prices and economic growth in Tunisia over a period from 1960 to 2009, Bouzid (2012) conducted an empirical analysis of time series properties of the data collected which is followed by examining the nature of causality among the variables. Tunisia is not oil producing rather oil-importing country. It was found that an increase

in oil price decrease economic growth. The increase in oil price has further negatively affected the daily consumption pattern of households. Summarily, the results show that the existence of a long-term relationship between energy prices, economic growth and Granger pairwise causality test revealed unidirectional causality from real GDP to oil prices. In Korea, using modern time series techniques in a cointegrating framework and a VEC model including interest rates, economic activity, real stock returns, real oil prices and oil price volatility, Masih et al. (2010) examined the impact of oil price volatility on stock price fluctuations. They expanded the standard error correction model by examining the dynamics of out of sample causality through the variance decomposition and impulse response function techniques. Results indicate the dominance of oil price volatility on real stock returns. The study emphasised that oil price volatility can have profound effect on the time horizon of investment and firms need to adjust their risk management procedures accordingly.

Englama et al. (2010), argued that as a mono-product economy, where the main export commodity is crude oil, volatility in oil prices has implications for the Nigerian economy and, in particular, exchange rate movements. The latter is particularly important due to the twin dilemma of being an oil exporting and oil-importing country, a situation that emerged in the last decade. The study examined the effects of oil price volatility, demand for foreign exchange, and external reserves on exchange rate volatility in Nigeria using monthly data for the period 1999:1 to 2009:12. Drawing inspiration from the works of Jin (2008), the paper utilized cointegration technique and vector error correction model (VECM) for the long-run and the short-run analysis, respectively. The results showed that a 1.0% permanent increase in oil price at the international market increases exchange rate volatility by 0.54% in the long-run, while in the short-run by 0.02%. Futhermore, the paper reports that sensitivity analysis showed that a permanent 1.0% increase in demand for foreign exchange increases exchange rate volatility by 14.8% in the long-run. The study reaffirms the direct link of demand for foreign exchange and oil price volatility with exchange rate movements.

Close scrutiny of the foregoing review of related literature, indicates that a research gap still remains which this present work intends to fill. First wheras Salim and Rafiq (2013), Bouzid (2012) and Ito (2012) carried out their studies on foreign countries, this work takes into consideration the peculiar nature of Nigeria's geopolitical, cultural and economic environment. Secondly, though Oriakhi and Osaze (2013) and Apere and Ijeoma (2013), conducted their studies using Nigeria data their efforts differ from this one in terms of econometric model and the period covered by the study.

METHODOLOGY

This study, investigates the causal relationship between oil price

and key macroeconomic variables in Nigeria in a multivariate framework using times series data from 1980 to 2010. 1980, has been selected as the cut off year because of availability of usable data and also to allow for two year post second civillian rule which further heightened the pressure on the monoproduct driven economy of Nigeria as a consequence of the very expensive version of Nigeria's Presidential System. Data for Oil price and the other macro economic variables as well as stock market data were sourced from Central Bank Statistical bulletins for several years

The model

To examine whether there is a prediction between oil prices and macroeconomic indicators (inflation, interest rate, exchange rate and real GDP) this study adopts the Granger causality. The Granger causality test determines whether one time series is useful in predicting another time series. A time series *A* is said to Granger-cause *B* if it can be shown, usually through a series of t-tests and F-tests on lagged values of *A* (and with lagged values of *B* also included), that those *A* values provide statistically significant information about future values of *B*. Granger proposed a time-series data based approach in order to determine causality (Pasquale, 2006). Granger-causality is normally tested in the context of linear regression models and specified as follows in our bivariate linear autoregressive model of two variables X_1 and X_2 based on lagged values as applied by Pasquale (2006):

$$X_1(t) = \sum_{j=1}^{P} A_{11,j} X_1(t-j) + \sum_{j=1}^{p} A_{12,j} X_2(t-j) + E_1(t) \dots \dots \dots \dots \dots \quad 1$$

$$X_2(t) = \sum_{j=1}^{P} A_{21,j} X_1(t-j) + \sum_{j=1}^{p} A_{22,j} X_2(t-j) + E_2(t) \dots \dots \dots \dots \dots \quad 2$$

Where;
p is the maximum number of lagged observations included in the equation, the matrix *A* contains the coefficients of the equation (that is, the contributions of each lagged observation to the predicted values of $X_1(t)$ and $X_2(t)$,
X_1 is the oil price which is constant while X_2 takes the form of various macroeconomic indices identified above and,
$E1$ and $E2$ are residuals (prediction errors) for each time series.

