

Impact of Non-Oil Revenue on Economic Growth of Nigeria (1994 – 2017): An Empirical Analysis

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Abstract: - This study investigated impact of non-oil revenue on economic growth of Nigeria for the period 1994 – 2017 studied. Data were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin (2017). Real gross domestic product (RGDP) proxy for economic growth was adopted as the dependent variable while agricultural revenue (AR), manufacturing revenue (MNR), mining revenue (MR) and value-added tax revenue (VATR) were adopted as the independent variables. The Augmented Dickey-Fuller (ADF) unit root test was used to test the stationarity of the variables. The results revealed a mixed order of integration, hence, the Auto-Regressive Distributed Lag (ARDL) bounds test was used to test the long-run relationship (co-integration) among the variables in the model and that there was a long-term relationship among the variables. The ARDL results showed that agricultural revenue and mining revenue had a negative and insignificant effect on economic growth of Nigeria in both the short run and long run. Manufacturing revenue had a positive and insignificant effect on economic growth in the short-run and a positive and significant effect on economic growth of Nigeria in the long run. However, VAT revenue had a positive and very significant effect on economic growth of Nigeria both at short run and long run. The study thus recommended amongst others that government should sustain and improve on its policies on the agricultural sector in order to boost agricultural production considering its positive posture on domestic growth while both the manufacturing sector and mining sector should be reinvigorated for increased production in a bid to make a transformed impact on economic growth in the future. Further, the study suggested that government should widen the VAT base by incorporating more items into the VAT net than increasing the VAT rate as it is presenting try to do in 2020 national budget appropriation.

Keywords: Economic Growth; Agricultural Revenue; Manufacturing Revenue; Mining Revenue; VAT.

I. INTRODUCTION

1.1 Background to the Study

Nigeria, being the most populous African nation today like every other nation requires finance or revenue to be able to cater for the needs of its administration and citizens. Public revenue according to Nwaeze (2016), is a term used to describe all incomes expected by the government within the budget period, usually one year. Generally, public revenue

consists of recurrent and capital revenue. Recurrent revenue is money received regularly every year by way of taxes, fees, fines, licenses, etc while capital revenue, on the other hand, consists of all bulk loans and grants received by the government from within the country or from abroad. Nigeria's revenue profile consists of oil and non-oil sectors with the former contributing over 70% of the total revenue to the federation (Jones, Ihendinihu & Nwaiwu, 2015). In the 1960s, agriculture was the mainstay of the Nigerian economy and the greatest foreign exchange earner. However this vintage position occupied by agriculture was overtaken by the oil sector by the mid 1970s.

In addition, the oil and gas sector in Nigeria has also been adjudged to have provided 95 percent of foreign exchange earnings and about 65 percent of government budgetary revenues (Ude & Agodi, 2014). Despite the undeniable benefits of the oil and gas sector to the Nigerian economy, there has been persistent call for the diversification of the nation's economy away from crude oil. The persistent call for the diversification of the nation's economic base has been hinged on the belief that the oil and gas sector in Nigeria has become a national curse rather than a blessing as earlier envisaged due to the fact that it led to the neglect of the other productive sectors of the economy, such as agriculture, mining, etc.

Proponents of diversification of the economic base of Nigeria away from crude oil argue that it would enable Nigeria develop expertise in the production of other goods and services thereby increasing her comparative advantage in other sectors. Given her rich endowment with other natural resources, they argued that continuous national emphasis on the production of crude oil, in particular and the oil sector, in general would lead to a 'crowding-out' of other sectors. Thus, the proponents of diversification contended that if Nigeria did not diversify her economy, she could be in for an economic suicide because any shock in the prices of crude oil in the international market (as often witnessed) and any drop in output (due to activities of militia groups in the Niger Delta and North East regions) could heavily retard government

revenue generation and economic growth in Nigeria. It is with the above mindset that supporters of diversification of revenue sources in Nigeria had advocated for the enthronement of the non-oil sector in Nigeria. The argument is that with the development of the non-oil sector, the over-dependence of the Nigerian economy on the oil and gas sector would be reduced and importantly the susceptibility of the Nigerian economy to internal and external economic shocks arising from reduction in output and fluctuations in the prices of crude oil in the international market would be less felt.

The inability of the Nigerian government to meet up with its responsibilities to its citizens in the area of provision of welfare services, security, employment, basic infrastructures etc. due to dwindling revenues motivated this study towards investigating the impact of non-oil revenue - agricultural revenue, manufacturing revenue, value added tax (VAT) and mining revenue on the Nigerian economy for the period 1994 – 2017. Thus, the quest to determine the extent to which non-oil sector revenue influences Nigerian economy necessitated this study.

1.2 Statement of the Problem

The oil and gas sector in Nigeria has been bedeviled by the twin problems of militancy in the Niger Delta region of Nigeria and continuous changes in the prices of crude oil in the international market. The activities of militants in the oil-rich Niger Delta region have over the years led to worrisome reduction in oil production because the activities of these militants have been hindering exploration activities (Igwe, Edeh & Ukpere, 2015). A decline in oil production expectedly leads to a decline in oil revenue. Even more disturbing is the consistent fall in the prices of oil in the international market because this is very much external to the control of Nigerian government and has over the years negatively affected projected government revenue. These challenges have triggered the call for the diversification of the Nigerian economy away from the oil sector. The non-oil sector had been tipped to be panacea to the challenges associated with the oil sector and thus the main driver of the diversification agenda. But the problem is: Which of the non-oil sectors would significantly contribute to the economic growth of Nigeria?

Despite the increasing revenue generation during the oil boom of the 1970s, the Nigerian economy is still suffering from economic underdevelopment, with her citizens passing through very difficult times. The false illusion of riches which oil revenue gave the country in the seventies led to the total neglect of the non-oil sector – agriculture, manufacturing and others. This situation also contributed to the debt problem in which Nigeria has found itself today, issues of loss of jobs, non and irregular payment of salaries and emoluments of civil and public servants in Nigeria, decayed infrastructures such as roads, housing, etc., poor power supply, insecurity and youth restiveness and general deteriorating economic activities in the country (Igwe, Edeh & Ukpere, 2015).

Previous studies had been carried out on the relationship between non-oil revenue and economic growth in Nigeria. For instance, Olurankise & Fatukasi (2012); Ude & Agodi (2014); Ifeacho, Omoniyi & Olufemi (2014); Igwe, Ede & Ukpere (2015); Okezie & Azubuike (2016); Kromiti, Kanadi & Lado (2017); and Kawai (2017). While some of these previous studies found a positive relationship between non-oil sector revenue and economic growth (Salami, Amusa & Ojoye, 2018; Kawai, 2017; Okezie & Azubike, 2016), others found a negative relationship between non-oil sector revenue and economic growth (Noula, Sama & Gwah, 2013; Safdari & zaroki, 2012). In terms of the degree of influence, some of the studies (Salami, Amusa & Ojoye, 2018; Kromiti, Kanadi, Ndingra & Lado, 2017; Kawai, 2017) found non-oil sector revenue to have exerted significant influence on economic growth while others found that non-oil sector revenue had no significant influence on economic growth (Akwe, 2014; Noula, Sama & Gwah, 2013). Equally, in some previous studies, non-oil sector components were limited to mainly the agricultural and manufacturing sectors and investigations were carried out on whether revenues from these sectors influenced economic growth (Ude & Agodi, 2014; Kawai, 2017; Riti, Gubak & Madina, 2016). The effect of non-oil revenues generated from other non-oil sector such as mining sector has not been considered in the previous studies to the best of my knowledge. Thus, it was empirically impossible to assess to what extent revenue from the mining sector had influenced economic growth in the Nigerian nation. To fill this gap, this study incorporated the mining sector as well as looked at the influence of value added tax revenue, both of which have been key to the diversification drive of the Nigerian government, on economic growth of Nigeria.

1.3 Objectives of the Study

The general objective of this study is to determine impact of non-oil revenue on economic growth of Nigeria for the period 1994 – 2017. The specific objectives of the study are as follows:

1. To investigate nature and impact of agricultural sector revenue on the economy of Nigeria.
2. To assess impact and magnitude of manufacturing sector revenue on economic growth of Nigeria.
3. To determine to what degree mining sector revenue has impacted on the economy of Nigeria.
4. To determine to what extent value added tax (VAT) revenue has impacted on economic growth of Nigeria.

1.4 Research Questions

The following research questions are raised to guide this study:

1. To what extent does agricultural sector revenue impact on the economy of Nigeria?
2. To what magnitude does manufacturing sector revenue impact on economic growth of Nigeria?

