ANALYSIS OF REAL SECTOR CONTRIBUTIONS TO ECONOMIC GROWTH IN NIGERIA

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Abstract

The real sector which involves production of goods and services used in the economy has been the engine of economic transformation over the years. Since independence in 1960 Nigeria overall economic performance has not been encouraging. Despite the availability of large amount of foreign exchange mainly from its crude oil and huge expenditure, economic growth has been insignificant and the incidence of poverty has increased. This study identified few sectors that contributed most to economic growth in Nigeria. Ten years data (2009-2018) on contributions of real sector to Gross Domestic Product (GDP) were used for the study and Pareto analysis was used to analyse the data. The study reveal that to achieve 80% economic growth in Nigeria government should give preference to service, agriculture and industry sectors in formulation of policies for economic growth.

Key words: Economic growth, Gross domestic product, Pareto analysis, Policy, Real Sector

JEL Classification Codes: C46, O49, Y10

1. INTRODUCTION

The real sector of Nigeria economy has arguably been the engine of the country economic transformation over the years. Importantly, the sector has metamorphosed into an emerging industrial workhorse from a hitherto rudimentary agrarian economy that can hardly be ignored. A plethora of factors, including infrastructural gaps, inefficiencies in the public sector project management and service delivery, the resource curse of oil exploration, dysfunctional macroeconomic policy environment, among others have obviously truncated the real sector revolution (Central Bank of Nigeria, 2013).

The economy of a nation comprises four interrelated sectors, operating to ensure that resources are best utilised in the production of goods and services to maximise the welfare of its citizenry. These four sectors are the financial, government or fiscal, external and real. While all four sectors have important roles in the welfare of the citizenry, the role of the real sector is particularly significant

and strategic (Oduyemi, 2013). The real sector involves the production and distribution of goods and services (from a combination of factor resources), needed to meet the consumption demand of an economy. It drives economic growth and development, and provides an indication on the living standard of the citizens of an economy and the effectiveness of government's macroeconomic policies. It also brings about economic linkages with other sectors and helps in creation of employment and income generation. Hence, real sector development is topical as it is the pillar on which the government's objective of inclusive growth and improves standard of living hinges, since it contributes most to employment generation and growth (Anyanwu, 2010).

Since independence in 1960 Nigeria overall economic performance has not been encouraging. Despite the availability of large amount of foreign exchange mainly from its oil and gas resources and huge expenditure, economic growth has been insignificant and the incidences of poverty have increased. The objective of every sovereign nation like Nigeria is to improve the standard of living of its citizenry and promote economic growth and development of the country. As observed by Udeaja & Onyebuchi (2015) the Nigerian economy, has had a volatile "growth-history". The period of 1960-70, the Gross Domestic Product (GDP) annual growth was 3.1 per cent. In the oil boom era (1970-78), GDP grew positively by 6.2 percent annually but in 1980s negative growth rates were recorded. During the period of structural adjustment 1988-1997 and liberalisation of the economic, the GDP rise at a positive rate of 4.0 percent (Ekpo & Umoh, 2004). This insignificant growth experience has been blamed mainly on the high inflation rate, a mounting fiscal deficit, increasing foreign debt and debt servicing, political instability, and, among other factors, economic mismanagement and corruption.

A lot of studies have looked at the macroeconomic determinant of economic growth, effects of monetary policy on economic growth, monetary policy and economic growth in Nigeria (Adigwe et al, 2015; Ismaila & Imoughele, 2015; Udeaja & Onyebuchi, 2015). However, there is dearth of research on contributions of real sector to economic growth in Nigeria. In view of above, this research tend to look at contribution of real sector to economic growth in Nigeria using Pareto analysis approach to determine few component of real sector that can bring about greater economic growth in Nigeria.

2. LITERATURE REVIEW

According to Aigbokhan (1995), Economic growth means an increase in the average rate of output produce per person usually measured on a per annum basic. It can also be described as the rate of change in national output or income in a given period of time. An increase of per capital gross domestic product (GDP) can also be referred to economic growth. It is often measured as the rate of change in real GDP. Economic growth can also be described as an increase in real gross domestic product (GDP). That is, gross domestic product adjusted for inflation. The growth can either be positive or negative. Negative growth can be identified by

shrink in the economy. This is characterised with economic recession and economic depression. Ullah and Rauf (2013) noted that whenever there is increase in real GDP of a country it will boosts up the overall output and we called it economic growth. The economic growth is helpful to increase employment, income of people and the standard of living.

