

FINANCIAL IMPLICATION OF CRUDE OIL DISCOVERY IN NIGERIA: A BLESSING OR A CURSE?

SANI, Abdulrahman Bala PhD

E-mail: sonyaxle9@gmail.com

Tel: +234 803 436 3250

Department of Accounting and Finance
Usmanu Dan Fodiyo University
Sokoto, Nigeria.

NASIR, A. Kaoje PhD

E-mail: naskaoje@yahoo.com

Tel: +234 806 256 9898

Department of Accounting and Finance
Usmanu Dan Fodiyo University
Sokoto, Nigeria.

BAKARE, Taophic Olarewaju

E-mail: abubackrie@gmail.com

Tel: +234 806 770 2354

Department of Accounting and Finance
Usmanu Dan Fodiyo University
Sokoto, Nigeria

ABSTRACT

Continuous sustainable economy for growth and development which remains the true essence of governance is threatened in Nigeria due to oil revenue upon which the country relies for development. This reliance had placed the country in an invidious position. This study examine crude oil discovery on Nigerian economy: a blessing or a curse with a view to determine the extent to which the country can sustain its economy (meet its recurrent (Rec_Exp), capital expenditures (Cap_Exp) and external debt servicing (Ext_Deb)) from its reliance on oil revenue. Fully Modified Least Square (FMOLS) Regression Technique was used to estimate the model over a 49 years period (1970-2018) while Single Equation Co-integration Test was carried out using E-Views 8 version. The study reveals that crude oil discovery in Nigeria has been a blessing since it has assisted in increased export and revenue generation which has been used for developmental purposes while on the other hand it has been a curse since the discovery of oil which has led to the neglect of other sectors of the Nigerian economy that would have positively impacted on the economy like agriculture sector. The study recommends that government should formulate and implement economic policies that will enable swift diversification of the economy from oil revenue dependence to a country with multiple revenue sources.

Key Words: Crude Oil Revenue, External Debts, Capital and Re-current Expenditure.

Introduction

Nigeria, a country that is blessed with abundance of natural resources including coal, lime-stones, bitumen, gold, crude oil, iron-ore, Tin and Ignite among others has its economy

anchored on agriculture prior to oil discovery in 1956. This agrarian-based economy was sturdy and steadily growing and this progress era continued into the 1960s when agriculture played a vibrant role in her economy in terms of adding

value to GDP and foreign exchange earnings (Ogundipe & Oluwatobi, 2011). The progress and constant growth in the economy diminished drastically in the era of oil dominance; in terms of decline in the roles played by agriculture and crude oil became the major revenue source in the mid-1970s. Since 1956 when oil was discovered, Nigeria economy has been mono-based on this oil revenue for government financing on defense, education, health, infrastructural development among others.

Suddenly discovery of oil in Nigeria placed high value on the country in terms of a number of the Organization of Petroleum Exporting Countries (OPEC), a prominent exporter of oil in international market with consistent increase in oil revenue (Agbaeze & Ukoha, 2018). This ushered in an unprecedented and unexpected wealth for Nigeria, such that the government found it imperative to have a drastic and dramatic shift of her socio-economic policies from a holistic approach to benchmarking them against the status of the oil revenue. In order to make the business environment conducive and attractive for investors, the government began investing the new found wealth in socio-economic infrastructure across the country.

According to Uzonwanne (2015), the relative attractiveness of the urban centers made many able-bodied Nigerians to migrate from the rural area, abandoning their farmlands for the cities and hoping to partake in the growing and prosperous (oil-driven) urban economy. This gradually led to the abandonment of the agricultural sector that has previously sustained the economy and also facilitated rural-urban migration which eventually created social problems of congestion, pollution, unemployment and crimes among others.