The empirical findings reported in the research presented in this paper are calculated within a simple Granger-causality test, testing whether "oil prices in Nigeria Granger-cause" macroeconomic indices and vice versa. Given the estimated OLS coefficients for equations (1) and (2) four different hypotheses about the causal relationship between oil price and macroeconomic indices can be formulated:

1. Unidirectional Granger-causality from oil price to macroeconomic indices. Here, oil price increases the prediction of macroeconomic indices but not vice versa.
2. Unidirectional Granger-causality from macroeconomic indices to oil price. Here, macroeconomic indices increase the prediction of oil price but not vice versa (this is most unlikely in the Nigerian scenario).
3. Bidirectional causality. In this case oil price increases the prediction of the macroeconomic indices and vice versa.
4. Independence between oil price and macroeconomic indices. In this case there is no Granger-causality in any direction.

Therefore, by observing any one of the above predictions, it

suggests possible detection in the causality relationship prediction between oil price and certain macroeconomic indicators in Nigeria. Secondly to examine the relationship between change in oil price and the GDP on the one hand and among other explanatory variables the multiple regression equation was estimated and specified thus:

$OP_t = K + \beta_1 GDP_t + \beta_2 IR_t + + \beta_4 EXR_t$
Where
OP_t = oil price in time t
GDP_t = Gross domestic product in time, t.
IR_t = Interest rate in time t
EXR_t = Exchange rate in time t.

DISCUSSION OF FINDINGS

Granger test requires that the data involved should be stationary, accordingly the stationarity of the data are first tested using Dicker- Fuller (DF) test (Dickey and Fuller 1979), Augmented Dicker- Fuller (ADF) test (Dickey and Fuller (1981) unit root tests. We start by checking whether our original time series (exchange rate, inflation, interest rate, oil price and real GDP) series are stationary or not. Actually, we had a similar idea about non stationarity of the series by plotting the variables graphically as represented below in Figure 1.

In the above graphical representation, oil prices series is stationary as it crossed several times the zero-line and we do not have large departure from 0, while all the other series shows evidence of unit root as the line graph failed to cross several times the zero-line and we did have large departure from it. However, we performed an ADF test on the series to ascertain the number of times we differentiated our non-stationary time series to become stationary which the results are as presented in table 1. However, to get a statistical robust evidence of stationarity of the first and second difference of the variables, we can carry out a unit root test on the variables, using all the three possible models and the p-value of the d(y) ADF < 0.05. In the above unit root test, the null hypothesis of a unit root is H0: $a = 0$ versus the alternative: H1: $a < 0$. The ADF unit root test result presented above confirms that change in oil prices is stationary at level while stationarity was achieved for real GDP at the second difference. Stationarity was achieved for inflation rate, interest rate, and oil price at first difference. We therefore, did not reject the null hypothesis of a unit root for exchange rate, inflation rate, interest rate, oil price, and real GDP series and hence differentiate our variable at first difference for exchange rate, inflation rate, interest rate, oil price, and stock prices, and at second difference for real GDP. Figure 2 presents the new differenced series to confirm their stationarity.