Aurangzeb and Ul Haq (2012) asserted that Investment plays an important role in driving growth through increase in productivity levels. Foreign direct investment brings technology and creates employment. It helps to adopt new methods of production and enhances productivity by bringing competition in the economy. It reduces the barriers in adoption of technology and brings improvements in the quality of labour and capital inputs in the host economy. Kolawole (2013) asserted that macroeconomic stability is fundamental basis of sustainable economic growth, because, it increases national saving and private investment and also improves exports and balance of payments with improving competitiveness. A macroeconomic stability, therefore, to a large extent guarantees economic wellbeing of the people. To this end, there are several factors identified as potential determinant of macroeconomic stability such as low inflation, low deficit, stability of real exchange rate and exchange relationship.

Ismaila and Imoughele (2015) research on the macroeconomics determinants of economic growth in Nigeria measured by Real Gross Domestic Product (RGDP). The study reveals that gross fixed capital formation, foreign direct investment and total government expenditure are the major determinants of Nigeria economic output under a stable inflationary rate. They recommended that government should develop the business environment by provision of necessary infrastructure, which will lower the cost of doing business in the country. Adigwe et al. (2015) examines the impact of monetary policy on the Nigerian economy. That shows that monetary policy exerts a positive impact on GDP growth but negative impact on the rate of inflation. They recommend that monetary policy should facilitate a favourable investment climate through appropriate interest rates, exchange rate and liquidity management mechanism. Nwoko and Ihemeje (2016) examined the extent to which the Central Bank of Nigeria (CBN) Monetary Policies could effectively be used to promote economic growth. The study reveal that CBN Monetary Policy measures are effective in regulating both the monetary and real sector aggregates such as employment, prices, level of output and the rate of economic growth. They recommend that CBN monetary policy can be used to increase investment, reduce lending rate, increase employment and spur economic growth in the country.

Machi (2011) research on the determinants of economic growth in Nigeria showed that policies that encourage investments in physical capital, human capital, man power development, training, research and technological development would boost both short run and long term growth of the economy. Hence policy tools such as fiscal, monetary and income-price policies should be used by the government to achieve economic growth in Nigeria. Edoumiekum and Opukri (2013) research on economic growth Factor in Nigeria considering the role of global trade. The result

shows two co-integrating equations which establish the existence of long run relationship among the international trade. They concluded that Nigeria needs to increase or diversify her export goods to enjoy more of the benefits of international trade which will have robust impact on her economic growth.

Evaluating the impact of macroeconomic policies on economic development in Nigeria for the period which spanned between 1990 and 2008. Employing multiple regression technique in the analysis, it was discovered that public capital expenditure, fuel price, balance of trade and bank total lending have positive impact on economic development while net foreign direct investment and dummy variable which capture the period of major macroeconomic policies has negative and insignificant effect on economic growth which implies that the structural adjustment programmes introduced in 1986 and covered up to 1994 as well as National Economy Empowerment and Development Strategies introduced since 2004 did not translate into the long run economic growth. Rather they ended in pushing the economy deeper into the depression (Ismaila and Imoughele, 2015). They recommended that there is a need to introduce greater depth and comprehensiveness in the ongoing macroeconomic policy, and more efficient utilization of foreign direct investment to make macroeconomic policies impact significantly on economic development in Nigeria.

2.1 OVERVIEW OF SECTORAL INTERACTION IN THE ECONOMY

Economic units interact with one another in the production of goods and services, in an effort to improve their individual and collective welfare. These interactions involve the utilisation, consumption and transformation of resources to goods and services, in return for economic rewards (factor incomes) to economic units for their role in the economic activities. The aggregate value of all the goods and services produced or the collective reward for economic units involved in economic activities is referred to as the Gross Domestic Product (GDP). The combined units of goods and services produced from the interaction of economic units in economic activities are referred to as the Real GDP (Oduyemi, 2013).

Households supply their resources (i.e. labour and or capital) in economic activities to produce goods and services. They do so as entrepreneurs or as employees in private & public non-financial corporations, financial corporations or government (civil, voluntary, armed and defence service). In return for entrepreneurship role, household is rewarded with both wages and share of profit (i.e. dividend), while it receives wages and other benefits as rewards for supply of labour. The real sector is responsible for production goods and services, which are sold in exchange for a share of total wages and government revenues. The reward for engaging in the production of goods and services is profit, which can be saved and/or reinvested in the business. The economic activities of the non-financial sector are financed from entrepreneur(s) capital and/or retained profit and/or loans and/or transfers/grants from the Government.