Despite these indications, the presence of

the “black gold” as crude oil is metaphorically called provided approximately ninety percent (90%) of foreign exchange earnings and about eighty percent (80%) of Federal revenue and contributes to the growth rate (Gross Domestic Product) of the country (Bamisaye & Obiyan, 2006). The Nigeria currency (Naira) then strengthened as foreign exchange inflows outweighed outflows, and foreign reserves were built up with its attendant consequence of the Naira stronger than the US Dollar. This encouraged import-oriented consumption habit that later turned Nigeria into a perennial net importer of consumables such as electronics, cars, processed foods, and clothing; this in turn made the economy vulnerable to volatility in oil prices. It was however noted that none of the economic policies put in place (such as the **Operation Feed the Nation (OFN) in 1976, the Green Revolution in 1980 to revive and restore the economy to its original sufficient resource based economy sufficed** (The Washington Times, 1999).

suddenly, there was a drop in oil prices at the international market which led shrinkage in government revenue, a collapse of the external reserve, fiscal deficits mounted and external borrowing ensued, and as such; satisfying the demand of the populace became a nightmare (Iwuchukwu & Ibokwe, 2012). With this current state, the country had to resort to external borrowing/debt financing in order to sustain the various economic policies and developmental projects. The first jumbo loan of over \$1billion was taken from the International Capital Market in 1979 and another one in 1986 but these loans and/or financial assistance were tied with stringent conditionality of some forms of adjustment in the internal structure of the country's economy. Worse still, borrowed funds were not judiciously utilized for the intended purpose while the interests

accruable on them out-weighed the associated economic benefits (KPMG, 2018).

The situation became critical when in 1986 the creditors refused to open new credit lines for imports to Nigeria. Negotiation between Nigeria and her creditor led to debt relief and restructuring arrangement with the Paris Club in 1986, 1989, 1991, and 2000 that ushered in the Structural Adjustment Programme (SAP) with the objective of reducing unproductive investments in the public sector; achieve viable balance of payment; reduce dependence on oil and on imports by restructuring and diversifying the productive base of the economy among others (Muttaka, 2015).

On the return of the democratic dispensation, the government in March 2004, embarked on an economic reform known as National Economic Empowerment and Development Strategy (NEEDS), at the federal level; State Economic Empowerment and Development Strategy (SEEDS), for states and Local Economic Empowerment and Development Strategy (LEEDS) for local governments respectively, with a view to address the structural and institutional weaknesses of the Nigerian economy (Adogamhe, 2007). Under this reform, Nigeria was able to pay its debts arrears owed to some International Finance Institutions (IFIs) particularly the Paris and London Clubs while the debts owed to London club commercial creditors were also restructured and paid off (Ngozi & Osafo-Kwaako, 2007; IMF Report 2007).

Barely few months when disruption of oil exploration and subsequent loss of revenue caused by activities of the Niger delta militants suspended, the economy in 2009 became confronted with insurgency (Boko Haram) in the north-eastern part of the country. Since 2010, the

government expenditure (acquisition of firearms, deployment of troops and construction and maintenance of refugee camps etc) has increased immensely as the fight against insurgency intensifies. The end result is such that the sole dependence on oil revenue has made government financing chaotic, extremely difficult and almost, if not impossible. Evidence abounds as about 18 states were unable to sustain their economies in terms of employees salary payment while capital expenditure/projects have been grounded to a halt, an evidence of infrastructural economic stagnation (Agbaeze & Ukoha, 2018).

Economic activities have been paralysed as the debt profile of state governments kept increasing, contractors were owed, and local government staffs were not paid salaries for up to 7 months. The resultant effect was that goods (agricultural produce inclusive) and services were sold on credit and at lower prices. Oil revenue has lowered almost all sectors and spheres of life and as such one may not be misled to ask if Nigeria economy can be sustained with the dwindling oil revenue (Uzonwanne, 2015).

Economic downtrend led to the new Nigerian narrative of austerity as oil prices fell. In 1980s, the economy was further confronted with corruption, capital flight and mounting foreign debt; which put a large number of masses into hardship, (Olumide, Ayodele, Frances, Obafemi & Ebong, 2013). Nigeria was left with no option as these necessitated the need to diversify the economy back into agriculture which has hitherto sustained the economy before the discovery of oil, (Favour, 2014). Several structural reforms such as Operation Feed the Nation (OFN), The Green Revolution (GR), IMF's Structural Adjustment Programme (SAP) and CBN intervention funds to revive agriculture where embarked upon to address the distortions caused by oil dependence.

