negative relationship between output growth and openness [1, 2, 23], in their study of market access for Nigerian exports in the European Union (EU) found that the impact of commodity specific and the generalized trade liberalization have remained minimal.

3.Methodology and Data

3.1methodological Framework

The theoretical foundation of the model in this study is based to a large extent on the model developed earlier by [24]. The model of this study however, differs in several specifications, including the introduction of two variables, namely, oil revenue and exchange rate in model 1. The model consists of three relationships and assumes that economic growth performance, measured by real gross domestic product, is affected by non-oil exports through the effect of the latter on investment and production in the economy. RGDP = Real Gross Domestic Product, AGR = Agricultural Revenue, OILR = Oil Revenue, EXCH = Nominal Exchange Rate, INT = Nominal Interest Rate, MNR = Manufacturing Revenue, GFCF = Gross Fixed Capital Formation, INF = Inflation Rate.

Where, OILR and INT are sets of control variables for model 3
β_i, α_i, ψ_i = Parametric Coefficients; U_t, ϵ_t, μ_t , v_i = Stochastic Error Terms.

Therefore, the first model captures objective 1 while the second and third models were used to achieve objectives 2 and 3 respectively. The models, therefore, can be expressed as:

3.2 The Model

3.2.1 Impact of agricultural revenue on economic growth

The model is specified as:

$$RGDP_t = \beta_0 + \beta_1 AGR_t + \beta_2 OILR + \beta_3 EXCH_t + \beta_4 INT_t + U_t \quad (2.1)$$

Where, OILR, EXCH and INT are sets of controlled variables for model 1.

3.2.2 Impact of manufacturing revenue on economic growth

The model is specified as:

$$RGDP_t = \alpha_1 + \alpha_2 MNR_t + \alpha_3 GFCF_t + \alpha_4 INT_t + \alpha_5 INF_t + \epsilon_t \quad (2.2)$$

Where, GFCF, INT and INF are sets of control variables for model 2.

3.2.3 Long-run relationship between non-oil revenue and economic growth

The model is specified as:

$$RGDP_t = \psi_1 + \psi_2 AGR_t + \psi_3 MNR_t + \psi_4 OILR_t + \psi_5 INT + \mu_t \quad (2.3)$$

The long-run equilibrium is specified as;

$$\mu_t = RGDP_t - \psi_1 - \psi_2 AGR_t - \psi_3 MNR_t - \psi_4 OILR_t - \psi_5 INT_t \quad (2.4)$$

The Error Correction Mechanism is modeled as;

$$\Delta RGDP_t = \psi_1 + \psi_2 \Delta AGRt + \psi_3 \Delta MNRt + \psi_4 \Delta OILRt + \psi_5 \Delta INT + \mu_t(-1) + v_i \quad (2.5)$$

Economic analysis supports that there is a relationship Between non-oil revenue and economic growth. Applied econometric analysis in trying to estimate this relationship implicitly considered the "constancy doctrine" of the variables involved, in terms of means and variances being constant while not dependent on time.

The assumption in the equations is that all the variables exhibit a mean reversing property of stationarity. In practice, most economic series are attuned to time with a non-reversing mean. In view of this, the study employed Augmented Dickey Fuller test of stationarity $\Delta Yt = (Yt - Yt-1) = \mu t$ ……. *(2.6).* This is to ensure that the regressors attain stationarity. The EVIEWS econometric package was adopted for this analysis. The study employed annual data from 1980 to 2013. Data were sourced from Central Bank of Nigeria statistical Bulletin volume 23 (2013). However, RGDP and OIR are in billions of naira.

4.Results and Discussion

The results of the ordinary least square regression are presented below.

4.1 Unit Root Test

The test is carried out to know whether the mean value and variances of the variables are time invariant, that is, constant over time. The unit root test for stationarity is applied using the Augmented Dickey Fuller (ADF) test.

Table 3.1: Unit Root Test (first differencing)

VAR	ADF	5%	CONST	TRND	LAGS
RGDP	-4.324926	-3.5312	YES	YES	2
AGR	4.456070	-1.9495	NO	NO	2
OILR	-2.940304	-1.9498	NO	NO	2
EXCH	-3.313814	-1.9498	NO	NO	2
INT	-6.575195	-2.9399	YES	NO	2
GFCF	5.420722	-3.5279	YES	YES	2
INF	-3.562596	-2.9378	YES	NO	2

From the table above, the study can infer that all the variables are stationary after taking their first difference.