Government employs labour resources from households and rewards them with wages and other benefits from tax and non-tax revenues as well as loans from financial sector. Total government operations is financed from taxes on income, expenditure and sales, profits and capital gains, non-tax incomes like royalties, rents, privatisation proceeds and loans and grants from domestic and international financial markets, multilateral institutions and foreign governments. The government is also involved in the production of goods and services, some of which are social/public goods and services while others are marketable goods which are sold at market or near market prices for general consumption. Invariably, some households, non-financial corporations and government would have surpluses, while others may be in deficit. The financial sector provides an avenue to transfer the surpluses as required at a cost to the deficit units. Like the other sectors, the financial sector also employs labour and rewards it with wages and benefits. The financial sector also mobilise funds from domestic surpluses to fund foreign deficits and vice versa as the case may be. In essence, the financial sector is critical in facilitating and supporting economic growth. If the different economic units produce more goods and services than can be consumed in the domestic economy, the surpluses could be exchanged on the international market with countries with deficit outputs. This would be exchanged for foreign currency and/or goods not produced in sufficient quantities in the domestic economy. This is captured as the external sector.

2.2 FINANCE AND THE REAL SECTOR

The financial sector plays an important role in the growth of the real sector, it mobilise funds from surplus unit of the economy to fund economic activities, which would otherwise not have been funded. Furthermore, it provides an efficient avenue for selecting, funding and monitoring risky projects, which stimulate and sustain economic growth. Efficient financial market facilitates appropriate costs of transaction and information asymmetries modify the constraints and incentives of financial agents, as well as foster efficient allocation of resources by ensuring allocation of same to their most productive use. In the absence of the financial sector, the cost of operations and funding risky ventures by the real sector may be prohibitive and may discourage participation in such activities. Financial market development fosters the generation of information, which is leveraged upon for the efficient allocation of capital, efficient monitoring of firms i.e. engenders corporate governance and in risk reduction (i.e. cross-sectional risk diversification, inter-temporal risk sharing, and liquidity risk). It also mobilise savings for loanable and investible funds and facilitates exchange i.e. financial arrangements help lower transaction costs, which can promote specialization, technological innovation and growth (Oduyemi, 2013; Levine 2004). Financial institutions foster innovation and economic growth by ensuring that the sector allocates resources to entrepreneurs that are best capable of developing innovative products and production techniques, which would stimulate the economy to a higher growth path.

A significant numbers of studies have shown the positive impact on long-run economic growth rates of financial systems and financial systems development,

in particular, helping to secure investable external funding for financially constrained small and medium firms to facilitate the actualisation of their expansion plans.

2.3 GOVERNMENT AND THE REAL SECTOR

The real sector is also heavily dependent on the government sector to provide the appropriate growth enabling environment, consisting of the appropriate institutions such as legal, security, monitoring and regulatory, health, education, tax, benefits and grants as well as policy consistency, infrastructures and amenities, amongst others. Available evidence has shown that investment in the quality of factors of production like human capital and technological advances is a major factor contributing to growth rates (Rebelo, 1991). This is because the development of human capital in the form of better education and on the job training increases the efficiency, and thus output of labour. Likewise, investing in technological advances improves the production process, which manifests in increased production output. Furthermore, institutions play crucial roles in fostering innovation, which is a major driver of economic growth and development. For instance, research and development contributes to the creation of intellectual property rights and its associated rents for pioneering entrepreneurs. This serves as a reward for undertaking innovative research in the development of new product or techniques that helps to reduce the cost of economic activities, thereby enhancing the welfare of the consuming economic units as well as propel the economy to a higher growth trajectory. It is the role of institutions to protect the rights of agents, to engender growth enhancing but risky and complex economic transactions and activities, necessary to sustain economic growth and development. In essence, conducive government policy environment is important for economic growth and development.

3. MATERIALS AND METHODS

Central Bank of Nigeria data on contribution of activity sector to Gross Domestic Product will be used for the analysis. The study employs data collected from Central Bank of Nigeria Statistical Bulletin, 2019. The sample period is from 2009 to 2018. In analysing the data collected from secondary sources, Pareto Analysis and Pie chart will be employed.

Pareto Analysis is a statistical technique in decision-making used for the selection of a limited number of tasks that produce significant overall effect. It uses the Pareto Principle (also known as the 80/20 rule) the idea that by doing 20% of the work you can generate 80% of the benefit of doing the entire job. Joseph M. Juran an engineer and management consultant suggested the principle and named it after Italian economist Vilfredo Pareto (Powell and Sammut-Bonnici, 2015).