The democratic government that came to power in 1999 noticed with concern the increased utilization of shale gas and other alternative sources of energy such as hydroelectric, biomass, geothermal wind, solar etc. by the United States and other advanced oil importing nations of the world and therefore saw the need for macroeconomic and fiscal reforms that focused on prioritized economic diversification if the economy is to be continuously sustained. The reforms were directed towards industrialization; adding more value to agricultural products; develop the solid minerals potentials and other sectors of our economy before the time comes when crude oil may no longer be dominant as a global source of energy (Lawal, Williams & Ojo, 2015).

This diversification programme could not be sustained due to policy inconsistencies, politicking and corruption in all sectors. Unfortunately, the oil sector on which the economy relies was then bedeviled with pipeline vandalism, as militancy in the Niger-delta region increased immensely. At the height of the Niger-delta crisis, oil production sometime dropped to around 700,000 barrels per day as against over 2million barrels per day which led to a decrease in government revenue (Ibrahim, Ayodele, Hakeem & Yinka, 2014). The incessant unrest in the Niger-delta region led to the establishment of the Niger Delta Development Commission (NDDC) in 1999, the ministry of Niger Delta affairs in 2008 and Amnesty Programme in 2009 all with a view to contribute to security stabilisation in the Niger Delta through the Disarmament (Demobilisation and Reintegration) in order to end oil exploration disruption and also pave way for government developmental projects in the region.

Despite the huge outflow of resources, these schemes seemed unsuccessful due to poor

implementation and political influences as top militants are been patronized by politicians. Unfortunately, it raised the number of jobless youths in the Niger Delta region as the militants increased from 6,166 to 30,000 in number with some of them awarded contracts running in billions while some get annual salaries over ₦1billion (Agbaeze & Ukoha, 2018).

The second half of 2014, saw the most dramatic downslide in oil price/revenue ever (dropped from \$115.84 to \$96.29 per barrel) and is currently \$54.96 per barrel in September 2015. Because the United State of America (USA) the major buyer of Nigerian oil stopped importing the country's oil and other factors including repeated cut in oil prices by the Saudis and the Kuwaitis as well as increase in the use of alternative sources of energy such as hydroelectric, biomass, geothermal wind and solar by developed economies (Obayemi, 2013).

The impact of fall in oil revenue devastating on Nigeria's economy and its inhabitants in the form of reduction in the value of the country's currency as Naira which was 0.5 to \$1 in 1964 now stood at ₦220 to \$1. Other evidences of dwindling oil revenue are manifested in the difficulty and /or inability of government meeting her financing obligations. This is why the government is looking for avenues of blocking leakages in revenue as well as reducing expenditure. The reverse of what existed in the oil boom era (Baghebo & Atima, 2013).

It is then interesting to note or better still ask what will happen if the federal government continues to complain of no funds, states are unable to service their obligations as at when due, employment status degenerates, naira value decreases, per capital income and standard of living continues to degenerate just because the country's economy is oil driven. Will Nigeria

economy be sustained with the current trend in oil business which forms the main stay of the government's income? What happens to government finances and the growing population of Nigerian if the oil wells get dried up today? Will the sustainability of the amnesty programme be feasible?

Research Questions

From the foregoing, the following research questions became pertinent:

- i. Can oil revenue sustain Nigeria's capital expenditure?
- ii. To what extent can oil revenue sustain Nigeria's re-current expenditure?
- iii. In what way will oil revenue sustain Nigeria's external debt servicing?

