DOES EARNINGS FROM EXPORTS REDUCE OR AGGRAVATE POVERTY AND UNEMPLOYMENT IN NIGERIA

LUCKY OTAME
Department of Banking and Finance
Federal Polytechnic Nasarawa
Nigeria
E-Mail: Lucky33otame@Yahoo.Com

ABSTRACT
The main purpose of this paper is to quantitatively examine the impact of export earnings and exchange rate on the macroeconomic variables of poverty and unemployment using the statistical tool of co-integration in a modified ordinary Least Square (OLS) framework) in order to avoid spurious results, and hence, make for more meaningful and robust analysis. The regression results show that about 39% variation in unemployment level and 38% of the total change in poverty rate are explained or attributable to export earnings (oil and non-oil), inflation rate, exchange rate and the country's degree of openness. Specifically and as expected, oil exports make positive contribution to both poverty and unemployment reduction while non-oil exports, exchange rate and the country's degree of openness (against expectations) seem to aggravate unemployment. With the worsening trend in both poverty and unemployment levels in the country and with about 70% (world bank) of the population living below the poverty line and engaged in the agricultural sector, the reasons for this may not be far – fetched: The gain from non-oil exports are not trickling down to the masses and down- trodden. This might not be unconnected with systemic corruption, inability of farmers to access agricultural loans, inequitable distribution of wealth among others. The study therefore recommends that the fight against corruption should be sustained and strengthened. Mass education on modern agricultural techniques and positive parenthood/ family planning enlightenment campaigns for the rural poor is also recommended in order to reduce the incidences of too many dependants on a few Above all, critical steps should be taken to address the high rate at which the naira has depreciated against international currencies such as the US dollar and the British pounds sterling since 2014. In addition, income inequality prevalence in the country should be critically looked into with a view to addressing the huge income and wage disparity between the top rich, the middle class and the down trodden.

Key words: Co-integration; degree of openness; poverty, Unemployment; Trade policies

1.0. INTRODUCTION
The main purpose of this paper is to examine the impact of export earnings and exchange rate on poverty and unemployment levels in Nigeria and attempt to contribute to the measures of poverty reduction strategies of the country.

 No doubt, one of the greatest problems confronting development in developing countries including Nigeria is the issue of poverty and high rate of unemployment. According to the World Bank African Economic Outlook 2013, Nigeria is a resource-rich country and fast growing economy but that despite the huge recent macro gains of over 7% per annum over the past decade, the country is also among the poorest in the world with per capital GDP of USD1414

(2011). According to the bank, the growth has neither generated employment nor translated into poverty reduction, nor addressed inequality in Nigeria. For example, 70% of Nigeria's active population are engaged in agriculture (World fact book) with equally 70% living below the poverty line (2010) estimates) with a gini index which represents distribution of family income put at 43.7% (2003) and 50.6 (1997). These compared to that of countries such as Romania 28.2 and Belarus 27.7 shows that the country is struggling with the twin evil of poverty and unemployment. The growth witnessed in the economy is no doubt driven by exports in which crude oil sales takes dominance. For example, revenue from oil rose from N98,102.3m in 1990 to N190,453.2m in 1992 and recorded a steady rise to N591,151.0m in 1997 while revenue from non-oil recorded a marginal increase from N26,215.3m in 1990 to N26,375.1 in 1992 (National Bureau of Statistics (NBS)). Also, total exports in 2010 were N7614656.2m out of which oil exports accounted for N1757140.4m while non-oil earnings accounted for the rest. Within a period of two years (i.e. in 2012), total export trade jacked up to N9109032.5m recording an increase of about 19.63% and with the recent rebasing of the economy, Nigeria is considered the largest and one of the fastest growing economies in Africa. Despite these favourable outlooks, the Nigerian economy is still ridden with poverty and unemployment.

As a result of the weight of poverty in the development process, it has remained in the front burner in policy issues over time in the country. According to Lewu (2010), the Nigerian government has recognised the prevalence of poverty among its people especially in the rural areas. In this light, successive administrations have established various programmes and committed resources towards, not only in alleviating poverty, but also to promote economic/ entrepreneur development and innovation among the people in the country. Examples of such programmes include the YouWin Programme of the immediate past administration, the National Poverty Eradication Programme (NAPEP) and others such as the Family Economic Advancement Programme (FEAP), Better Life for Rural Women and host of others. Financing these programmes were made possible due to huge export earnings, particularly earnings from petroleum exports with substantial windfall oil income recorded in the early 1970s, 1980s, and during the gulf war of the early 90s.