It is easy to note that the differentiated series crosses several times the zero line and has small departure from it. Given the stationarity of our series, we proceeded to apply other analysis to determine the relationship as well as the directional causality between our series. We start our analysis by applying a Spearman-rank correlation test
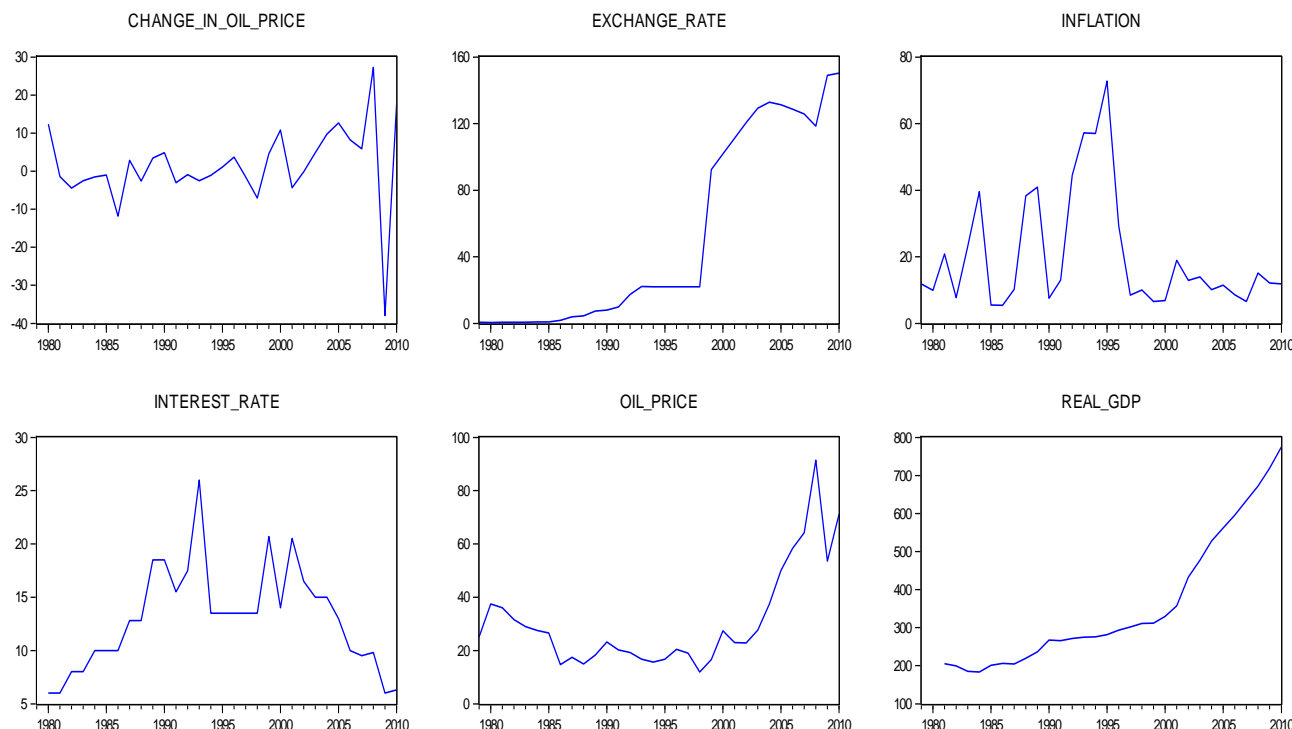
Figure 1. Variables
Source: Authors' Eview 7.0 Output.

Table 1. ADF unit root test result.

| Variable	Test Critical values			ADF	Status	d(y) ADF
	1%	5%	10%			
Change in oil prices	-3.670170	-2.963972	-2.621007	-7.969756	1(0)	
Exchange rate	-3.661661	-2.960411	-2.619160	0.163501	1(1)	-5.190888
Inflation rate	-3.661661	-2.960411	-2.619160	-2.743675	1(1)	-5.366489
Interest rate	-4.296729	-3.568379	-3.218382	-2.318496	1(1)	-8.182554
Oil price	-3.670170	-2.963972	-2.621007	-0.074780	1(1)	-7.969756
Real GDP	-3.689194	-2.971853	-2.625121	2.039840	1(2)	-7.047468

Source: Author's Eviews 7.2 output

to examine the relationship between oil price and macro-economic indices. (Table 2) Initial analysis shows that there is a positive but insignificant relationship between oil price and the Nigerian Gross domestic product. Though a positive relationship but, with correlation co-efficient of 0.019157 at 10% level of significance, it is clear that oil price and Nigeria's GDP are not significantly related. This agrees with previous studies of Apere and Ijeoma (2013) who found no significant relationship between oil prices GDP in Nigeria. The Spearman rank-order covariance analysis revealed a negative and non-significant relationship between oil price and other macroeconomic indices (exchange rate, inflation and

interest rate) applied in this study suggesting that an increase in oil price negatively correlates with exchange rate, inflation and interest rate.