Conceptual Issues: Oil revenue

Oil revenue refers to the income earned from the sales, taxes and other incidentals associated to crude oil. Oil is the dominant source of government revenue, accounting for about 90 percent of total exports, and this approximates to 80% of total government revenues (Adenikinju & Falobi, 2006). The huge revenues from oil, of course, presented net wealth and thus provided opportunity for increased expenditure and investment which brought about dramatic change in the nature of Nigerian economy, (Baghebo, 2012). In September, 2011, oil revenue generated into the Federation Account amounted to ₦2,642.800 billion, in June, 2016, ₦537.190 billion, in June, ₦1,219.190 billion respectively, (CBN Statistical Bulletin, 2019).

The major sources of oil revenue are export of crude oil and gas, the domestic sales of crude oil and gas, Petroleum profits tax and royalties, licensing fees and other incidentals, (CBN Statistical Bulletin, 2018).

Petroleum Profit Tax: In Nigeria, the prevailing law governing taxation of petroleum products are

the Petroleum Profit Tax Act (PPTA) CAP P13 LFN 2004 and the Petroleum Profits Tax Act, 2007 which emerged after the amendments of the Petroleum Profits Tax Act, Cap.P13 LFN 2004 via the Petroleum Profit (amendment) Bill, 2005. Petroleum operations are carried out both at the Upstream and Downstream. Upstream refers to petroleum product exploration, mining and drilling. Downstream refers to the simple sale and distribution of processed oil products by local corporations. Thus, corporations engaged in upstream exploration are subject to the PPTA, while downstream corporations are subject to Companies Income Tax Act (CITA), *Cap C21, LFN, 2004 (as amended by the CIT (Amendment) Act, 2007)*.

The current rate of petroleum profits tax is 50% for operations in in the deep offshore and inland basin, while the rate is 85% for operations in the onshore and shallow waters, (Obayemi, 2013).

Licensing Fee: According to the Nigeria constitution a license means a permission given by a competent authority to do an act, which without such grant would be illegal or would amount to a trespass or tort. A license therefore confers certain rights on the licensee. Before the democratic era in 1999, Oil licenses were granted to companies by direct negotiation and/or discretionary allocation by the Federal Government of Nigeria (FGN). However, to facilitate more transparency and increased revenue from award of oil licenses, the FGN has competitive tenders as the preferred mode for the award. With tenders, the process becomes more competitive and brought industry players with the most persuasive technical and financial capabilities to the fore. The Department of Petroleum Resources (DPR), under the Ministry of Petroleum Resources, is responsible for organizing oil bid rounds and the last bid round was in 2007, (KPMG, 2018).

Brief History of Crude Oil Discovery in Nigeria

The search for oil began in 1908 by a German company named Nigeria Bitumen Corporation, but there was no success until 1956 when oil was discovered in Oloibiri in Bayelsa state by the Royal Dutch Shell. Nigeria started exporting crude oil in 1958 but in commercial quantity in 1965, after the establishment of the bonny island on the coast of Atlantic and the pipeline to link the terminal. In 1970, as the Biafra war ends, there was a rise in world oil price and Nigeria benefited immensely from this rise, (Budina, Pang, and Wijnbergen, 2008). On this premise, the Nigerian government found it imperative to become a member of the organization of petroleum exporting countries (OPEC) in 1971. The establishment of the only government owned and controlled corporation, Nigerian National Petroleum Corporation (NNPC) in 1977 to regulate and control the activities of the oil sector also became needful. Since the late sixties till date, except in the mid-eighties and in the era of heightened militancy when the economy experienced a down turn, Nigeria has attained a production level of over 2 million barrels of crude oil per day, (Baghebo & Atima, 2013).

Capital and Re-current Expenditures

According to Aigheyisi (2013), capital and re-current expenditures are the two broad classification of government expenditure. Government expenditures refers to expenses incurred by the government for the maintenance of itself and provision of public goods, services and works needed to foster or promote economic growth and improve the welfare of its populace. Government expenditures are generally categorized into expenditures on administration,

defense, internal securities, health, education, foreign affairs, etc. (*Samuel and Kabir, 2012*) and has both capital and recurrent components.