The government in its attempt to improve the lot of the people is however faced with many constraints because in- spite of these efforts, poverty and high level unemployment remain unabated which aligns with Akanbi and Toit's view that, a review of the historical performance of the Nigerian economy reveals significant social-economic constraints. These constraints could range from massive corruption in the system to high level of ignorance predominant particularly with the rural poor said to constitute about 70% (World bank) of the population thereby creating a dis-connect between export earnings and general welfare of the citizenry.

2.0.   Literature Review
Poverty, Unemployment and Economic Development

According to Angaye (2005), poverty is engulfing more and more of the human population. However, while the number of the poor in the advanced countries has reduced considerably over the years, the reverse is the case with the developing countries (Nyong, 1999) and yet, the growth of most of the economies have been on a steady rise thus depicting an inverse relationship against rational expectations largely occasioned by high level of unemployment. It is a widely accepted view in economics that the growth of Gross Domestic product (GDP) of an economy increases employment and reduces unemployment (Akeju and Olanipekun: 2014). It is

also equally widely viewed by many that unemployment can be caused by various factors such as job mismatch (frictional unemployment), seasonal variations, structural changes (which could be short or long), disguise in developing countries and a lot more. Economic literature may provide some explanations for unemployment with varied perspectives. According to Mohammed (2011), some causes blame the economic system, and others blame the unemployed worker. Still, others shift the problem to external sources and shocks, or unpredictable events and others argue that technology and labour market institutions are the causes of unemployment problems. Holte (1987), opined that labour services are becoming more expensive compared to machine services and could thus be regarded as one of the causes of unemployment. While this could be true for developed countries, it might not be for underdeveloped countries where cheap human labour prevails. Other factors that could be responsible for unemployment as it relates to the Nigerian economy include ignorance, lack of required technical skills to perform in an ICT driven environment, laziness, poor quality of graduates and many more.

As a result of the debate on issues surrounding unemployment and poverty, many empirical works therefore exist with its burden on development particularly in sub - Sahara Africa being in the front burner. According to Akeju, et al, (2014), the problem of unemployment has been of great concern to the economists and policy makers in Nigeria since early 1980s. They tested the validity of the Okun's law by using error correction model and conclude from their findings that the theoretical proposition of the Okun's law which states that a negative relationship exists between unemployment rate and economic growth is not valid in Nigeria and put the rate of unemployment in Nigeria even in the period of normalcy, i.e. oil boom of the 1970s at 6.2%, 1980s 9.8% and the 1990s at 11.5% indicative of a negative trend.

Amassoma and Nwosa (2013) used the statistical tool of co-integration via the error correction modelling approach to test for the short run and long run impact of unemployment rate on productivity growth in Nigeria for the period 1986 – 2010 and finds that unemployment rate has an insignificant influence on productivity growth in Nigeria for the period and conclude that the Nigerian government has placed little or no emphasis on the rising unemployment rate since it does not affect productivity growth of the economy.

Umaru, Donga, & Musa (2013), investigated the effect of unemployment and inflation on economic growth in Nigeria between 1986-2010 through the application of Augmented Dickey-Fuller technique in testing the unit root property of the series and Granger causality test of causation between GDP, unemployment and inflation and find among others that unemployment does not significantly affect economic growth, but a good performance of an economy in terms of per capita growth may therefore be attributed to the rate of inflation in the country Despite these seemingly negative findings, the World bank in its report in 2014 predicts improved economic outlook and prospects for continued growth and conclude that poverty rates are likely lower than previously believed, but highly uneven across Nigerian region.

In most of the works reviewed, emphases were laid on the impact of exports and economic growth and productivity, poverty and unemployment. No concrete attempts were made to address the components of exports, exchange rate management and foreign trade policy on poverty and unemployment in Nigeria. This study is therefore an improvement on previous studies as the specific impact of the components of trade on the twin evil of poverty and unemployment (as against the emphasis of previous studies on growth) are examined and appropriate recommendations for policy concern proferred.