What is not clear from past empirical studies is the direction of the association or the causality between oil price and the Gross domestic product. To examine this, the research reported in this paper employs Granger causality test (Granger, 1969) and the result presented is presented in Table 3. Oil prices regressed on lagged values of Oil prices and then lagged values of GDP added as explanatory variables in the pairwise Granger causality test in 26 observations presented above reveals no causal relationship between oil prices and Nigeria's
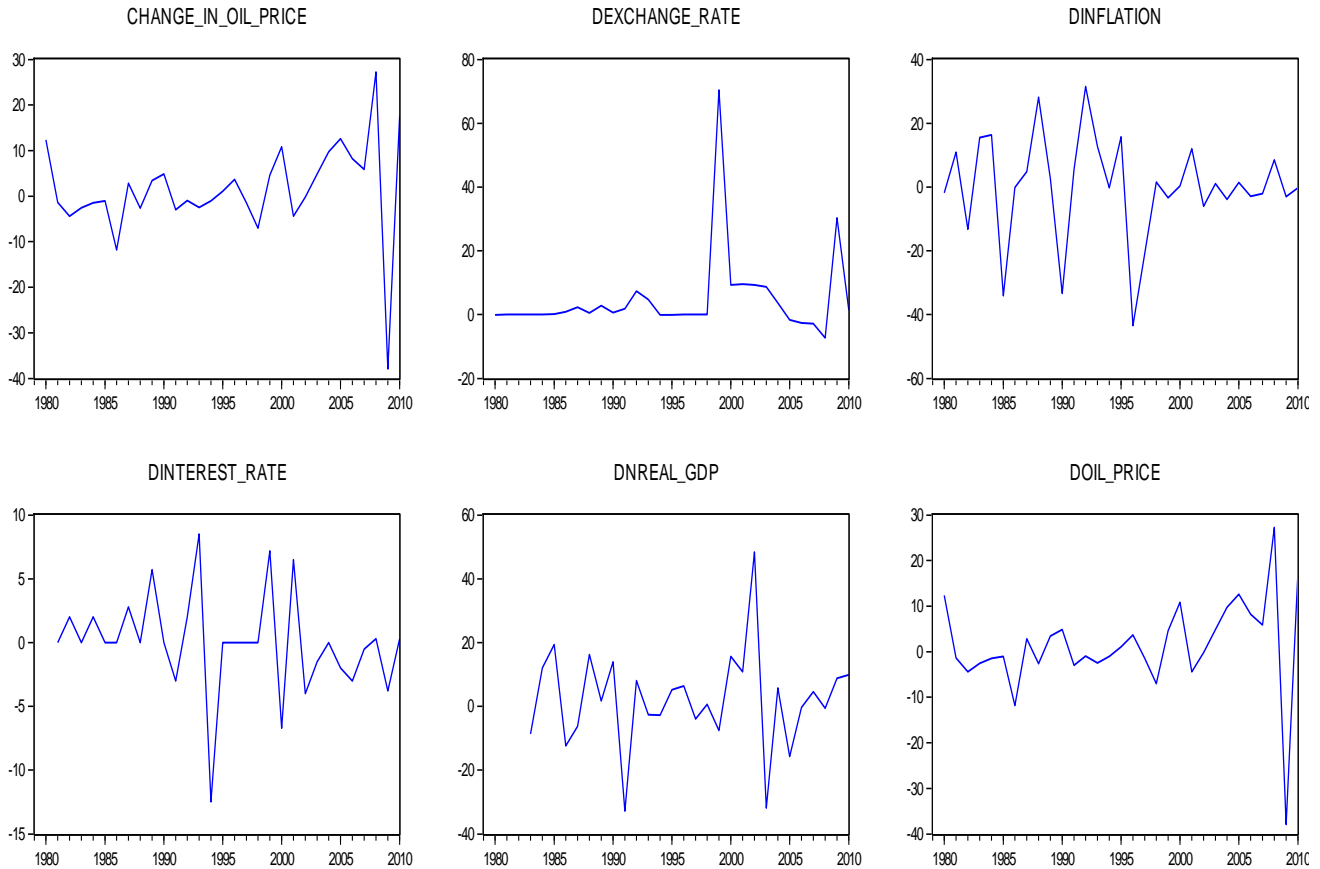
Figure 2. New differenced series to confirm their stationarity.
Source: Authors' Eviews 7.2 Output.