According to Lawal, Williams and Ojo (2015), capital expenditure refers to the amount spent in the acquisition of fixed (productive) assets (whose useful life extends beyond the accounting or fiscal year), as well as expenditure incurred in the upgrade/improvement of existing fixed assets such as lands, buildings, roads, machines and equipment, research etc., including intangible assets. Capital expenditure is usually seen as expenditure creating future benefits, as there could be some lags between when it is incurred and when it takes effect on the economy.

Recurrent expenditure on the other hand refers to expenditure on purchase of goods and services, wages and salaries, operations as well as current grants and subsidies (usually classified as transfer payments). Recurrent expenditure, excluding transfer payments, is also referred to as government final consumption expenditure. The annual budget spells out the direction of the expected expenditure, as it contains details of the proposed expenditure for each year, though the actual expenditures may differ from the budget figures due, for example, to extra-budgetary expenditures or allocations during the course of the fiscal year (*Ogundipe & Oluwatobi, 2011*).

Dwindling Oil Revenue in Nigeria

Over time, several questions have been raised concerning Nigeria's monolithic economy and the possible way forward. The neglect of other sectors of the economy has led to the non-diversification of the economy which culminated in a slow but steady sustainable economy. Government ability to embark on capital projects, sustain her huge recurrent expenditures, alongside servicing her external debts is worrisome with the

recent drop in oil price (Muttaka, 2015). The sustainability of the Nigerian economy is doubtful as the insurgency in the north eastern part of the country intensifies; as the government seek for possible ways on how to sustain the amnesty programme, and as the demand for Nigerian crude oil reduces, the government must seek drastic actions to salvage the situation before the Africa's largest economy and the most populated black race in the world faces doom.

Since the downturn of oil prices in mid-2014, Nigeria has experienced several indicators of increasing economic strife and political instability. With a fiscal breakeven price \$123pb compared to the actual price of \$54.96, the state may face greater civil unrest as the government is forced to implement austerity measures; While ability of the state to repay legacy debts owed to international trading companies is in doubt. One of the country's largest expenses is its fuel subsidy program, which may not be sustained in the long term if oil prices remain low (Agbaeze & Ukoha, 2018). In an attempt to curb government spending, the immediate past administration led by President Jonathan proposed a 50 percent fuel subsidy cut in November 2014. This cut attracted a nationwide protest that forced the administration to reinstate the program at a reduced percentage in 2012.

As oil revenue dropped, Nigeria's currency depreciated against the dollar, suggesting that the country's ability to balance its budget has been compromised. The Central Bank had tried to buffer the currency's fall by selling foreign exchange reserves and increasing interest rates. Low oil prices (falling government revenue) do not bode well for Nigerian economy in the short term (Odularu, 2013). Since limited resources is left to manage her political problems, sustain her ever increasing capital and recurrent

expenditures and sustain its fight against insurgency which is currently ravaging the north east; thus, the need to statistically establish the exact effect oil revenue has on government financing/economic sustainability of the country is imperative.

What Causes the Oil Curse?

In recent decades, many oil-producing states like Iran, Nigeria, Venezuela, Russia, Sudan, and Burma seem to be unusually *immune* to pressures from Western states, and actively defy them, yet they still suffer from the same problems as other, more docile petroleum-rich countries. For much of the twentieth century, international oil companies like Shell, British Petroleum, Exxon, and Mobil had remarkable influence over the fate of oil-producing countries in the developing world, and could justifiably be faulted for many of those countries' problems. But the oil companies' role has sharply diminished since the early 1970s, when most developing countries nationalized their oil industries. If foreign companies were the source of the problem, then nationalization should have been the cure (Agbaeze & Ukoha, 2018).

Most social scientists trace the oil curse to the governments of petroleum-producing states, although they agree on little else. Almost all studies focus on just one of the problems that seem to be linked to petroleum like poor economic performance, the lack of democracy, or the unusual frequency of civil wars (violence). They offer many explanations for these problems, faulting oil's alleged links to corruption, rent seeking, inequality, short-sighted policies, and weakened state institutions.