Table 4.2: Impact of Agriculture on Economic Growth
Dependent Variable: LOG(RGDP)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2017.032	20235.60	0.099677	0.9212
LOG(AGR)	0.052883	0.008921	5.927717	0.0000
LOG(OILR)	0.918708	0.112917	8.136135	0.0000
LOG(EXCH)	127.8789	388.8080	0.328900	0.7441
INT	-14833.31	1850.411	-8.016223	0.0000

Table 4.3: Impact of Manufacturing on Economic Growth
Dependent Variable: LOG(RGDP)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	921.8228	18981.49	0.048564	0.9615
LOG(MNR)	0.183555	0.020954	8.759903	0.0000
LOG(GFCF)	0.016136	0.026349	0.612414	0.5441
INT	-12914.60	1763.277	-7.324207	0.0000
INF	-77.72162	540.7908	-0.143718	0.8865

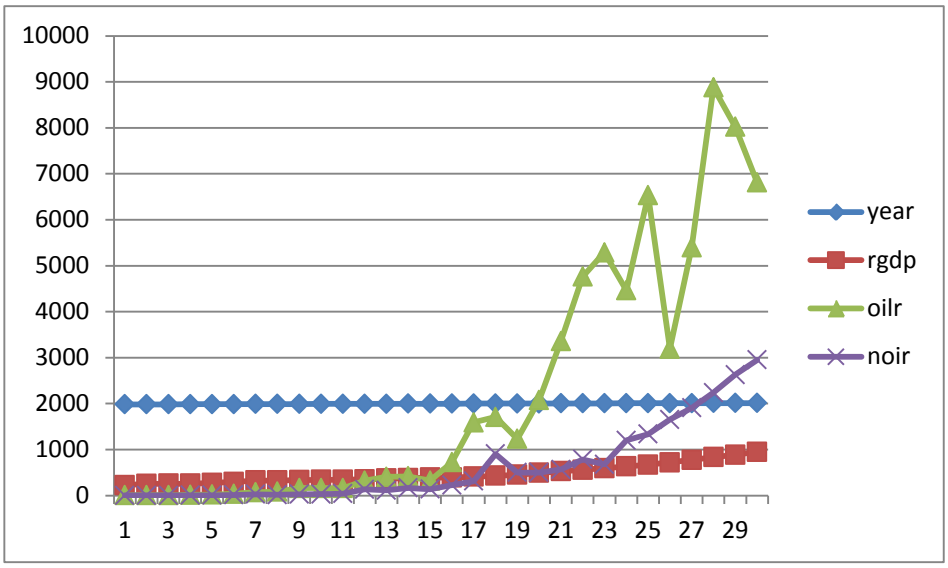

Figure 4.1: Relationship between economic growth, non-oil revenue and oil revenue

4.2 Discussion

Impact of Non-Oil Revenue on Economic Growth in Nigeria

The result of our study supports the hypothesis of a positive relationship between economic growth and agricultural revenue. This implies that a 1% increase in agricultural revenue would increase the value of economic growth by 5%. Although agricultural revenue is significant, but the marginal 5% shows that there is a lot of potential to tap in the agricultural sector. However, this result conforms to the findings by [4, 7].The result of this study equally supports the hypothesis of a positive relationship between economic growth and manufacturing revenue. This implies that a 1% increase in manufacturing revenue increases the value of economic growth by 18%. Also, the result shows that there is still room for improvement in the manufacturing sector of the Nigerian economy. This result is also in tandem with the findings by [4, 7].
The result of this study also supports the hypothesis of a positive relationship between economic growth and oil revenue. This implies that a 1% increase in oil revenue increases the value of economic growth by about 91%. This is a reflection of the over dependence of oil revenue for economic activities of the Nigerian government.

The coefficient of interest rate conformed to "a priori" expectation and it is very significant in both results. Thus, this shows that interest rate plays very important role in the production and marketing of Nigeria's agricultural and manufacturing products.

From figure 3.1, oil revenue has been on the increase, contributing greatly to the increases in economic growth. Non-oil revenue has not been keeping pace with its oil counterpart, contributing less to economic growth. Interestingly, in the last decade, non-oil revenue has been rising consistently with a rate higher than the rate of the rise in economic growth in Nigeria.

4.3 Cointegration

Since the study does not want to lose any useful information due to differencing, the study carries out a cointegration test on the estimated model. This test is carried out using the Augmented Dickey Fuller test on the residuals obtained from the regression under the following hypothesis, $H_0 : \alpha = 0$ (not cointegrated) against $H_1 : \alpha \neq 0$ (cointegrated)
Decision Rule:
Reject H_0 if $t_{cal} > t_{tab.}$ The following result was obtained.