3. Methodology

Classical economic theory assumes that observed data come from a stationary process where means and variances are constant over time (Hendry & Jesulius: 1999). Violations of the assumption of stationarity may lead to spurious results (Koo, Tan & Duval: 2013). According to Iyoha (2004), much of economic analysis and econometrics is concerned with the use of, study and manipulation of time series data and time series data are known to be heavily trended and highly correlated, moving up and down together over time. Iyoha emphasised that a meaningful equilibrium or long run relationship can only be properly specified between (or among) stationary economic time series variables. Yet, many researchers specify such economic time ordered relationships without testing for their stationarity levels which often lead to spurious regression results (Granger and Newbold 1974). In order to avoid a spurious situation in regression analysis, co-integration test can be adopted.

The multivariate co integration method developed by Johansen (1988) is appropriate to our case. The time series characteristics of the models variables will be also examined using the Augmented Dickey Fuller (ADF) test in order to determine the order of integration of each of the variables used in this study. The ADF test is stated of the following general term

$$\Delta X_t = a + b x_{t-1} + \sum_{t=i}^{k} c_i \Delta X_t -1 + E_t .... (i)$$

Where k is large enough to ensure white noise residuals

When the series of the co integrating regression are non-stationary, we apply the unit root test to the residuals in order to check their level of stationarity. If co integration is established, then, a parsimonious error correction model that incorporates long run equilibrium and short run dynamics would be developed.

3.2. Data Description, Variables and Data Sources

Annual time series data covering the period 1974 – 2013 sourced from the National Bureau of Statistics (NBS) and CBN publications will be used for this study. Our variables of interest shall be poverty rate and unemployment while the explanatory variables include oil export, non – oil exports, inflation rate, exchange rate and the country's degree of openness to proxy trade policy.

3.3. Test of Hypotheses

The hypotheses formulated for this study are that exports have not reduced poverty and unemployment levels in the country. The two models below will be used to explore this postulation.

$$povt = oexp + noex + infr + exgr + dope + e_1 \quad .... \quad .(1)$$
$$uemp + oexp + noex + infr + exgr + dope + e_2 \quad .... \quad (2)$$

Where;

Povt = Poverty rate, oexp = Oil export, noex = non-oil export, infr = Inflation rate, exgr = real exchange rate and dope = the country's degree of openness to proxy the country's trade policy. e_1 and e_2 are of course the error term included to capture the effects of other variables not expressly included in the models.

Log-linearisg equations (1) and (2), in order to explore the marginal effect of each of the explanatory variables on the explained, they become;

$$Logpovt = b_o + b_1 logoexp + b_2 lognoex + b_3 logInfr + b_4 logexgr + b_5 logdope + e_1 ----- (3)$$

On apriori expectation, $b_0, b_3, b_4 > 0$ and $b_1, b_2,$ and $b_5 < 0$ and;

$Logunem = c_0 + c_1 logoexp + c_2 lognoex + c_3 logInfr + c_4 logexgr + c_5 logdope + e_2$ ...... (4)

C_0, c_3 c_4 are expected to be > 0 and c_1, c_2, c_5 < 0

4.0. Discussion of results

The results obtained from the stationarity tests conducted on the variables used for this study show that the variables were non stationary at levels and were have to be differenced to arrive at stationarity. Co integration test was also conducted on the stationary residuals of the variables. The results of the regression equations are presented below:

Model 1

Ypov = 4.2418 – 0.0422oexp - 0.0206noex - 0.0163inf + 0.1717exch + 0.0305dope

(4.5995) (-0.4305) (-0.4821) (-0.2882) (2.0179) (0.1661)

* The parenthesized figures below the coefficients are the t-values.

R-Square: 0.474087, Adjusted R-square: 0.380174, Standard Error: 0.222294

F- Statistics: 5.048148, Durbin-Watson: 0.605447

The R-Square is 0.474087 suggests a positive but moderate relationship between the dependent variable that is: Poverty rate and the independent variables: Oil Exports, Non-Oil Exports, Inflation Rate, Exchange Rate and Degree of Openness. The adjusted $R2$ of 0.380174 suggests that 38% of the total change in Poverty rate can be attributed to the Independent variables.

The individual coefficients of oil exports of (– 0.0422) and non – oil exports (- 0.0206) imply that if additional N1b oil export is made, poverty level will reduce by about 4% while non-oil export would have the ability of reducing poverty by about 2% if the same amount is earned from non-oil export. The coefficient of inflation shows that if inflation rate trends downwards, poverty rate will reduce by about 1.6%.The positive values of the coefficients of exchange rate and degree of openness calls to question the country's exchange rate management system and as trade policies as they seem to move in the same direction with our variable of interest which is poverty.