The Dutch Disease Theory

Theoretical literature on Dutch disease is quite extensive. Early contributions on this theory were carried out in the 80s; which includes the work of Corden (1984), Corden and Neary (1982),

Wijenvergen (1984), Edwards and Aoki (1983) and Habberger (1983). Corden and Neary (1982) outlined the core model of the theory comprising the spending effect and the resource movement effect, to describe the mechanisms through which what would initially seem to be an economic boom for a nation inverts and produces a paradoxically adverse consequence. This clearly reflects the state of the Nigerian economy. The discovery of crude oil though having had favourable contribution to the economy has paradoxically had adverse consequences on the economy also. The theory is also relevant since the proceeds from oil revenue largely accrued directly to the government caused outright neglect of other sectors of the economy, making the economy monolithic and vulnerable to the ever dwindling oil revenue.

Empirical Underpinning

Muttaka (2015) examined the effect of Nigeria's oil dependency on its economic growth and finds that Nigeria has wasted much of its opportunities to break away from underdevelopment despite its massive natural and human resources endowment due to heavy reliance on her huge crude oil resources, which was regrettably mismanaged as the major source of revenue. He identified and discussed on some key drivers of economic diversification such as investment, governance and regional dimensions of economic diversification as well as human and natural resources. He maintained that of all the other drivers, good governance (which is absolutely lacking in Nigeria) remains a prerequisite in building an enabling environment for such diversification.

Uzonwanne (2015) examined the role of economic diversification in Nigeria in the face of dwindling oil revenue. Descriptive statistical method was employed in analyzing the data

collected and the study showed a positive relationship between economic growth and economy diversification and as such the call for the diversification of Nigerian monolithic economy is imperative.

Ibrahim, Ayodele, Hakeem and Yinka (2014) examined the impact of oil price shocks on the Nigerian economy, using data from 1981 to 2012. The Generalized Methods of Moment was used to estimate data collected and it was revealed that oil price shocks insignificantly retards economic growth while oil price itself significantly improves it. The study concluded that policy makers should ensure the judicious utilization of the oil revenue; which will enable the populace perceive oil as a blessing instead of a curse.

Odularu (2013) examined the effect of crude oil on Nigerian economic performance using ordinary least square regression estimation technique. The finding showed that crude oil consumption and export have contributed to the improvement of the Nigerian economy. The study concludes that government should implement policies that would enable the private sector to participate actively in the oil sector.

METHODOLOGY

Model Specification

The study examines the effect of crude oil revenue discovery on Nigerian economy over a period of forty nine (49) years from 1970 to 2018. A multiple regression equation is set up to investigate the hypothesized relationships between the dependent and independent variable in this study. This relationship is modeled as follows:

$$ECO_t = f(\text{OilRev}_t + \text{Non-Oil}_t)$$

Nigeria economy is measured by government's ability to maintain its capital and recurrent expenditures as well as its external debt obligations. Hence, when specified, it becomes:

$$Cap_Exp_t = \beta_0 + \beta_1 OilRev_t + \beta_2 Non_OilRev_t + \mu_t \text{-----i}$$

$$Rec_Exp_t = \alpha_0 + \alpha_1 Oil_Rev_t + \alpha_2 Non_OilRev_t + \mu_t \text{-----ii}$$

$$Ext_Deb_t = \gamma_0 + \gamma_1 OilRev_t + \gamma_2 Non_OilRev_t + \mu_t \text{-----iii}$$

$$Total_Exp_t = \delta_0 + \delta_1 OilRev_t + \delta_2 Non_OilRev_t + \mu_t \text{-----iv}$$

The a prior expectation of the relationship is that $\beta_1, \beta_2, > 0$

Where:

Cap_Exp_t = Federal Government Capital Expenditure (Dependent Variable);

Rec_Exp_t =Federal Government Re-current Expenditure (Dependent Variable);

Ext_Deb_t = Federal Government External Debt Servicing (Dependent Variable);

OilRev_t = Oil Revenue (Independent Variable);

Non_OilRev_t = Non-oil Revenue (Control Variable);

μ = Error Term

Estimation Technique

The study adopts a time series data analysis research method but were estimated using Fully Modified Least Square (FMLS) Regression Technique. The data were analyzed using E-views version 8.