Table 4.4: Cointegration

Variable	t-ADF	Critical value
Cointegration (U_{t-1})	-3.930043	1% = -3.6019
		5% = -2.9358
		10% = -2.6059

From the table above, since the absolute value of computed t-adf > critical t-adf, especially when compared with the 5% critical value i.e. /-3.930043/>/-2.9358/, the study concludes that the estimated error term is stationary which means that the variables are cointegrated. Put in another way there is a sustainable long run relationship (steady –state path) between economic growth and non-oil revenue variables.

4.4 Error Correction Model (ECM)

The error correction model is a short run model, which explains the extent to which the long run errors of the model are corrected in the short run. In other words, it is employed to check the speed of adjustment between the long run and short run dynamics in model (3.5). To arrive at this error correction model, all the variables in model (3.5) were estimated in their level form and the cointegrated residuals obtained. The ECM thus, implies estimation of the first difference of their level forms against the first lag of their cointegrating residuals (ECM(-1)) obtained.

Table 4.5: The ECM Result

Variable	Coefficient
ECM(-1)	-0.521531

From the table above, the speed of adjustment is found to be negative and statistically significant in the stock return. The larger the value of the error–correction term, the faster the disequilibrium is adjusted in the short run so that long run equilibrium relationship holds. The speed of adjustment is -0.52, implying that about 52 percent of the previous deviation between the actual and the desired private consumption expenditures are corrected in each year.

4.5 Diagnostic Test Result: Normality Test

The test is conducted to check whether the error term follows the normal distribution. The normality test adopted is the Jarque-Bera (JB) statistics, which follows a chi-square distribution with 2 d.f. Reject H_0 if $Jb_{cal} > Jb_{tab}$, accept otherwise. Application of the JB test shows that Jb_{cal} = 0.945209 and the probability of obtaining such a statistic under the normality assumption is 0.62, while the Jb_{cal} = 5.99.

Since Jb_{cal} (0.94) < Jb_{tab} (2df) (5.99), the study does not reject the null hypothesis and conclude that the error term is normally distributed. Also, looking at the histogram the study observes that the residual is normally distributed.

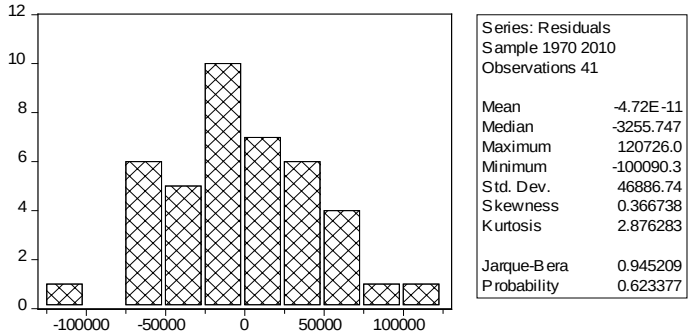

Figure 4.2 Residual histogram

5.Conclusion

This study revealed the need for viable agricultural and manufacturing revenue alternative to oil revenue, which is a dominant export product in Nigeria. It noted that non-oil revenue offer a greater viable alternative to oil revenue in relation to economic growth and development in Nigeria. Therefore, for Nigeria to prosper in economic growth, and manifest the desired economic transformation, they need to appreciate the strategic importance of non-oil revenue. The overall performance of non-oil revenue cannot be compared with performance of oil revenue. This could be largely due to the policies of the various tiers of Government to develop the non-oil sector due to the fluctuations in the International oil market and the incessant conflicts in the oil producing areas of Nigeria. This study recommends the following for policy:

- The government needs to invest in the non-oil sector adequately so as to be able to strike a balance, between the oil and non-oil sector and other sectors of the economy. In order to achieve this, the following steps must be taken: investments in agriculture, that is, cultivation of vast plots of land, for the farming of crops, in areas where these crops thrive most e.g. sugarcane (for the production of sugar), Rubber in Edo and adequate management/administration should be provided for these crops, wherever they are planted, so that high revenue yields can be got from agricultural products' exports.
- Interest rates should be reduced to make loanable funds cheaper for investors in the non-oil sector of the Nigerian economy especially the manufacturing sub-sector.

Finally, this work has shown that the non-oil sector can contribute more to the export earnings of Nigeria than the oil sector if properly managed, thus government should gear her efforts toward improving the non-oil sector of the Nigerian economy.