3. To what degree has mining sector revenue impacted on the economy of Nigeria?
4. How far does value added tax (VAT) revenue impact on economic growth of Nigeria.

1.5 Hypotheses

The following research hypotheses have been advanced in this study in line with the stated objectives of the study:

- H₀₁: There is no positive and significant impact of agricultural sector revenue on the economy of Nigeria.
- H₀₂: Manufacturing sector revenue does not have a positive and significant impact on economic growth of Nigeria.
- H₀₃: Mining sector revenue does not have a positive and significant influence on the economy of Nigeria.
- H₀₄: There is no positive and significant impact of value added (VAT) tax revenue on economic growth of Nigeria.

II. REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework Review of Literature and Definitions

In the conceptual review, the researcher assessed the opinions of other scholars and definitions offered by them on the key terms used in the study. The essence of this is to broaden the perspective of the researcher on what these key terms stand for.

2.1.1 Government Revenue and Its Sources

Revenue is seen as all amounts of money received by a government from internal and external sources. Financial resources of government constitute the bulk of its revenue and this is related to monies mobilized or generated in the economy (Obiechina, 2010). The government collects revenue by way of direct and indirect taxes. Direct taxes include: corporate tax, personal income tax, capital gain tax and wealth tax. Indirect taxes include: custom duty, cultural excise duty, Value Added Tax (VAT) and service tax.

However, according to Ihendinihu, Ebieri & Amaps (2014), two sources of federal government revenue existed namely; oil and non-oil revenue. Oil revenue has been the most important sources of revenue to the federal account. Oil revenues are revenues from crude oil and gas exports, receipts from petroleum profit tax and royalties. The non-oil revenues are revenues that are not derived from oil. They include Company Income Tax (CIT), Custom and Excise Duties (CED), Value Added Tax (VAT), Education Tax, Personal Income Tax (PIT) among others. Valued Added Tax (VAT) is a consumption tax that is being charged on goods and services consumed by any person whether government agencies, business organizations or individuals. VAT is an

accurate measurement of the growth of an economy since purchasing power increases with economic growth. Others include borrowing which involves external debt and internal debt.

According to Nwaeze (2016), the major sources of Federal Government revenue in Nigeria include:

1. Oil Revenue

The revenue from the oil sector majorly is Petroleum Profit Tax. Nigeria is a major oil producer. Many indigenous and foreign firms engage in oil business in the country. Profits made by these firms are subjected to tax which constitutes a major source of revenue to the government of Nigeria since the oil boom days of 1970s and early 1980s.

2. Non-oil Revenue

Non-oil revenue sources include:

- (a) Income tax, made up of
 - I. Personal Income tax
 - II. Company Income tax
 - III. Capital gains tax
 - IV. Capital transfer tax, etc.
- (b) Custom and Excise Duties
 - I. Import duties
 - II. Export duties
 - III. Excise duties etc.
- (c) Mining Rents and Royalties

Apart from petroleum, other solid minerals mined in the country are subject to payment of both rents and royalties, e.g. coal and tin as well as iron ore.

3. Others:

These include:

a. Government Borrowing

Government also raises finance by borrowing money through the central bank. The loans might be obtained internally from financial institutions and individuals, or externally from international financial institutions like the World Bank and the International Monetary Fund (IMF) and Foreign Governments, etc.

b. Grants and Aids

These are free gifts made by institutions or external governments and bodies to a government to enable it meet its obligations. They are important sources of revenue to the Federal and State Governments of Nigeria.

c. Fees and Licenses

There are a number of goods and services marketed by the government, for which users have to pay. Examples are vehicle licenses, liquor licenses, market fees, school fees, court fees, etc.

d. *Interest and Profits*

Government lends money and owns shares in businesses. Returns from these, in the form of interest and profits also constitute part of government revenue.

e. *Service Charges for Governmental goods and services (User Charges)*

Some of the goods and services provided by the government have the character of private goods and therefore, it is possible to charge for them specifically. This is referred to as user pricing, which means charging users for the public services provided to them. For instance, toll-gate fees are called user charges i.e. levies, the incidence and payment of which are related to the use of a particular public service.

In user charge/pricing, the charge is tied to the service e.g. stamp and postal services. Taxes are compulsory and are not attached to any particular service unlike user charges, which are not compulsory. Once you avoid usage of such services, you avoid its payment e.g. stamp and postal services.

2.1.2 *Economic Growth*

According to Anyanwu & Onikhenan (1995), economic growth simply refers to the increase, over time of a country or an economic capacity to produce those goods and services needed to improve the well being of the citizens in increasing number and diversity. The International Monetary Fund (2013) and CBN (2010) agreed that economic growth was the increase in the amount of goods and services produced in an economy over time. Economic growth refers to an increase in aggregate productivity. Often, but not necessarily the aggregate gains in productivity correlate with increased average marginal productivity. Growth is usually calculated in real terms, that is, inflation-adjusted terms in order to net out effect of inflation on the prices of goods and services produced.

2.1.3 *Value Added Tax in Nigeria*

This is a tax that was introduced by the Federal government of Nigeria in 1994 by Decree 102 of 1993 to replace the old Sales tax. It is a consumption tax imposed on all VATable goods and services at the rate of 5% (Soyode & Kajola, 2006). They went further to capture the major attributes of Value Added Tax (VAT) as:

- a. A consumption tax
- b. A multi-stage tax and
- c. A tax with incidence on the final consumer.

As a consumption tax, Ochei (2010), opined that VAT was an indirect tax system where the consumer actually bore the cost of the tax. Bird (2005), on his part, confirmed the multi-stage nature of VAT when he asserted that, Value Added Tax (VAT) was a multi-stage tax imposed on the value added to goods and services as they go through various stages of production and distribution as well as services rendered. Obviously from the shares of opinions highlighted above, it is

clear that the final incidence or burden of VAT is borne by the final consumer of goods and services in Nigeria.

Okezie (2003) and Offiong (2004), were all in agreement as they cited the enabling law (Value Added Tax Act, 1993) which listed the following as Goods and Services exempted from VAT in Nigeria.

1. Medical and Pharmaceutical products
2. Basic food items
3. Books and educational materials
4. Baby products
5. Commercial vehicles and their spare parts
6. Agricultural equipment and products and Veterinary medicine
7. Fertilizers, farming, machinery and farming transportation equipment
8. All exports of goods and services
9. Plant and machinery used in export processing zone
10. Plant, machinery and equipment purchased for utilization of gas in the downstream petroleum operations
11. Tractors, ploughs, agricultural equipment and implements purchased for agricultural purpose
12. Services of community banks and primary mortgage institutions
13. Plays and performances conducted by educational institutions as part of learning
14. Services related to education and medical services

On his part Oyebanji (2010), helped us to arrange those taxable goods and services as specified in VAT decree of 1993.

(a) *Goods*

1. All goods manufactured and assembled in Nigeria
2. All goods imported into Nigeria
3. All second hand goods
4. All household furniture and equipment
5. Petroleum and petroleum products
6. Jewel and jewelry
7. Textile, cloth, carpet and rug
8. Beer, wine, liquor, soft drinks, treated water
9. All vehicles and their spare parts exchanging commercial vehicles and their spare parts
10. Perfumes and cosmetics (including toiletries)
11. Soap and detergents
12. Mining and minerals
13. Office furniture and equipment
14. Electrical materials of description

(b) *Service*

1. All services rendered by financial institutions to consumers
2. Accounting services
3. Provision of reports, advice, information or similar technical service in the following areas:

- i. Management, financial and taxation
- ii. Recruitment, staff and training
- iii. Marketing research

From the above items listed it becomes obvious that Value Added Tax covers almost every aspect of Nigerian economic and human life. It is a tax that most consumers pay without knowing, yet it helps the government to generate substantial revenue for economic growth. Aruwa (2008) added his voice to the broad nature of VAT in Nigeria when he stated that the Nigerian VAT which is a replacement for the sales tax of 1986 has a very wide base with relative few exemptions and only exports are zero-rated.

2.2 Theoretical Framework Review of Literature

The theoretical framework of this study is hinged on the theories of taxation.

2.2.1 Cost of Service Theory

According to the cost of service theory, the cost incurred by government in providing certain services to the people must collectively be met by the people who are the ultimate receivers of the service (Jhingan, 2009).

The theory believes that tax is similar to price. So if a person does not utilize the services, he should not be charged any tax. Some criticisms have been leveled against this theory. According to Jhingan (2009), the cost of the service theory imposed some restrictions on government services. The objective of government is to provide welfare to the poor. If the theory is applied, the state will not undertake welfare activities like provision of medical care, education, social amenities etc. It would also be difficult to compute the cost per head of the various services provided by the state organ. The theory has violated the correct definition of tax, hence the theory as propounded was misleading.