Method of Data Analysis

Because the data are time series, they were first subjected to unit root test to establish whether the distribution is stationary or not. Further tests carried out include co-integration test as well as multi-collinearity and heteroscedasticity tests to measure the existence and/ or extent of relationship if any among the variables.

The study variables were modeled such that in turn on an individual basis OilRev_t and Non_OilRev_t were regressed on Cap_Exp_t, Rec_Exp_t, Ext_Deb_t and Total_Exp in the reverse order. This enables us determine what happens the effect of oil revenue on economic sustainability (meeting government financing of in terms of

capital expenditure, recurrent/revenue expenditure) while debt servicing was added as means of determining the extent to which these oil revenue and non oil revenue can service Nigeria debt. It also shows the regularity of repayment of external debt in the country with a view to measure its credit worthiness.

DATA ANALYSIS AND INTERPRETATION

Before going to statistical evidences, the trend analysis of the data were presented to in charts and were descriptively discussed. This provides background information as to the behavior of the variables over the years considered. It also provides the opportunity to see visually the extent to which OilRev_t and Non_OilRev_t can finance government expenditures (Cap_Exp_t, Rec_Exp_t, Ext_Deb_t and Total_Exp). This pictorial representation were later compared with statistical result for agreement or discord.

Table 1 Augemented Dickey Fuller Unit Root Test Result

Variables	ADF Stat.	Critical Value	Order of Integration	Remarks
@5% Confidence Level				
Oil_Rev _t	-20.2692	-3.51809	I(1)	Stationary
Non- Oil_Rev _t	-7.9308	-3.51809	I(1)	Stationary
Rec_Exp _t	-7.4044	-3.5180	I(1)	Stationary
Cap_Exp _t	-8.2205	-3.5180	I(1)	Stationary
Ext_Deb _t	-3.88744	-3.51809	I(1)	Stationary
Total_Deb _t	-7.8262	-3.51809	I(1)	Stationary

The result in table 1 reveals that Oil Revenue significantly explains government capital expenditure while non-oil revenue does not significantly explain government capital expenditure. As can be seen in table 1, oil revenue is significant at both 5% & 10% significance levels while the non- oil revenue is not statistically significant at any of these conventional significance levels.

Table 2: Result of Breusch-Pagan Test of Heteroscedasticity

Tests	Debt	p-value	Capital	p-value	Recurrent	p-value	LogDebt	p-value
Heteroscedasticity	2.433	0.2961	10.65	0.0049	10.835	0.0044	9.9911	0.00676
Multi-collinearity(VIF)	6.339309							

Source: Author's Computation, (2020).

The study computed Breusch-Pagan test of heteroscedasticity table 2 and observed that only debt as dependent variable is suspected to be heteroscedastic p-value 0.2961 compared to capital expenditure and recurrent expenditure that have p values of 0.0049 and 0.0044 respectively. Therefore, double logarithm was introduced and no traces of heteroscedasticity was observed. Variance inflation factor was also conducted to test for multi-collinearity and it was observed that there is no collinearity in the data since the value of VIF (6.34) is less than 10 table 2.

Having satisfied with the preliminary tests, normal regressions analysis were conducted as follows:

Table 3: Fully Modified Least Square (FMOLS) Regression Result.