Model 2

Yump = 1.519220 – 0.0638oexp + 0.1215noex + 0.0585inf – 0.1039exch – 0.0993dope

(2.0337) (-0.8058) (3.6247) (1.2405) (-1.4625) (-0.6707)

* The parenthesized figures below the coefficients are the t-values.

R-Square: 0.471853, Adjusted R-square: 0.394184, Standard Error: 0.188204

F- Statistics: 6.075205, Durbin-Watson: 0.898254

The R-Square is 0.471853, indicates a positive relationship between the dependent variable unemployment and the explanatory variables.

The adjusted $R2$ of 0.394184 suggests that 39% of the total change or variation in Unemployment rate is jointly explained by the Independent variables.

Of note is the coefficient of non – oil export which appears to aggravate unemployment. The implication of this value is that as non – oil export grows by our unit of measurement (i.e. N1b for instance), unemployment level would worsen by about 1.2%. This trend may not be unconnected with the fact that the gains from non – oil export are not evenly and well distributed and may therefore not be trickling down well enough to the masses and down trodden of the citizenry who constitute the majority and hence, its inability to improve the unemployment situation.

5.0.   Concluding Remarks and Recommendation

This study has quantitatively examined the link between export earnings and poverty and unemployment levels in Nigeria using the statistical tool of Johansen co-integration method in order to establish the long run and short relationships between exports, inflation rate, exchange rate and government policy on the twin evil of poverty and unemployment bedevilling Nigeria. The study finds that oil exports make positive contributions to both poverty and unemployment levels while non-=oil exports seem to aggravate unemployment. With about 70% of the population engaged in agriculture and living in the rural areas, the reasons for this may not be-fetched. The gain from non-oil exports is not trickling down to the masses and down- trodden due to many factors. The study therefore recommends that the fight against corruption should be strengthened. Mass education on modern agricultural techniques and positive parent hold /family planning enlightenment campaigns for the rural poor is also advocated. Above all, critical steps should be taken to address the high rate at which the naira has depreciated against international currencies such as the US dollar and the British pounds sterling since 2014. In addition, income inequality prevalence in the country should be critically looked into with a view to addressing the huge income and wage disparity between the top rich, the middle class and the down trodden

References

Akeju, K.F, and Olanipekun, D.B, (2014), **Unemployment and Economic Growth in Nigeria Journal of Economics and Sustainable Development** www.iiste.org ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online) llVol.5, No.4

Amassoma D, and Nwosa P.I, (2013) **The Impact of Unemployment Rate on Productivity Growth in Nigeria: An Error Correction Modelling Approach**. Journal of Economics and Management Sciences, Vol. 2, No.8, pp 01 – 13

Ezike, J.E and Ogege, S. (2012), **Nigerian Foreign Trade Policy: It's Impact on Non -Oil Exports. J**ournal of Economics and International Finance Vol. 4(8), PP 194-200, May

Fuller, W.A (1976), **Introduction to Statistical Time Series.** John Wiley, New York

Hendry, D.F and Jesulius, K (1999), **Co-integrational Analysis: Part 1**, European University Institute, September 10

Holte, F.C (1987) **Four Papers on the Theory of Unemployment**, Central Bureau of Statistics of Norway

Iyoha, M.A (2004) **Applied Econometrics** Benin City, Nigeria

Koo, T.R, Tan D.T, & Duval D.T (2013), **Direct air transport and demand interaction: A vector error – correction model approach.** Journal of Air Transport Management 28 (14 – 19)

Mohammed, A.H. (2011), **Important Theories of Unemployment and Public Policies.**

Journal of Applied Business and Economics, Vol. 12(5)

Nigerian Bureau of Statistics (2012), **Annual Abstracts of Statistics**

The World Bank (2013), Nigeria – **African Economic Outlook**

The World Bank, (2014) **Nigeria Economic Report**, July 22

Umaru A, Donga M, & Musa S, (2013) **An Empirical Investigation into the Effect of Unemployment and Inflation on Economic Growth in Nigeria**, Interdisciplinary Journal of
Research in Business, Vol. 2, issue 12(pp 01-14), June