GDP. Given an F-statistics of 0.25925 and 0.26927 and probability of 0.7741 and 0.7665 > 0.1, we accept the null hypothesis of independence between oil price and macroeconomic indices (GDP) in particular. In this case, there is no Granger-causality in any direction between oil price and GDP. This result corroborates the report of Bouzid (2012) who in an attempt to investigate the causal relationship between oil prices and economic growth in Tunisia (which is not an oil producing rather oil-importing country) over a period from 1960 to 2009 found that an increase in oil price decrease economic growth.

Generally, the pairwise Granger causality also reveals that independence between oil price and other macro-economic indices were applied in this study except interest rate. This suggests there is no Granger-causality in any direction between oil price and exchange rate and inflation. However, among the causality between our explanatory variables in general, the pairwise Granger causality reveals a unidirectional causality running from interest rate to inflation suggesting that high credit interest rate in Nigeria of above 24% predicts inflation; and from inflation to real GDP suggesting that high inflation rate in Nigeria of above 11% is the fundamental

cause of real GDP growth of 6.5% in Nigeria. This is an interesting finding as it attempts to provide a plausible explanation to Nigeria's much touted GDP growth of between 6.5% to 7%, without commensurate impact on the citizenry. One expects that growth in GDP should naturally be seen and felt in the other macroeconomic parameters ceteri paribus. This has not happened in Nigeria, leading many to believe that Nigeria appears to be practising a novel version of voodoo economics, where growth is seen only through official statistics, rebasing and propaganda. Every other place what is seen is increasing unemployment, dimunition in standard of living, and rising discontent. These are not indices and signposts of growth.

The research concludes by examining the impact of oil price on the applied macroeconomic indices using the least squares method. The results are presented in table 4 below. Overall the least squares results depict that oil prices have no significant impact on real GDP and exchange rate in Nigeria. How can this unusual finding be explained? The place to begin is to examine the nature of the Nigerian economy. Nigeria is not the only mono economy among emerging economies, but it appears to

Table 2. Covariance Analysis: Spearman rank-order Sample (adjusted): 1983 2010 Included observations: 28 after adjustments Balanced sample (listwise missing value deletion) Correlation t-Statistic.

Probability	Dexchange_rate	Dinflation	Dinterest_rate	Doil_price	Dreal_GDP
Dexchange_rate	1.000000	-	-	--	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Dinflation	-0.012589	1.000000	-	-	-
	-0.064196	-	-	-	-
	0.9493	-	-	-	-
	-	-	-	-	-
Dinterest_rate	0.189381	0.357191	1.000000	-	-
	0.983454	1.949957	-	-	-
	0.3344	0.0620	-	-	-
	-	-	-	-	-
Doil_price	-0.214012	-0.275315	-0.060792	1.000000	-
	-1.117134	-1.460268	-0.310556	-	-
	0.2742	0.1562	0.7586	-	-
	-	-	-	-	-
Dreal_GDP	0.183361	-0.146141	-0.000840	0.019157	1.000000
	0.951085	-0.753264	-0.004285	0.097700	-
	0.3503	0.4581	0.9966	0.9229	-

Source; Authors' Eviews 7.2 Output.