2.2.2 Benefit Received Theory

The gap inherent in the cost of service theory led to the modernization of the theory. This gave birth to the benefit received theory of taxation. This theory stipulates that citizens should be asked to pay taxes in proportion to the benefits they received from the services rendered by the government. The theory assumes that there is exchange relationship between tax payer and government. But the inability to measure the benefits received by an individual from the services rendered by the government has rendered this theory inapplicable (Ahuja, 2012).

2.2.3 Revenue Productivity Theory

This study is hinged on Revenue Productivity Theory. Anyanwu & Oaikhenan (1995), stated that economic growth refers to the increase, over time, of a country's or an economic capacity to produce those goods and services needed to improve the well-being of the citizens in increasing numbers and diversity. This is the reason why government of many nations, Nigeria inclusive has placed more emphasis on

ways of boosting their revenue sources given the high expectations from their citizens. Ndekwe (1991), noted that more than ever before, there is now a great demand for the optimization of revenue from various tax sources in Nigeria. Scholars like David Ricardo and J. S. Mills emphasized this distinction by putting revenue first, in their division of public finance into three, namely; 'revenue, expenditure and public debt'. Public Finance experts based their arguments principally on Revenue Productivity as important criteria for judging a good tax system (Okezie, 2003). This theory lays emphasis on having a large tax base to cover minimum cost through efficient tax administration. The taxes introduced should be appropriate and sufficient to finance the expenditure needs of the government over time. Well-designed tax systems would encourage competitive growth across various sectors of the economy with high prospect of tax revenue. An effective tax system and efficient use of public debt would encourage an efficient economy and provide an environment conducive for business, thereby reducing costs. When taxes and other revenue sources fund the essential 'public goods' like public security and the 'rule of law' on which oil and non-oil depends, it also promotes revenue productivity.

2.3 Review of Empirical Literature

Several empirical studies have been carried out on the relationship between non-oil revenue and economic growth in Nigeria. Some of these have been x-rayed below:

Salami, Amusa & Ojoye (2018), studied impact of non-oil revenue on the economic growth of Nigeria. The study covered the period 1981-2016 and gross domestic product was adopted as the proxy for economic growth and it was also used as the dependent variable. On the other hand, the study adopted non-oil revenue as the independent variable. The study made use of the Ordinary Least Squares (OLS) regression analysis to analyze the data collected from the Central Bank of Nigeria (CBN) Statistical Bulletin. Findings from the study revealed that non-oil revenue exerted a positive and significant impact on economic growth in Nigeria. The study therefore concluded that non-oil revenue exerted a significant impact on the economic growth of Nigeria.

Likita, Idisi & Nakah (2018), carried out an investigation on impact of non-oil revenue on economic growth in Nigeria. The study covered the period 1981 to 2016 and agricultural revenue, manufacturing revenue, solid minerals contributions, services revenue contribution, company income tax, and custom and excise duties tax were adopted as proxies for non-oil revenue and they were used as the independent variables. On the other hand, the study made use of gross domestic product (GDP) as proxy for economic growth and it served as the dependent variable. Unit root test was carried out to determine the stationarity of the variables while the cointegration test was carried out to ascertain the existence of long run equilibrium relationship among the variables. Thereafter, the Ordinary Least Squares (OLS) and error correction mechanism (ECM) techniques were used to analyze the data collected. Findings from the study showed

that agricultural revenue, manufacturing revenue and services revenue exerted positive and significant impact on economic growth. On the other hand, the study showed that company income tax revenue exerted a negative and significant impact on economic growth in Nigeria. The study further revealed that solid minerals revenue exerted a negative and insignificant relationship with economic growth while custom and excise duties tax exerted a positive but insignificant impact on economic growth in Nigeria using the Ordinary Least Squares (OLS) estimation method. Using the error correction mechanism (ECM) model, the study revealed that agricultural revenue and services revenue exerted a positive and significant impact on economic growth of Nigeria whereas manufacturing revenue, solid minerals revenue and customs and excise duties tax exerted a positive but insignificant impact on economic growth of Nigeria. The study further revealed that company income tax revenue exerted a negative and significant impact on economic growth of Nigeria.

Kromiti, Kanadi, Ndingra & Lado (2017), carried out an investigation into the contribution of non-oil exports to economic growth in Nigeria. The study covered the period 1986 to 2015 and gross domestic product was used as a proxy for economic growth as well as the dependent variable. On the other hand, the study made use of non-oil export and exchange rate as the independent variables. Unit root test was carried out to determine the stationarity of the variables and the Autoregressive Distributed Lag (ARDL) methodology was used to determine impact of the independent variables on the dependent variable. Findings of the study revealed that non-oil revenue exerted a positive and significant impact on economic growth of Nigeria while exchange rate exerted a negative and weak significant impact on economic growth of Nigeria. The study concluded that non-oil exports made significant contribution to the Nigerian economic growth.

Kawai (2017), studied impact of non-oil exports on Nigerian economic growth. The study covered the 1980 to 2016 and real gross domestic product was adopted as proxy for economic growth and it was used as the dependent variable. On the other hand, non-oil export and exchange rate were used as the independent variables. Unit root test was carried out to determine the stationarity of the variables used in the study and Engel-Granger cointegration test was carried out to ascertain the existence of long run equilibrium relationship among the variables. Findings of the study showed that non-oil export exerted a positive and significant impact on economic growth of Nigeria whereas exchange rate exerted a negative and significant impact on economic growth of Nigeria. The study argued that non-oil exports exerted a significant impact on economic growth of Nigeria

Okezie & Azubuike (2016), studied the contributions of non-oil revenue to economic growth in Nigeria. The study covered the period 1980 to 2014 and gross domestic product and total revenue were used as dependent variables. On the other hand, the study used oil revenue and non-oil revenue as

independent variables. The Ordinary Least Squares (OLS) multiple regression method was used to analyze the data collected for the study. Findings from the study showed that oil revenue contributed positively to economic growth in Nigeria. Conversely, the study showed that non-oil revenue contributed positively and weakly to economic growth in Nigeria. In addition, the study revealed that oil revenue and non-oil revenue made positive and significant contribution to total government revenue in Nigeria. Thus, the study concluded that non-oil revenue had made significant contribution to economic growth in Nigeria.

Riti, Gubak & Madina (2016), examined the exploration of the growth of non-oil sectors in Nigeria and how such growth had impacted on economic performance and diversification exercise of the Nigerian government. In the study, gross domestic product was used as a measure for economic performance and it served as the dependent variable. On the other hand, agriculture sector, manufacturing sector and telecommunication sector were used as proxies for non-oil sector and they served as the independent variables. The study made use of the autoregressive distributed lag model (ARDL) and vector error correction mechanism (VECM) methods as tools for analyzing the data collected. Findings of the study revealed that agriculture sector and telecommunication sector exerted positive and significant impact on Nigerian economic performance. The study also showed that manufacturing sector exerted a negative and significant impact on Nigerian economic performance.

Ojong, Ogar & Arikpo (2016) carried out an assessment of effect of tax revenue on the Nigerian economy. The study covered the period 1993 to 2012 and the gross domestic product was used as a measure for Nigerian economy and it served as the dependent variable. On the other hand, petroleum profit tax, company income tax and non-oil revenue were used as measures of tax revenue and they served as independent variables. The study made use of the Ordinary Least Squares (OLS) method to analyze the data collected. Findings from the study revealed that petroleum profit tax exerted a negative and insignificant effect on the Nigerian economy while company income tax exerted a positive and insignificant effect on the Nigerian economy. The study further showed that non-oil revenue exerted a positive and significant effect on Nigerian economy.

Idowu (2016), as cited in Kawai (2017), carried out an analysis of effects of oil and non-oil export on economic growth in Nigeria. The study covered the period 1981 to 2015 and the gross domestic product was used as proxy for economic growth and gross domestic product served as the dependent variable. The study made use of oil revenue and non-oil revenue as proxies for oil and non-oil exports respectively and they were used as the independent variables. The study carried out the unit root test to test for stationarity of the variables and the cointegration test was also carried out to determine the existence of long run equilibrium relationship among the variables. Thereafter, the Granger-causality test

was carried out to ascertain the flow of causation among the variables and cointegrating regression technique was used to determine effect of the independent variables on the dependent variable. Findings from the study revealed that oil export exerted a negative and significant effect on economic growth whereas non-oil export revenue exerted a positive and significant effect on economic growth in Nigeria. The granger-causality test showed that there existed a bi-directional causality relationship between non-oil revenue and gross domestic product. The implication of the granger-causality test was that non-oil revenue determined the level of economic growth in Nigeria and economic growth in Nigeria also determined the non-oil revenue.