References

[1] Olomola, O. (1998). Civil Society and Conflict Management in the Niger Delta: Scoping Gaps for Policy and Advocacy, Lagos: CLEEN Foundation.
[2] Oladipo, N.E.. (1998). Evaluation of Nigeria's Debt Relief Experience (1985-1990). Research Programme on Financial Policies for the global dissemination of Economic Growth. *Technical Paper No. 55.*
[3] Geroid, A., (2006). Real Exchange Rate Misalignments and Economic Performance. *Working Paper 315. Central Bank of Chile, Economic Research Division*.
[4] Okunnu, M.A (2008). Non-Oil Export Development and Promotion as a Vital Strategy for Increasing Foreign Exchange Earning in an Economy. *Dimension Consult Limited* Lagos.
[5] Sasore, R. J., (2004). Government Spending in a Simple Endogenous Growth Model. *Journal of Political Economy*, Vol. 98, 103–125.
[6] Adeyemi, O.T. (2004). Economic Integration of Non-Oil Exports on Nigerian Economic Development. (Unpublished) Submitted In Partial Fulfillment of The Requirements For The Degree of M.Sc.Economics, Lagos State University, Lagos, Nigeria. 11-18.
[7] Opara, B.C, (2010). Nigerian Firms' Non-Oil Export involvement: An Economic Transformation Paradigm. *European Journal of Scientific Research*. Vol. 40 No. 4 pp 547-556.
[8] Anifowose, O.K. (1996). Latest Development in the non-oil Export Sector; including Current Export Procedure and Documentation. Being paper Presented to

Export Seminar organized by NEPC Lagos zone, held at Palace Hotel, Lagos, April 25th.
[9] Gelb, A. (1988). *Oil Windfalls: Blessing of Curse?* New York: Oxford University Press. Nigerian Institute of Management, pp. 29-31.
[10] Everhart,G and,Duval-Hernandez, D.(2001). "Avoiding the Oil Curse: What Norway can teach Iraq" in Slate's "Moneybox" column 10/29/2004.
[11] Leonidon, T. and Katsikeas, S., (1996). A theoretical Macroeconomics: A critique *Journal of Monetary Economics* 66, 25-30
[12] Zinkota, F. (1994). OPEC & the struggle to control Oil Prices. *Columbia University Journal of International Affairs*
[13] Squire, H. and Waters, B.M (1995). Trade Laws and Institutions. Goods Practices and the World Trade organization. World Bank Discussion papers No. 282.
[14] Terpstra, H and Sarathy, P. (200). Turning Oil Wealth into Development: Comparison of Angola and Nigeria. Draft. Center on Democracy, Development, and the Rule of Law.
[15] Ajakaiye D.O (1987). Economic Development. Nigeria Institute of Social and Economic Research (NISER) Ibadan.
[16] Oyedeji, A.P (1986). The structure and growth of the Non-oil sector since 1990's. Central Bank of Nigeria (CBN) Central Bank of Nigeria Reports (various).
[17] Ojo, E.O. (1989). Export Marketing for Nigerians' Economic Transformation. *Management in Nigeria*, Vol. 34, No. 2-4, April-December pp. 20-25.
[18] Abalu E.R. (1975). The prospect of made-in-Nigeria Goods in world markt. *The Journal of Management Sciences*, pp. 23-27.
[19] Langley, O. C. (1968). The Precarious Place of Labour Rights and Movements in Nigeria's Dual Economic and Political Transition. *Journal of African Law*, 51: 68-94.
[20] Falana, A. (1979). Nigeria's oil Wealth: The Challenges of Sustainable Development in an Economy Dependent on Non-Renewable Natural Resources, Ibadan: Postgraduate School, University of Ibadan.
[21] Ekpo, k anf Egwaikhide, O. (1994). The Ijaws and the Niger Delta: The Challenge of Leadership, Keynote Address at the 1994 Boro Day Observance and 6th Annual INAA Service And Devotion Award Ceremony, Newark, New Jersey, U.S.A., May 22.
[22] Amsden, J.C. (1989). Official Debt Rescheduling. *External Debt Management* edited by Mehran, Hassanali, International Monetary Fund, Washington D.C.
[23] Ogunkola, R., and Oyejide, H.(2001). Sub-Saharan Africa's Debt Crisis: Analysis and Forecast based on Nigeria. *Emerald Managerial Finance* Vol. 32 No. 7, pp. 606-620.
[24] Salvatore, D., (1983). A Simultaneous equations model of trade and development with dynamic policy simulation. *Kyklos* 36, 66-90.