Table 3. Pairwise Granger Causality Tests Date: 10/10/13   Time: 23:15 Sample: 1979 2010 Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
Dinflation does not Granger Cause Dexchange_rate	29	0.93197	0.4076
Dexchange_rate does not Granger cause Dinflation	-	0.39142	0.6803
Dinterest_rate does not Granger cause Dexchange_rate	28	0.02660	0.9738
Dexchange_rate does not Granger cause Dinterest_rate	-	0.58718	0.5640
Doil_price does not Granger cause Dexchange_rate	29	0.11402	0.8927
Dexchange_rate does not Granger cause Doil_price	-	0.89876	0.4203
Dreal_GDP does not Granger cause Dexchange_rate	26	0.00050	0.9995
Dexchange_rate does not Granger cause Dreal_GDP	-	0.72850	0.4944
Dinterest_rate does not Granger cause dinflation	28	5.28203	0.0130
Dinflation does not Granger cause Dinterest_RATE	-	2.01257	0.1565
Doil_price does not Granger cause Dinflation	29	0.24375	0.7856
Dinflation does not Granger cause Doil_price	-	0.06680	0.9356
Dreal_GDP does not Granger cause dinflation	26	0.62547	0.5447
Dinflation does not Granger cause Dreal_GDP	-	2.87410	0.0788
Doil_price does not Granger cause Dinterest_rate	28	1.59924	0.2237
Dinterest_rate does not Granger cause Doil_price	-	0.43541	0.6522
Dreal_GDP does not Granger cause Dinterest_rate	26	0.81533	0.4560
Dinterest_rate does not Granger cause Dreal_GDP	-	1.73982	0.1999
Dreal_GDP does not Granger cause doil_price	26	0.25925	0.7741
Doil_price does not Granger cause Dreal_GDP	-	0.26927	0.7665

Source; Authors' Eviews 7.2 output.

Table 4. Dependent Variable: Doil_price method: Least Squares Date: 10/10/13 Time: 23:28 Sample (adjusted): 1983 2010 Included observations: 28 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Dreal_GDP	-0.034790	0.140641	-0.247369	0.8068
Dexchange_rate	-0.234202	0.157324	-1.488657	0.1502
Dinflation	-0.049457	0.132504	-0.373251	0.7124
Dinterest_rate	0.362217	0.550467	0.658019	0.5171
C	2.774382	2.328334	1.191574	0.2456
R-squared	0.094150	Mean dependent var		1.416429
Adjusted R-squared	-0.063389	S.D. dependent var		10.99231
S.E. of regression	11.33535	Akaike info criterion		7.854163
Sum squared resid	2955.275	Schwarz criterion		8.092056
Log likelihood	-104.9583	Hannan-Quinn criter.		7.926889
F-statistic	0.597629	Durbin-Watson stat		2.491534
Prob(F-statistic)	0.668005			

Source: Authors' Eviews Output.

be the only one that rides on a 'circuit of oil reversal'. This is the culture where successive governments bleed the natural resources, run down local refineries, operate off shore refineries in a circuit and engage in massive refined products importation in a cartel-like fashion. And worse still, the few available foreign exchange is wasted through a racket called oil subsidy which is a rent seeking patronage system organized to sustain those who tout to hold the levers of power. These issues have not been factored in the regression conducted above, and account significantly for the unusual results. The sad commentary is that unless these bottlenecks are dismantled, official statistics of rising fortunes cannot be felt by the citizenry.

CONCLUSION

The Central Bank of Nigeria, the Budget and Planning Office, Federal Ministry of Finance and other agencies involved in setting fiscal and monetary policies in Nigeria and globally are interested in the oil price movements in the local and international oil markets because of its direct bearing on Nigeria's annual budget and attendant cause or influence on macroeconomic indicators. Government officials and certain scholars maintain that the bigger the oil-price increase and the longer higher prices are sustained, the bigger the macroeconomic impact. However, to confirm or argue the above assertion, the research presented in this paper examined the causal effect between oil prices and macroeconomic indices as well as the impact of oil prices on macroeconomic indices in Nigeria. Conclusively, though a positive relationship exists between oil prices and economic growth, the research presented in this paper suggests that neither do oil prices have a causal relationship with macroeconomic indices nor does it have a significant positive impact on

Nigeria's economic growth and other macroeconomic indicators. Thus confirming the paradoxical finding that countries which are amply endowed with resources tend to grow slower than others as is the case in Nigeria.

Conflict of Interests

The authors have not declared any conflict of interests.

REFERENCES

Agbayi E, Chawai E (2009). "Nigeria LNG Commitment to the Development of Nigerian Technological Capacity", Petroleum Technology Development Journal An International Journal 2:1-8.