Igwe, Edeh & Ukpere (2015) examined impact of non-oil sector on economic growth in Nigeria for the period 1981 to 2012. The study adopted gross domestic product as a proxy for economic growth and it served as the dependent variable while net export, capital stock and labour were adopted as independent variables. The study employed Johansen cointegration test, vector error correction mechanism (VECM) and Granger-causality test as analytical tools. Findings from the study showed that non-oil export had a positive and significant impact on economic growth in Nigeria in both the short run and long run. The Granger-causality test revealed that there was no causality between non-oil export and economic growth in Nigeria. The study further showed that both capital stock and labour had positive impact on economic growth of Nigeria.

Mohsen (2015), studied how non-oil trade and gross domestic product are related especially in petroleum exporting countries. The study covered the period 1975 to 2010 and gross domestic product was used as a measure for economic growth and thus served as the dependent variable. On the other hand, oil exports revenue and non-oil export revenue were used as independent variables. Granger-causality test was carried out to determine the flow of causation among the variables; cointegration test was carried out to determine existence of long run equilibrium relationship among the variables and thereafter the panel data analysis was carried out to ascertain impact of the independent variables on the dependent variable using the data collected. Findings from the study revealed that both oil export revenue and non-oil sector revenue had positive and significant relationship with gross domestic product. From the Granger-causality test, it was revealed that a bidirectional relationship existed between non-oil export revenue and gross domestic product. This indicated that non-oil export revenue drove gross domestic product while gross domestic product also drove non-oil export revenue in petroleum exporting countries. On the other hand, the study revealed that there was unidirectional relationship between oil export revenue and gross domestic product. This indicated that oil export revenue determined the growth of gross domestic product and not otherwise.

Onwuchekwa & Aruwa (2014) investigated impact of tax on the economic growth in Nigeria and used ex-post

facto research method to articulate their position. They employed Ordinary Least Square technique to analyze their data. They discovered that VAT contributed significantly to total revenue of government and growth of Nigeria, though the increase was not explosive. They were of the opinion in their recommendation that to boost tax revenue, government needed to boost revenue collected from VAT, not by increasing VAT rate of 5%, but by closing every VAT revenue leakage, sensitizing the management of companies on the need to remit VAT revenue collection and adequate training of staff of Federal Inland Revenue Service (FIRS).

Okoyeuzu (2013), investigated Value-Added Tax Remittance: Observations from developing countries. The challenge of that study was to evaluate the performance of VAT as revenue earner in Nigeria and to access revenue generated from VAT since its inception to know if it has been on the increase or decrease. The study covered a period of 7 years from 2005 – 2011. The researcher utilized a survey research design and the data analysis was sourced from the Federal Inland Revenue Service chart. The study found out that VAT revenue has been on the decrease for the period of the study and recommended that the Nigerian government should make adequate provision for retrieving the proceeds of VAT from companies and other agencies of collection.

In Ude & Agodi (2014), the study investigated the time role of non-oil variables on economic growth in Nigeria. The study thus extended literature in this area by employing co-integration methodology alongside error correction mechanism to investigate impact of non-oil revenue on economic growth of Nigeria. The study employed annual observations from 1980 to 2013. The non-oil revenue variables analyzed are: Agricultural revenue and Manufacturing revenue. Results from the study showed that Agricultural revenue, Manufacturing revenue and Interest rate had significant impact on economic growth of Nigeria. Results also showed existence of long-run equilibrium relationship and short run dynamic adjustment with speed of about 52% to restore equilibrium.

Ifeacho, Omoniyi & Olufemi (2014), studied relationship between non-oil exports and economic development of Nigeria. The study made use of per capita income as a measure for economic development and it stood as the dependent variable. The study made use of inflation rate, exchange rate, non-oil export, trade openness and capital formation as the explanatory variables. The study employed the Ordinary Least Squares (OLS) multiple regression method in order to analyze the data collected in the study. Findings from the study revealed that non-oil export had a positive and significant relationship with economic development in Nigeria. On the other hand, inflation rate, exchange rate and capital formation had positive and insignificant relationship with economic growth in Nigeria. Finally, the study showed that trade openness had a negative and insignificant relationship with economic growth in Nigeria. The study

concluded that non-oil exports had significant relationship with economic development in Nigeria.

Aladejare & Saidi (2014), investigated the factors that determine economic growth in Nigeria. The study covered the period 1970 to 2012. Real gross domestic product was used as a measure of economic growth and it stood as the dependent variable. On the other hand, non-oil export revenue, real exchange rate, consumer price index and real interest rate were used as determining factors and the independent variables. Unit root test was used to test for stationarity of the variables and the cointegration test was used to determine existence of long run equilibrium relationship among the variables. The autoregressive distributed lag (ARDL) bound test was used as the analytical tool for analyzing the data collected. Findings from the study revealed that non-oil export revenue and consumer price index were positive and significant determinants of economic growth in the long run while real exchange rate was a negative and significant determinant of economic growth in the long run. On the other hand, the study revealed that interest rate was a positive and insignificant determinant of economic growth in the long run. But in the short run, the study showed that non-oil export and consumer price index were positive and significant determinants of economic growth whereas exchange rate was a positive and insignificant determinant of economic growth. In addition, the study showed that interest rate was a negative and weak significant determinant of economic growth in the short run.

Akwe (2014), carried out a study on the impact of non-oil tax revenue on economic growth in Nigeria. The study covered the period 1993 to 2012 and non-oil tax revenue was used as the independent variable. On the other hand, gross domestic product was used as a measure for economic growth and it was used as the dependent variable. Unit root test was carried out to ascertain the stationarity of the variables and cointegration test was also carried out to determine existence of long run equilibrium relationship amongst the variables. After that, the error correction mechanism (ECM) method was used to analyze the data collected for the study so as to determine impact of the independent variables on the dependent variable. Findings from the study showed that non-oil tax revenue had a positive and significant impact on economic growth only in the long run. Conversely, the study revealed that non-oil tax revenue had a positive but insignificant impact on economic growth in Nigeria in the short run.

Abogan, Akinola & Baruwa (2014), studied the nexus between non-oil export and economic growth in Nigeria. The study covered the period 1980 to 2011 and real gross domestic product was used as a measure for economic growth and it stood as the dependent variable. On the other hand, the study used non-oil export revenue as a measure for non-oil export and it served as the explanatory variable. Ordinary Least Squares (OLS) regression technique was used to analyze the data collected in the study and findings showed

that non-oil export earnings had a positive and significant relationship with economic growth in Nigeria.

Takumah (2014), examined whether there existed any relationship between tax revenue and economic growth in Ghana. The study covered the period 1986 to 2010 and real gross domestic product was adopted as a measure for economic growth and used as the dependent variable. On the other hand, the study made use of tax revenue, foreign direct investment (FDI), government expenditure and consumer price index as the independent variables. The study carried out unit root test to ascertain the stationarity of the variables and cointegration test so as to determine the existence of long run equilibrium relationship amongst the variables; and Granger-causality test to determine the flow of causation among the variables. Thereafter, the vector error correction mechanism (VECM) method was used to determine impact of the independent variables on the dependent variable. Findings from the study revealed that tax revenue and foreign direct investment had positive and significant relationship with economic growth in the short run. However, the study showed that government expenditure had a positive and insignificant relationship with economic growth in the short run. On the other hand, the study revealed that consumer price index (CPI) had a negative and significant relationship with economic growth in Ghana in the short run. In the long run, evidence suggested that tax revenue, foreign direct investment and government expenditure had positive and significant relationship with economic growth in Ghana while consumer price index had a negative and significant relationship with economic growth in Ghana.

Noula, Sama & Gwah (2013), examined relationship between agricultural export and economic growth in Cameroon. The study covered the period 1975 to 2009 and gross domestic product was used as a proxy for economic growth and also served as the dependent variable. The study used agricultural export as the independent variable. The independent variable (agricultural export) was broken down into coffee export, banana export and cocoa export revenues. The Ordinary Least Squares (OLS) method was used to analyze the data collected in the study. Findings from the study revealed that coffee export revenue and banana export revenue had positive and significant relationship with economic growth in Cameroon. On the other hand, the study showed that cocoa export revenue had a negative and insignificant relationship with economic growth in Cameroon. The study concluded that agricultural export had significant relationship with economic growth in Cameroon.