Dep. Var.	Indep. Variables	Coeff.	Std. Error	t-Stat.	Prob.	Adj.R ²
Cap_Exp _t	Oil_Rev _t	0.88725	0.028987	3.4058	0.0015	R ² = 0.83
	Non_Oil_Rev _t	0.12068	0.86591	0.8900	0.3786	Adj.R ² =0.816
Rec_Exp _t	Oil_Rev _t	0.803609	0.021369	7.7854	0.0000	R ² = 0.97
	Non_Oil_Rev _t	0.196364	0.063833	12.589	0.0000	Adj.R ² =0.978
Ext_Deb _t	Oil_Rev _t	0.2264	0.2924	0.7746	0.4430	R ² = 0.08
	Non_Oil_Rev _t	-0.0999	0.8735	-0.1144	0.9095	Adj.R ² =0.035
Total_Deb _t	Oil_Rev _t	0.6790	0.240325	0.8773	0.3855	R ² = 0.78
	Non_Oil_Rev _t	0.21085	0.6699	1.10135	0.3169	Adj.R ² =0.772

Source: Author's Computation, (2020).

The result of the Fully Modified Least Square (FMOLS) Regression as presented in table 3 where the extent to which oil revenue and non-oil revenues could finance government expenditures on capital, recurrent and external debt servicing. The table reveals that oil revenue is statistically significant (t=0.0015) in financing capital expenditure in Nigeria while non- oil revenue is insignificant when it comes to capital expenditure

financing. Precisely, oil revenue could finance 88% of capital expenditures while the remaining 12 % is being financed by non-oil revenue. The implication of this is that if the dwindling nature of oil revenue as is being currently experienced continues, there is possibility of economic collapse in terms of government inability to carry out expected capital expenditures. This will amount to reduction in infrastructure provision (good roads, power supply, water and health projects as well as energy sector development) which might lower economic growth.

It can be seen from the same table both OilRev_t and Non_OilRev_t are statistically significant in financing government recurrent expenditure in Nigeria as indicated by R Squared value of 0.97. However, OilRev_t could single handedly finance 80% of the recurrent expenditures while only 20% could be handled by non-oil revenue (Non_OilRev_t)

Furthermore, the relationship between OilRev_t and Non_OilRev_t and external debt financing reveals that only 3% of external debt servicing is explained by the model while neither OilRev_t nor Non_OilRev_t is significant (p=0.4430 and 0.9095 respectively). This is an indication that external debt servicing has not been regular and might spell doom for the country if OilRev_t has not been deployed to its payment when there is boom. What will happen if the current trend in fall in prices continues? Especially when evidence from figure 4 shows that as from 2006 till date, Rec_Exp_t has been insufficient in financing external debt servicing in Nigeria.

Conventionally, in periods of insufficient income, country go borrowing, but lack of debt servicing renders a country non-credit worthy. By inference, therefore, Nigeria may find it difficult obtaining additional loan from external borrowers. This looming debt overhang problem was

experienced between 1986 and 2000. This is a pointer to how dangerous and delicate the country's reliance on oil revenue is. The earlier the better the country begins to look at other sources of revenue apart from oil revenue if unexpected is to be avoided.

In the final analysis, the relationship between OilRev_t and total expenditure was examined while Non_OilRev_t was factored in. The result shows that none of them is significant in financing total expenditure. By inference therefore, Nigeria should not rely entirely on either on OilRev_t and Non_OilRev_t individually at a particular point in time as they are insufficient going by the finance needs of the country.

Conclusion and Recommendations

It can be concluded that crude oil discovery in Nigeria has been a blessing or a curse to Nigerian economy. It has been a blessing since it has contributed positively to revenue generation in Nigeria which has been used for infrastructural development while on the other hand it has been a curse since the discovery of crude oil which has led to the neglect of other sectors of the Nigerian economy. Reliance on oil revenue has led to economic retardation in form of neglect and underdevelopment of other non-oil revenue generating sectors especially the agric sector which was the mainstay of the economy before oil discovery in Nigeria. The Economic empowerment and diversification should be upheld and kept at the front burner as the nation seeks to reposition her monolithic economy.

In line with the conclusions reached, it is recommended that the government should formulate and implement economic policies that will enable swift diversification of the economy from oil revenue dependence to a country with multiple revenue sources. Specifically, agricultural sector (which has previously

sustained the economy) should be developed since the country has what it takes in terms of fertile land and, favourable climate and manpower.

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