Apere OT, Ijeoma AM (2013) "Macroeconomic Impact of Oil Price Levels and Volatility in Nigeria", Int. J. Acad. Res. Econ. Manage. Sci. 2(4):15-25. http://hrmars.com/hrmars_papers/Macroeconomic_Impact_of_Oil_Price_Levels_and_Volatility_in_Nigeria.pdf

Auty R (2001) "Resource Abundance and Economic Development", Oxford, Oxford University Press.

Bouzid A (2012). "The Relationship of Oil Prices and Economic Growth in Tunisia: A Vector Error Correction Model Analysis", Romanian Econ. J. 15(43):3-22. http://econpapers.repec.org/article/rejjournl/v_3a15_3ay_3a2012_3ai_3a43_3ap_3a3-22.htm

Chen S, Hsu K (2012). "Reverse Globalization: Does High Oil Price Volatility Discourage International Trade?" Munich Personal RePEc Archive, MPRA Paper No. 36182, posted 25. January 2012 16:01 UTC.

Englama A, Duke O, Ogunleye T, Isma'il U (2010). "Oil Prices and Exchange Rate Volatility in Nigeria: An Empirical Investigation" Central Bank of Nigeria Economic and Financial Review 48(3):31-48.

Ferderer J (1996). "Oil Price Volatility and the Macroeconomy: A Solution to the Asymmetry Puzzle", J. Macroecon. 18:1-16.

Granger CWJ (1969). "Investigating Causal Relations by Econometric Models and Cross Spectral Methods", Econometrica 37:224-238.

Ihua UB, Ajayi C, Eloji KN (2009). Nigerian Content Policy in the Oil and Gas Industry: Implications for Small and Medium-sized Oil Services Companies. Proceedings of the 10th Annual Conference, IAABD.

Ito K (2012). "The Impact of Oil Price Volatility on Macroeconomic Activity in Russia", Economic Analysis Working Papers 9 (5).

Jin G (2008). "The Impact of Oil Price Shock and Exchange Rate Volatility on Economic Growth: A comparative analysis for Russia, Japan, and China", Res. J. Int. Stud. 8:98-111: www.eurojournals.com/rjis_8_09.pdf

Majidi M (2006). "Impact of Oil on International Economy, International Economics Course, Centre for Science and Innovation Studies.

Masih R, Peters S, Mello L (2010). Oil Price Volatility and Stock Price Fluctuations in an Emerging Market: Evidence from South Korea. pp.1-32. http://www.iese.edu/en/files/Oil%20Price%20Volatility%20and%20Stock%20Market%20Fluctuations_tcm4-46145.pdf

Obioma R (2006). "An examination of oil prices and its changes on the Nigerian Economic Growth", J. Welfare Econ. 4(2):25-28.

OECD (2011). "The Effects of Oil Price Hikes on Economic Activity and Inflation", OECD Economics Department Policy Notes, No. 4.

OECD (2004). OECD Economic Outlook, No. 75, Paris. http://stats.oecd.org/Index.aspx?DataSetCode=EO75_MAIN

Oriakhi DE, Osaze D (2013). "Oil Price Volatility and Its Consequences On the Growth of the Nigerian Economy: An Examination (1970-2010)", Asian Econ. Finan. Rev. 3(5):683-702

Rickne J (2009). "Oil Prices and Real Exchange Rate Movements in Oil-Exporting Countries: The Role of Institutions, Research Institute of Industrial Economics", IFN Working Paper No. 810, 2009.

Ricken J. (2009). "Oil Price and Real Exchange Rate Volatility in Oil-Exporting Economies: The Role of Governance", IFN Working paper No. 810, Research Institute of Industrial Economics, Stockholm, Sweden: http://www.ifn.se/Wfiles/wp/wp810.pdf

Sachs J, Warner M (2005). "Natural Resource Abundance and Economic Growth, In: G.M. Meier, J.E. Rauch (Eds.), Leading Issues in Economic Development, eighth ed. Oxford University Press, New York pp.161-168.

Salim R, Rafiq S (2013). The Impact Of Crude Oil Price Volatility On Selected Asian Emerging Economies. pp. 1-33. http://www.wbiconpro.com/220-Salim.pdf

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