Ajie, Uzomba & Chukwu (2013), investigated effect of non-oil export on economic growth in Nigeria. The study covered the period 1970 to 2010 and gross domestic product was used as a measure of economic growth and so it served as the dependent variable. The study made use of non-oil export revenue, money supply and consumer price index as the independent variables. To analyze the data collected for the study, the error correction mechanism (ECM) method was

used. Findings from the study revealed that both non-oil export revenue and consumer price index had negative and significant effect on economic growth in Nigeria. On the other hand, the study revealed that money supply had a positive and significant effect on economic growth in the short run. Finally, in the long run, the study showed non-oil export revenue had a positive and significant effect on economic growth in Nigeria.

Safdari & Zaroki (2012), carried out an investigation into the influence of export growth on economic growth in Iran. The study covered the period 1961 to 2006 and the researcher collected data on gross domestic product which served as a proxy for economic growth and the served as the dependent variable. On the other hand, the study made use of export growth as the independent variable. Export growth was broken down into industry and mining sector export growth, services sector export growth and agricultural sector export growth. The Ordinary Least Squares (OLS) method was used to analyze the data collected in the study. Findings from the study revealed that industry and mining sector export growth, services sector export growth and agricultural sector export growth had positive and significant influence on economic growth in Iran with the industry and mining sector having the most significant influence on economic growth in Iran.

Awe & Ajayi (2009), assessed influence of the non-oil sector on the economic growth of the Nigeria. Agricultural sector revenue, solid mineral sector revenue and manufacturing sector revenue served as proxies for non-oil sector and they were adopted as the independent variables while gross domestic product was adopted as the dependent variable. The study was carried out using unit root test to ascertain the stationarity of the variables and cointegration test to determine the existence or otherwise of long run equilibrium relationship among the variables. Thereafter, the study employed the Ordinary Least Squares (OLS) method to determine impact of the independent variables on the dependent variable. Findings from the study revealed that agricultural sector revenue and solid minerals sector revenue had positive and significant influence on economic growth of Nigeria. On the other hand, the study showed that the manufacturing sector revenue did not have significant influence on economic growth of Nigeria.

Okwori & Sule (2010), carried out an examination of the relationship between government revenue sources and Nigerian economic growth. Gross domestic product was adopted as the proxy for economic growth and it was used as the dependent variable. On the other hand, oil revenue, non-oil revenue, total domestic debt and total external debt were used as the independent variables. The study carried out unit root test for determining the stationarity of the variables while cointegration test was carried out to determine existence of long run equilibrium relationship among the variables. The Ordinary Least Squares (OLS) method was used to analyze the data collected. Findings from the study revealed that oil revenue and non-oil revenue had positive and significant

relationship with economic growth. The study also showed that domestic debt had a negative and significant relationship with economic growth in Nigeria. While external debt exhibited a positive and significant relationship with economic growth in Nigeria.

Ogbonna & Appah (2012), investigated impact of tax on economic growth of Nigeria using time series data from 1994 to 2009 (a period of 11 years) utilizing petroleum profit tax; and custom and excise duties as proxy for tax (independent variables) and gross domestic product (GDP) as the dependent variable. The study revealed that there was a positive relationship between the revenue and economic growth of Nigeria. They argued that 54% variation in the dependent variable (GDP) was as a result of change in the revenue and that there existed long run equilibrium relationship between GDP and the independent variables.

Olurankinse & Fatukasi (2012), carried out an investigation into the effect of non-oil sector on the economy of Nigeria. The study made use of non-oil sectoral share of gross domestic product as the dependent variable. On the other hand, the study adopted exchange rate, interest rate and inflation rate as the explanatory variables. The Ordinary Least Squares (OLS) multiple regression method was used as empirical tool for analyzing the data collected. Findings from the study revealed that exchange rate and interest rate had positive and significant effect on non-oil sectoral share of gross domestic product in Nigeria. On the other hand, the study showed that inflation rate had a negative and significant effect on non-oil sectoral share of gross domestic product in Nigeria. The study concluded that non-oil sector had a significant effect on the economy of Nigeria.

Udude & Okulegu (2012), explored the relationship between exports and economic growth in Nigeria. The study covered the period 1990 to 2010. Gross domestic product served as proxy for economic growth and it was used as the dependent variable. On the other hand, exports, imports and exchange rate were used as the explanatory variables. Ordinary Least Squares (OLS) method was used to analyze the data collected in the study. Findings from the study revealed that both imports and exchange rate had positive and significant relationship with economic growth in Nigeria. The study also showed that exports had a negative and significant relationship with economic growth in Nigeria. The study concluded that Nigerian exports had significant influence on economic growth of Nigeria.

III. RESEARCH METHODOLOGY

3.1 Research Design

Research Design is a blue print which guides the researcher in his scientific inquiry, investigation and inquiry (Amaechi & Amara, 2015). In this study *ex-post facto* design was adopted in obtaining, analyzing and interpretation of data required for this study. The *ex-post facto* research design is used to foist a link between the dependent and independent variables, relying on already an existing secondary data. The

beauty of using the *ex-post* facto research design is that the researcher relies on the already existing data devoid of manipulation of the researcher (Osuala, 2010). This research design is appropriate and preferred in a cause-effect relationship where there is already an existing data which could not be manipulated by the researcher at the point of research. In this study, data for all the variables involved already exist in Nigeria.

3.2 Nature and Source of Data

The study made use of secondary data, mostly time series. The data for this study was obtained from the Central Bank of Nigeria (CBN) Statistical Bulletins (2017) and National Bureau of Statistics. Using data over the period 1994 – 2017 and in tune with the model adopted in the study, real gross domestic product proxy for economic growth was regressed on a variety of independent variables – agricultural revenue, manufacturing revenue, value-added tax revenue and mining revenue.

3.3 Method of Data Analysis

The study made use of pre-testing method, involving the Augmented Dickey-Fuller unit root test which tested the stationarity for the variables. The results showed a mixed order of integration, hence, the Auto-Regressive Distributed Lag (ARDL) bounds test was used to test the long-run relationship (co-integration) among the variables in the model.

3.4 Model Specification

Ugochukwu & Azubike (2016), specified a model which captured an evaluation of the contributions of non-oil revenue to economic growth of Nigeria.

$$GDP = f(OILREV, NOILREV) \dots \dots \dots \text{Eqn.(1)}$$

$$GDP = \beta_0 + \beta_1 OILREV + \beta_2 NOILREV + \mu \dots \dots \dots \text{Eqn.(2)}$$

Where:

- GDP = Gross domestic product
- OILREV = Oil revenue
- NOILREV = Non-oil revenue

This model was adopted and modified to suit the objective of this study, thus, we have:

$$RGDP = f(AR, MNR, VATR, MR) \dots \dots \dots \text{Eqn.(3)}$$

Where:

- RGDP = Real gross domestic product
- AR = Agricultural revenue
- MNR = Manufacturing revenue
- VATR = Value-added tax revenue
- MR = Mining revenue

When transformed to its econometric model, it becomes:

$$RGDP = \beta_0 + \beta_1 AR + \beta_2 MNR + \beta_3 VATR + \beta_4 MR + \mu \dots \dots \dots \text{Eqn.(4)}$$

Where:

- β_0 = Constant (Intercept) term
- $\beta_1, \beta_2, \beta_3, \beta_4$ = Coefficient parameters of the explanatory variables.
- μ = Stochastic or error term.

In order to bring the variables to the same base, the natural logarithm form was used as follows:

$$\text{LnRGDP} = \beta_0 + \beta_1 \text{LnAR} + \beta_2 \text{LnMNR} + \beta_3 \text{LnVATR} + \beta_4 \text{LnMR} + \mu \dots \dots \dots \text{Eqn.(5)}$$

3.5 Description of Research Variables

Dependent and independent variables were made use of in this work.

3.3.1 Dependent Variable

The dependent variable in the study is the real gross domestic product (RGDP). It shows the value of all outputs produced in a country valued at the cost of the factor services that went into production.

3.3.2 Independent Variables

The major explanatory variables in the study include: agricultural revenue (AR), manufacturing revenue (MNR), value-added tax revenue (VATR) and mining revenue (MR).

3.3.2.1 Agricultural Revenue (AR)

Agricultural revenue (AR) refers to income earned or revenue derived from agricultural and allied activities such as farming, animal husbandry, etc.

3.3.2.2 Manufacturing Revenue (MNR)

These are revenues generated from the country’s manufacturing and industrial activities.