4. DATA ANALYSIS AND RESULTS

4.1 AVERAGE REAL SECTOR CONTRIBUTION TO GDP ANALYSIS

Table 1. *Average Real Sector Contribution to GDP (2009 – 2018)*

YEAR	AGRICULTURE	INDUSTRY	CONSTRUCTION	TRADE	SERVICE
2009	12330325	11353422	1404496	8085442	16682413
2010	13048893	12033196	1570973	8992650	18966552
2011	13429379	12879246	1817830	9640905	19748682
2012	14329706	13028046	1989464	9853679	20728999
2013	14750523	13014510	2272377	10507899	22673413
2014	15380389	13791247	2568465	11125796	24286889
2015	15952220	13319126	2680216	11697588	25374780
2016	16607337	12062049	2520852	11669061	25071936
2017	17179495	12314677	2545991	11546446	24904371
2018	17544148	12513067	2605288	11473791	25663648
AVERAGE	15055242	12630859	2197595	10459326	22410168

Source: *Central Bank of Nigeria Statistical Bulletin, 2019*

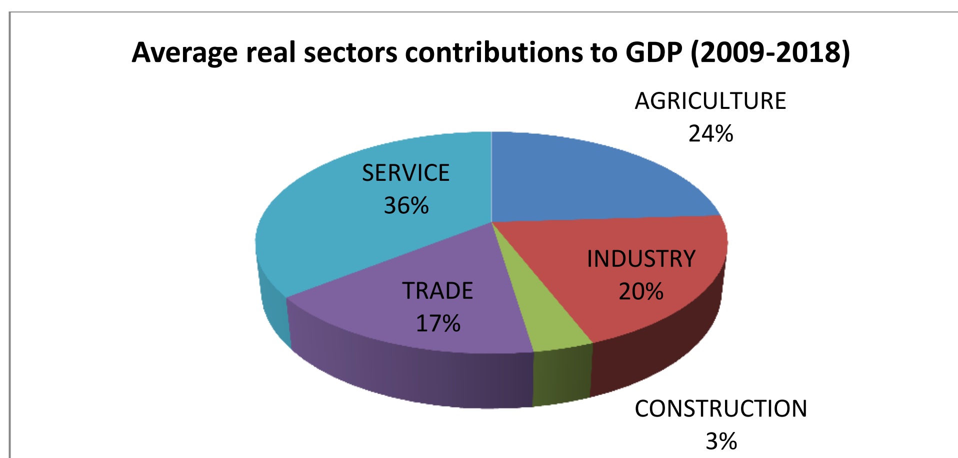

Figure 1. *Pie chart of Average Real Sector Contributions to GDP (2009-2018)*

4.2 PARETO ANALYSIS OF REAL SECTOR CONTRIBUTIONS TO GDP (2009-2018)

***Table 2**. Results for Pareto Analysis on Excel*

SECTOR	TOTAL/ 10 YRS	CUMMULATIVE	CUMMULATIVE %
SERVICE	2.24E+08	2.24E+08	35.7116
AGRICULTURE	1.51E+08	3.75E+08	59.7028
INDUSTRY	1.26E+08	5.01E+08	79.83063
TRADE	1.05E+08	6.06E+08	96.49803
CONSTRUCTION	21975952	6.28E+08	100
	6.28E+08		

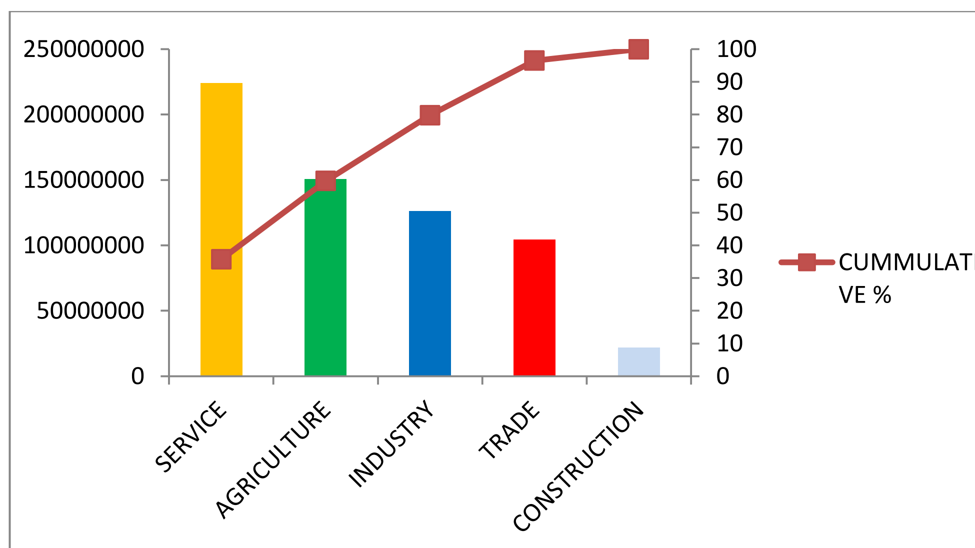

***Figure 2.** Pareto Analysis of Real Sector Contributions to GDP (2009-2018)*

Pareto analysis above showed that service, agriculture and industry sectors combined to give almost 80% of Gross Domestic Product (GDP) in Nigeria during the period under review.