3.3.2.3 Value-Added Tax Revenue (VATR)

This refers to revenue accruing from consumption tax placed on products whenever value is added at each stage of the supply chain, from production to point of usage.

3.3.2.4 Mining Revenue (MR)

This refers to revenue generated from the extraction or exploration of valuable solid minerals or other geological material from the earth such as coal, tin, iron ore etc.

IV. DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Data Presentation

Data used in this study are presented and analyzed in order to determine how each of the explanatory variables –

agricultural revenue, manufacturing revenue, mining revenue and value-added tax revenue behaved when regressed with the real gross domestic product (proxy for economic growth) in Nigeria for the period 1994 – 2017.

Table 4.1: Data on RGDP, AR, MNR, MR and VATR (₦' Billion)

YEAR	Real Gross Domestic Product (RGDP)	Agricultural Revenue (AR)	Manufacturing Revenue (MNR)	Mining Revenue (MR)	Value-Added Tax Revenue (VATR)
1994	19979.12	3839.68	1670.72	2.81	5.03
1995	20353.2	3977.38	1592.49	2.24	6.26
1996	21177.92	4133.55	1599.94	2.43	11.29
1997	21789.1	4305.68	1609.83	2.62	13.91
1998	22332.87	4475.24	1412.44	2.62	16.21
1999	22449.41	4703.64	1459.02	2.81	23.75
2000	23688.28	4840.97	1505.66	2.99	30.64
2001	25267.54	5024.54	1666.49	2.73	44.91
2002	28957.71	7817.08	1813.81	1.71	52.63
2003	31709.45	8364.83	1918.09	1.71	65.89
2004	35020.55	8888.57	2143.45	1.88	96.2
2005	37474.97	9516.99	2350.99	2.06	87.45
2006	39995.5	10222.47	2574.29	2.27	110.57
2007	42922.41	10958.47	2823.53	2.50	144.37
2008	46012.52	11645.37	3079.04	2.72	198.07
2009	49856.1	12330.33	3323.41	2.96	229.32
2010	54612.26	13048.89	3578.64	3.22	275.57
2011	57511.04	13429.38	4216.19	3.87	318
2012	59929.89	14329.71	4783.66	4.58	347.69
2013	63218.72	14750.52	5826.36	5.50	389.53
2014	67152.79	15380.39	6684.22	6.59	388.85
2015	69023.93	15952.22	6586.62	7.27	381.27
2016	67931.24	16607.34	6302.23	7.34	397.06
2017	68490.98	17179.5	6288.9	7.24	473.77

Source: CBN Statistical Bulletin, 2017 (Various)

4.2 Analysis of Data

Below, the study analyzed data as presented in Table 4.1.

4.2.1 Real Gross Domestic Product (RGDP)

Table 4.1 above revealed that RGDP in Nigeria stood at ₦19,979.12bn in 1994 and maintained an upward movement to ₦68,490.98bn in 2017 without any decline in any of the years. This would be attributed to the policy of government aimed at achieving its objectives of ensuring growth on gross domestic product over the years.

4.2.2 Agricultural Revenue (AR)

Table 4.1 above showed that agricultural revenue recorded an upward movement in all the years under study. In 1994 it stood at ₦3,839.68bn and rose to ₦17,179.5bn in 2017. There was a consistent increase in agricultural revenue

and this could be attributable to the efforts and programmes of successive administrations in Nigeria to make agriculture the mainstay of the Nigerian economy as well as revealing potentials for continued rise in agricultural productivity.

4.2.3 Manufacturing Revenue (MNR)

Manufacturing revenue stood at ₦1,670.49bn in 1994 and declined to ₦1,666.49bn in 2001. It resumed an upward movement in 2002 from ₦1,813.81bn to ₦6,684.22bn in 2014. Again, it declined between the years 2015 and 2017 which probably could be attributed to unfavourable economic conditions, inadequate power supply, insecurity, high cost of equipment, etc. which were inimical to manufacturing in Nigeria.

4.2.4 Mining Revenue (MR)

Table 4.1 also revealed that mining revenue stood at ₦2.81bn in 1994 and declined to ₦2.62bn in 1998. It increased between 1999 and 2000, and thereafter declined from ₦2.73bn in 2001 to ₦2.72bn in 2008. It resumed an upward trend from ₦2.96bn in 2009 to ₦7.34bn in 2016. This could be as a result of the efforts of government in the sector to increase the revenue base of the economy. In 2017, it had a slight decline to ₦7.24bn.

4.2.5 Value-Added Tax Revenue (VATR)

Table 4.1 besides, revealed that VATR stood at ₦5.03bn in 1994 when it commenced in Nigeria. It maintained an upward trend to ₦473.77bn in 2017. This could be as a result of the fact that more activities were included in the VAT bracket in the country over the years.

4.3 Results and Discussion

Table 4.2: Unit Root Test Result

ADF Unit Root Test

Variable	ADF	ADF	0.05 Critical Values		Order of Integration
	Level	1 st Diff	Level	1 st Diff	
lnRGDP	-1.328283	-3.964631	-3.004861	-3.004861	I(1)
lnGAR	-0.860093	-4.532498	-2.998064	-3.004861	I(1)
lnMNR	-0.499502	-3.536400	-3.004861	-3.004861	I(1)
lnGMR	-0.501098	-3.430742	-3.004861	-3.004861	I(1)
lnVATR	-3.468590	-	-2.998064	-	I(0)

Source: Author's Computations (2019) using E-views 9.0 software package

This study adopted the Augmented Dickey-Fully (ADF) unit root test. From the result in Table 4.1, it was evident that at level, only VATR was stationary as its ADF value (3.468590) in absolute terms was greater than the critical value (2.998064) at five percent level of significance. The ADF values for RGDP, AR, MNR and MR in absolute terms were less than their critical values respectively. Based on this outcome, there was a need to difference the non-stationary time series one more time to see whether the study would attain an overall stationarity. At first difference, RGDP, AR, MNR and MNR became stationary as their ADF values 3.964631, 4.532498, 3.536400 and 3.430742 became greater than their critical values 3.004861, 3.004861, 3.004861 and 3.004861 in absolute terms, respectively. Overall, it was evident that the order of integration was a mixture of I(0) and I(1). Based on this, the researcher employed the Autoregressive Distributed Lag (ARDL) technique in carrying out the empirical analysis. The ARDL approach comes with many outstanding benefits. For example, the ARDL technique utilizes a single reduced form of equation to examine the cointegration of the variables as opposed to the conventional

Johansen test that employs a system of equations. Importantly, another advantage of using the ARDL approach to cointegration is that it does not require the underlying variables to be integrated of similar order, for example, integrated of order zero *I(0)*, integration of order one *I(1)* for it to be applicable. It also provides unbiased estimates of the long-run model, even in cases where some variables are endogenous (Odiambo, 2009).

To ascertain the long run relationship (i.e. cointegration), the null hypothesis of no cointegration is tested against alternative hypothesis of cointegration. Decision rule follows that if the computed F-statistic is compared to the critical values provided by Pesaran, Shin & Smith(2001) in the I(0) and I(1) bounds, where the F-statistic is greater than the Critical values, the study shall reject the null hypothesis of no cointegration. On the other hand, when the F-statistic is less than critical values lower bound, the study would conclude there is nocointegration. However, when the F-statistics value is in between the upper and lower bound, the results are inconclusive (Pesaran, Shin & Smith, 2001).

Table 4.2: ARDL Bounds Cointegration Test Result

F-statistic	Critical Value Bounds	I(0) Bound	I(1) Bound	Conclusion
6.952798	10%	2.45	3.52	Cointegrated
	5%	2.86	4.01	
	2.5%	3.25	4.49	
	1%	3.74	5.06	

Source: Author's Computations (2019) using E-views 9.0 software package.

From the results in Table 4.2, the computed F-statistic (6.952798) was greater than the upper bound table values at 10 percent (3.52), 5 percent (4.01), 2.5 percent (4.49) and 1 percent (5.06). More so, the computed F-statistic (6.952798) was not less than any of the lower bound values at 10 percent, 5 percent, 2.5 percent and 1 percent, respectively.

Thus, the null hypothesis of no cointegration is rejected and alternative hypothesis indicating that there is cointegration is accepted. Rejecting the null hypothesis of no cointegration meant that there was a long run relationship among the variables. With the result in Table 4.2, proceeding to carry out long run and short run analyses is justified.

Table 4.3: Cointegrating Short run Coefficients

Variable	Coefficients	Std. Error	t-Statistic	Prob.
D(lnGAR)	-0.072230	0.126356	-0.571642	0.5802
D(lnMNR)	0.025406	0.073061	0.347733	0.7352
D(lnMR(-1))	-0.053703	0.037923	-1.416117	0.1871
D(lnVATR)	0.114213	0.034532	3.307474	0.0079*
CointEq(-1)	-0.365829	0.135801	-2.693860	0.0225**

Source: Author's Computation (2019) using E-views 9.0 software package.

Key: * significant at 1% level; ** significant at 5% level.

From the short run dynamic ARDL result in Table 4.3, it was evident that a negative relationship existed between agricultural sector revenue and real gross domestic product in Nigeria. From the result, 1 percent increase in agricultural sector revenue led to 7.22 percent decrease in real gross domestic product in Nigeria. The probability value (0.5802) was greater than the test significant level (i.e. $P > 0.05$). Thus, the researcher concluded that agricultural sector revenue had negative and insignificant effect on gross domestic product in Nigeria in the short run.

Secondly, the result showed that there was a positive relationship between the manufacturing sector revenue and real gross domestic product in Nigeria. From the result, 1 percent increase in manufacturing sector revenue leads to 2.54 percent increase in real gross domestic product in Nigeria. The probability value of manufacturing sector revenue (0.7352) was greater than the test significant level (i.e. $P > 0.05$). Thus, the researcher concluded that manufacturing sector revenue had positive and insignificant effect on gross domestic product in Nigeria in the short run.

Thirdly, the result showed that negative relationship existed between mining sector revenue and real gross domestic product in Nigeria. From the result, 1 percent increase in mining sector revenue led to 5.37 percent decrease in real gross domestic product in Nigeria. The probability

value (0.1871) was greater than the test significant level (i.e. $P > 0.05$). Thus, the researcher concluded that mining sector revenue had negative and insignificant effect on gross domestic product in Nigeria in the short run.

Fourthly, the result showed that there was a positive relationship between value-added tax revenue and real gross domestic product in Nigeria. From the result, 1 percent increase in value-added tax revenue led to 11.42 percent increase in real gross domestic product in Nigeria. The probability value of value-added tax revenue (0.0079) was less than the test significant level (i.e. $P < 0.05$). Thus, the researcher concluded that value-added tax revenue had positive and significant effect on real gross domestic product in Nigeria in the short run.

Finally, the cointegrating equation error correction term (CointEq(-1)) had the correct sign and significant at 5 percent significant level. The value of the coefficient was -0.365829 and this meant about 36.58 percent of the disequilibrium in real gross domestic product of previous year's shock had adjusted back to the long run equilibrium in the current year. It also implied that deviated real gross domestic product adjust to equilibrium with lags and only about 36.58 percent of the discrepancy between long and short run real gross domestic product in Nigeria has been corrected within a year. This was a slow rate of adjustment.

Table 4.4: Long run Coefficients

Variable	Coefficients	Std. Error	t-Statistic	Prob.
lnGAR	-1.064493	0.679983	-1.565470	0.1485
lnMNR	1.066069	0.397457	2.682224	0.0230**
lnMR	-0.678737	0.345407	-1.965036	0.0778**
lnVATR	0.505976	0.201901	2.506064	0.0311**
C	4.526759	1.182180	3.829163	0.0033

Source: Author's Computation (2019) using E-views 9.0 software package.

Key: * significant at 1% level; ** significant at 5% level.

From the long run ARDL results in Table 4.4, it was evident that a negative relationship existed between agricultural sector revenue and real gross domestic product in Nigeria. From the result, 1 percent increase in agricultural sector revenue led to 106.4 percent decrease in real gross domestic product in Nigeria. The probability value (0.1485) was greater than the test significant level (i.e. $P > 0.05$). Thus, the researcher concluded that agricultural sector revenue had a negative and insignificant effect on real gross domestic product in Nigeria in the long run. This finding contrasts with Oyetade & Shri (2013) which established a positive relationship between agricultural sector performance and economic growth in Nigeria. This finding might be attributed to the subsistence nature of agricultural practices in Nigeria which had made the agricultural sector produce in Nigeria lack the capacity to compete favourably with products from other countries. With lack of competitiveness inherent in the Nigerian agricultural sector, revenue accruing to the agricultural sector had not been significant and therefore has not made significant impact on the economy of Nigeria.

Secondly, the result showed that there was a positive relationship between the manufacturing sector revenue and real gross domestic product in Nigeria. From the results, 1 percent increase in manufacturing sector revenue led to 106.6 percent increase in real gross domestic product in Nigeria. The probability value of manufacturing sector revenue (0.0230) was less than the test significant level (i.e. $P < 0.05$). Thus, the researcher concluded that manufacturing sector revenue had a positive and significant influence on real gross domestic product in Nigeria in the long run. This finding corroborates Ademola (2012) which argued that manufacturing sector had a positive and significant relationship with economic growth in Nigeria. Based on the current efforts of the government to support the Small and Medium Scale Enterprises (SMEs) using several policies and programmes, it is not surprising that manufacturing sector revenue had impacted positively and significantly on economic growth in Nigeria. These efforts have led to higher access of the SMEs to funds and availability of funds to the SMEs had increased productivity of the SMEs thereby increasing the manufacturing sector revenue. With increased revenue being generated by manufacturing sector, Nigerian economy would record a higher economic growth in the long run.

Thirdly, the result showed that negative relationship existed between mining sector revenue and real gross domestic product in Nigeria. From the result, 1 percent increase in mining sector revenue led to 67.87 percent decrease in real gross domestic product in Nigeria. The probability value (0.0778) was greater than the test significant level (i.e. $P > 0.05$). Thus, the researcher concluded that mining sector revenue had negative and insignificant effect on real gross domestic product in Nigeria in the long run. This finding is in contrast to the works of David, Oladepo, Afees & Ayodele (2016) who found a positive and significant impact of the contributions of the mining sector to economic

development in Nigeria. This finding might be attributed to the poor and nascent state of the mining sector in Nigeria especially the solid mineral natural resources. Most of these natural resources are mined and exported in their raw stages (and no value chain added) with little being earned as revenue because of the inability of Nigeria to export them in their processed form. Even Nigeria's crude oil is also exported in its crude and unprocessed state thereby making Nigeria not to earn as much as she would have earned if it was exported processed. Thus, even with the massive abundance of natural resources in Nigeria, mining sector revenue had not had any significant effect on the nation's economic growth. The negative relationship between the mining sector revenue and economic growth in Nigeria stemmed from leakages in the mining sector which were often blamed on corruption (Igwe, Edeh & Ukpere, 2015). With increased level of corruption, economic growth of Nigeria is undermined rather than enhanced.

Fourthly, the result showed that there was a positive relationship between value-added tax revenue and real gross domestic product in Nigeria. From the results, 1 percent increase in value-added tax revenue led to 50.60 percent increase in real gross domestic product in Nigeria. The probability value of value-added tax revenue (0.0311) was less than the test significant level (i.e. $P < 0.05$). Thus, the researcher concluded that value-added tax revenue had positive and significant effect on real gross domestic product in Nigeria in the long run. This finding corroborates Onwuchekwa & Aruwa (2014) who argued in favour of a positive and significant effect of value-added tax on economic growth in Nigeria. This finding might be attributed to the nature of collection of value-added tax which being an indirect tax is usually imposed on every goods/services paid for by all Nigerians, their income level notwithstanding. Hence, the more Nigerians buy goods or pay for services, they inadvertently pay VAT consequently resulting into VAT revenue increases. The VAT revenue is then plunged into the provision of basic amenities to the populace which increases the standard of living of the people. As the standard of living of the people is enhanced, productivity increases and economic growth in Nigeria increases.

V. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

The findings of this study are summarized below:

- (i) There was a negative and insignificant impact of agricultural sector revenue on economic growth of Nigeria in the short run and long run.
- (ii) The study revealed that there was a positive and insignificant effect of the manufacturing sector revenue on economic growth of Nigeria in the short run. On the other hand, manufacturing sector revenue exhibited a positive and significant effect on economic growth of Nigeria in the long run.

- (iii) Mining sector revenue had a negative and insignificant effect on economic growth of Nigeria in the short run and long run.
- (iv) Value added tax revenue had a positive and significant effect on economic growth of Nigeria both in the short run and long run.