4.3 DISCUSSION

The industrial sector consists of manufacturing and mining (including crude petroleum, gas and solid minerals). The manufacturing sector in Nigeria consists of large, medium, small and micro scale enterprises. On attainment of independence, government embarked on transforming the country from its predominantly agrarian nature, into an industrialized economy through various

policies and programmes as encapsulated in the development plans. The share of the industrial sector averaged 20 percent during the period of analysis, with its sectoral contribution declining from 22.8 percent in 2011(Central Bank of Nigeria, 2013) to 17.9 percent in 2018. The decline in the sectoral contribution of the industrial sector to GDP is attributed to various factors including policy inconsistencies and reversals, as well as infrastructural bottlenecks. Declining share of the industrial sector, especially manufacturing sector is worrisome as this has exacerbated the unemployment situation in the country.

The mining sub-sector is made up of crude petroleum, gas and solid minerals. Solid minerals such as coal and tin used to be the main mining activity and export items for Nigeria prior to the discovery of crude oil. However, this changed following the discovery of petroleum, which has dominated activity in the mining sector, and constituted the major source of government revenue and export earnings. The crude petroleum & natural gas sector accounted for 23.3 percent of the share of total GDP during the period under review, which showed a similar declining pattern with the industrial sector falling from 22.8 per cent in 2011(Central Bank of Nigeria, 2013) to 17.9 percent in 2018.

The share of construction in the GDP fluctuated around 3 percent during the period of analysis with a rise from 2.8 percent in 2011(Central Bank of Nigeria, 2013) to 3.7 percent in 2018. As a percentage of GDP, the share of trade averaged 17 percent during the period 2009-2018. The share of the sector increased during the period of analysis from 15 percent (Central Bank of Nigeria, 2013) in 2011 to 17 percent in 2018. Similarly, the share of services in GDP averaged 36 percent during the review period, increasing from 33.5 percent (Central Bank of Nigeria, 2013) in 2011 to 36.8 percent in 2018.

Agriculture which consists of crop production, livestock, forestry and fishing has consistently been a major contributor to Nigeria's GDP, Its output helps feed the nation, forms part of input in some firms and generate foreign exchange income through export. The Nigerian agricultural sector, is however, characterised by the predominance of subsistence small scale farming and low productivity. Evidence suggested that yields were falling and that productivity had declined for both cash and food crops over the past decades. Agriculture contribution to GDP during this period of analysis average 24 percent, the sector also show an insignificant increase from 24.7 percent in 2009 to 25.1 percent in 2018. This is due to insecurity experience across the country during the year under reviewed especially the incessant clashes between the herdsmen and farmers which have really affected farmers output.

Pareto analysis showed that service, agriculture and industry sectors contributed more to economic growth in Nigeria with 80% contribution to Gross Domestic Product (GDP) during the period under review. Hence to increase economic growth rate in Nigeria to 80% government should focus more on service, agriculture and industry sectors by giving preference to these sectors in formulation of policies for economic growth.

5. CONCLUSION AND RECOMMENDATION

Pareto analysis identified that service, agriculture and industry sectors as the most contributors to economic growth in Nigeria with 80% contribution of Gross Domestic Product (GDP) during the period under review. Hence to increase economic growth rate in Nigeria to 80% government should focus more on service, agriculture and industry sectors by giving preference to these sectors in formulation of policies for economic growth.

The following recommendations based on the findings of this study are therefore suggested:

- For government to achieved 80 percent economic growth in Nigeria, economic growth policy intervention should focus more on service, agriculture and industry sectors.
- Government should solve the problem of insecurity in the country, especially herdsmen and farmer's clashes and insurgency which have affected farmer's output negatively. This will bring about increase in agriculture sector output and enable agriculture sector to take its place as a major contributor to Nigeria GDP as it was in the pre- crude oil era.
- Central Bank of Nigeria (CBN) should use monetary policy to facilitate investment in the real sector through appropriate interest rate, exchange rate and liquidity management mechanism.
- Lastly, Government should invest more in the provision of infrastructure like power, roads, telecommunication and other infrastructure that will lower the cost of doing business, facilitate real sector development and in turn lead to economic growth in the country.

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