5.2 Conclusion

The study investigated impact of non-oil sector revenue on economic growth in Nigeria. In order to achieve this broad objective, the study specifically investigated effect of agricultural sector revenue, manufacturing sector revenue, mining sector revenue and value added tax revenue on real gross domestic product in Nigeria. Agricultural sector revenue, manufacturing sector revenue, mining sector revenue and value added tax revenue served as the explanatory variables while real gross domestic product served as the dependent variable. From empirical results, the study revealed that manufacturing sector revenue had a positive and insignificant effect on economic growth of Nigeria in the short run and a positive and significant effect on economic growth of Nigeria in the long run. Agricultural sector revenue and mining sector revenue had a negative and insignificant impact on economic growth of Nigeria in both the short run and long run. Value-added tax revenue had a positive and significant impact on economic growth of Nigeria in both the short run and long run.

5.3 Recommendations

The following recommendations have been made in line with the findings of the study to guide policy action of government. They include the following:

- (i) The government at different levels (Federal, State and Local) should sustain and improve on its policies on the agricultural sector in order to boost agricultural production. Policies on fertilizer sales and distribution should be improved in order to have increased agricultural yields which would increase agricultural revenue such that Nigeria's economic growth would be enhanced.
- (ii) Manufacturing sector in Nigeria should be reinvigorated for increased production. This could be achieved by the government through creating an enabling environment especially through increased power supply and removal of multiple taxes. These would lead to increased manufacturing revenue thereby increasing Nigeria's economic growth.
- (iii) There is need for government to lay emphasis on diversification of the economy, especially in the area of mining, to enable her have variety of viable sources of income to pursue its cardinal objective of provision of welfare services to its citizenry.
- (iv) Instead of increasing VAT rate as being suggested by many, the government should increase VAT base by incorporating many other items into the VAT net. This would increase VAT revenue without making it

become cumbersome. With increased VAT revenue, economic growth of Nigeria would further increase.

5.4 Contribution to Knowledge

The following contributions to knowledge arose from the findings of this research:

- (i) That value added taxation (VAT) in Nigeria had been very productive and as such has been positively leading real growth in Nigeria in the short-run.
- (ii) In the long-run the manufacturing sector (MNR) has been the main mover of domestic growth in Nigeria in that it had a positive and significant effect in real GDP of Nigeria.
- (iii) That the agricultural sector of the non-oil revenue has never been significant it has been negatively contributing to the real sector for the period studied.

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Appendix 1

Data on Real Gross Domestic Product (RGDP), Agricultural Revenue (AR), Manufacturing Revenue (MNR), Mining Revenue (MR) and Value-Added Tax Revenue (VATR) (In Billion Naira)

YEAR	RGDP	AR	MNR	MR	VATR	LOGRGDP	LOGAR	LOGMNR	LOGMR	LOGVATR
1994	19979.12	3839.68	1670.72	2.81	5.03	4.300576	3.584295	3.222904	0.448089	0.701568
1995	20353.2	3977.38	1592.49	2.24	6.26	4.308633	3.599597	3.202077	0.351179	0.796574
1996	21177.92	4133.55	1599.94	2.43	11.29	4.325883	3.616323	3.204104	0.385941	1.052694
1997	21789.1	4305.68	1609.83	2.62	13.91	4.338239	3.634042	3.20678	0.418126	1.143327
1998	22332.87	4475.24	1412.44	2.62	16.21	4.348945	3.650816	3.14997	0.418126	1.209783
1999	22449.41	4703.64	1459.02	2.81	23.75	4.351205	3.672434	3.164061	0.448089	1.375664
2000	23688.28	4840.97	1505.66	2.99	30.64	4.374534	3.684932	3.177727	0.476118	1.486289
2001	25267.54	5024.54	1666.49	2.73	44.91	4.402563	3.701096	3.221803	0.436155	1.652343
2002	28957.71	7817.08	1813.81	1.71	52.63	4.461764	3.893045	3.258592	0.232035	1.721233
2003	31709.45	8364.83	1918.09	1.71	65.89	4.501189	3.922457	3.282869	0.232035	1.81882
2004	35020.55	8888.57	2143.45	1.88	96.2	4.544323	3.948832	3.331113	0.273428	1.983175
2005	37474.97	9516.99	2350.99	2.06	87.45	4.573741	3.9785	3.371251	0.31482	1.94176
2006	39995.5	10222.47	2574.29	2.27	110.57	4.602011	4.009556	3.410657	0.356213	2.043637
2007	42922.41	10958.47	2823.53	2.50	144.37	4.632684	4.03975	3.450792	0.397588	2.159477
2008	46012.52	11645.37	3079.04	2.72	198.07	4.662876	4.066153	3.488415	0.434141	2.296819
2009	49856.1	12330.33	3323.41	2.96	229.32	4.697718	4.090975	3.521584	0.470977	2.360442
2010	54612.26	13048.89	3578.64	3.22	275.57	4.73729	4.115574	3.553718	0.507617	2.440232
2011	57511.04	13429.38	4216.19	3.87	318	4.759751	4.128056	3.62492	0.588237	2.502427
2012	59929.89	14329.71	4783.66	4.58	347.69	4.777643	4.156237	3.67976	0.660546	2.541192
2013	63218.72	14750.52	5826.36	5.50	389.53	4.800846	4.168807	3.765397	0.740107	2.590541
2014	67152.79	15380.39	6684.22	6.59	388.85	4.827064	4.186967	3.825051	0.818734	2.589782
2015	69023.93	15952.22	6586.62	7.27	381.27	4.839	4.202821	3.818663	0.861657	2.581233
2016	67931.24	16607.34	6302.23	7.34	397.06	4.83207	4.2203	3.799494	0.865971	2.598856
2017	68490.98	17179.5	6288.9	7.24	473.77	4.835633	4.235011	3.798575	0.859619	2.675568

Source: CBN Statistical Bulletin (Various)

Appendix 2

Regression Results

ARDL Cointegrating And Long Run Form
 Dependent Variable: LOGRGDP
 Selected Model: ARDL(2, 1, 1, 2, 1)
 Date: 07/04/19 Time: 00:04
 Sample: 1994 2017
 Included observations: 22

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGRGDP(-1))	-0.323246	0.221380	-1.460143	0.1749
D(LOGAR)	-0.072230	0.126356	-0.571642	0.5802
D(LOGMNR)	0.025406	0.073061	0.347733	0.7352
D(LOGMR)	-0.060852	0.083025	-0.732937	0.4804
D(LOGMR(-1))	-0.053703	0.037923	-1.416117	0.1871
D(LOGVATR)	0.114213	0.034532	3.307474	0.0079
CointEq(-1)	-0.365829	0.135801	-2.693860	0.0225

Cointeq = LOGRGDP – (-1.0645*LOGAR + 1.0661*LOGMNR -0.6787
 *LOGMR + 0.5060*LOGVATR + 4.5268)

Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGAR	-1.064493	0.679983	-1.565470	0.1485
LOGMNR	1.066069	0.397457	2.682224	0.0230
LOGMR	-0.678737	0.345407	-1.965036	0.0778
LOGVATR	0.505976	0.201901	2.506064	0.0311
C	4.526759	1.182180	3.829163	0.0033

Appendix 3

ARDL Bounds Test

Date: 07/04/19 Time: 00:03

Sample: 1996 2017

Included observations: 22

Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	6.952798	4

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Test Equation:

Dependent Variable: D(LOGRGDP)

Method: Least Squares

Date: 07/04/19 Time: 00:03

Sample: 1996 2017

Included observations: 22

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGRGDP(-1))	-0.323246	0.221380	-1.460143	0.1749
D(LOGAR)	-0.072230	0.126356	-0.571642	0.5802
D(LOGMNR)	0.025406	0.073061	0.347733	0.7352
D(LOGMR)	-0.060852	0.083025	-0.732937	0.4804
D(LOGMR(-1))	-0.053703	0.037923	-1.416117	0.1871
D(LOGVATR)	0.114213	0.034532	3.307474	0.0079
C	1.656018	0.349532	4.737817	0.0008
LOGAR(-1)	-0.389422	0.146725	-2.654086	0.0241
LOGMNR(-1)	0.389999	0.081910	4.761294	0.0008
LOGMR(-1)	-0.248301	0.064338	-3.859320	0.0032
LOGVATR(-1)	0.185100	0.039117	4.732015	0.0008
LOGRGDP(-1)	-0.365829	0.135801	-2.693860	0.0225
R-squared	0.949733	Mean dependent var		0.023955
Adjusted R-squared	0.894439	S.D. dependent var		0.015033
S.E. of regression	0.004884	Akaike info criterion		-7.503141
Sum squared resid	0.000239	Schwarz criterion		-6.908027
Log likelihood	94.53455	Hannan-Quinn criter.		-7.362950
F-statistic	17.17618	Durbin-Watson stat		2.189158
Prob(F-statistic)	0.000048			