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An Analysis of the Economic Consequences of Nigeria's Dependence on Crude Oil Exports

Udo N. Ekpo, (Ph.D)
Department of Economics, Faculty of Social Sciences
Akwa Ibom State University, Ikot Akpaden, Akwa Ibom State, Nigeria

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ABSTRACT*: This paper analysed the economic consequences of Nigeria's dependence on crude oil exports. The study adopted a qualitative analytical approach that made use of secondary data. The findings of the study established that since the discovery of crude oil in large quantity in Nigeria in 1956, the country has been trapped in the illusions of oil wealth and the ease of obtaining foreign exchange earnings and government revenue through crude oil exports. Consequently, the country has progressively over-depended on crude oil exports thereby resulting in the displacement and replacement of the non-oil sector exports (mostly agriculture and solid minerals) by crude oil exports. This study observed that, in addition to depriving the country of additional foreign exchange earnings and revenue from agricultural products and solid minerals exports, overdependence on crude oil exports has resulted in excessive external dependence, deprivation of demographic dividends and weak capacity of the Nigerian economy with attendant effects of high level of unemployment, poverty, low output and income, and income inequality. In addition, it has exposed the economy to unnecessary unhealthy shocks as well as development elusiveness. It is, therefore, recommended that the government should evolve and implement appropriate policies toward the diversification of the Nigerian economy. For a period of seven to ten years, a sizeable percentage of government earnings from crude oil exports should be devoted to the development of agriculture sector, solid minerals and manufacturing subsectors to bring them to a reasonable level comparable to that of other emerging economies. There should be a proper national policy on the solid minerals exploration and refining; and the same vigor government employed in the development of petroleum sector should be adopted in the case of solid minerals development.*

KEY WORDS: oil sector, oil exports, non-oil sector, non-oil exports and the Nigerian economy.

INTRODUCTION

Nigeria is a richly blessed and greatly endowed nation. It has a lot of human and natural resources. Human resources consist of a large population and labour force. Based on 2019 United Nations estimate, the Nigerian population is about 198.5 million people. As at 2014, about 53.3 per cent of the population formed the working population and the population growth rate was 3.2 per cent (CBN, 2014). The natural resources are made up of the agricultural and mineral resources. The agricultural resources in the country include huge expanse of fertile agricultural land, rivers, streams, lakes, forests and grassland. Nigeria has an area of 910.8 thousand square kilometres with 77.7 per cent cultivable expanse of land (CBN, 2016). There are vast deposits of mineral resources in Nigeria. Akpan (1999) reported that Nigeria is endowed with over 99 minerals resources distributed unevenly among the thirty-six (36) states and the Federal Capital Territory, Abuja. Included among the mineral resources found in Nigeria are crude oil (hereafter used interchangeably with petroleum) and associated gas as well as enormous solid minerals such as tin, gold, coal, bitumen, columbite, cassiterite, limestone, marble, iron ore, ironstone, manganese, chromite, clay, nickel, topaz, nickel, emerald and gypsum (Onah, 2001). Crude oil and gas constitute the oil sector. All other economic activities in the country outside the oil sector such as agriculture, manufacturing, mining and quarrying, and services formed the non-oil sector.

Since the discovery of crude oil in commercial quantity in Nigeria in 1956, emphasis shifted gradually from non-oil sector, especially agriculture and solid minerals to crude oil production and exports. From crude oil production capacity of about 5,000 barrels per a day (bpd) in 1957, Nigeria has grown to become a major crude oil producer with an average daily production capacity of about 2.4 million bpd. It has occupied the position of the 6th largest crude oil producer in the world and the 2nd largest oil producing country in Africa (Chukwu and Onyeze, 2010). As a prominent member of Organisation of Petroleum Exporting Country (OPEC), about 90 per cent of the crude oil produced in Nigeria is exported and Nigeria had been ranked as the 6th global exporter of oil (Umo, 2012). Crude oil has become the dominance resource and, the country had progressively over-depends on its exports as its main source of foreign exchange earnings and government revenue. The share of oil export in the total exports which was only 2.7 per cent in 1960 increased to about 57.6 per cent in 1970 and over 96 per cent in the 1980s and 1990s while the share of non-oil exports dwindled from 97.3 per cent in 1960 to 42.4 per cent in 1970, 3.9 per cent and 3.0 per cent in 1980s and 1990s respectively. In 2000, oil exports accounted for 98.7 per cent of the total exports and about 83 per cent of government revenue while non-oil exports accounted for only 1.3 per cent of the total exports. In the year 2010 and 2016, oil exports were 94.1 per cent and 92.6 per cent respectively of the total exports of Nigeria whereas non-oil exports stood at 5.9 per cent in 2010 and 7.4 per cent in 2016 (CBN, 2017).

As much as petroleum sector has contributed significantly to the country's gross domestic product (GDP) and crude oil exports has enhanced the total export, foreign exchange earnings and government revenue, Nigeria's dependence on crude oil exports is not without grave economic consequences. First, though petroleum sector is large in terms of value-added, it is small in terms of manpower (employment). Secondly, the sector has remained an 'enclave' and had perpetuated 'Dutch-Disease' in the Nigerian economy. Ekpo, Ndebbio, Akpakpan and Nyong (2003) observed

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that the petroleum sector has led to Nigeria's rise in income, not by transmission of technical advance through supply connections, not by drawing inputs from less productive sectors; but rather, by providing low-cost output and simultaneously pumping out increasing income with which to buy it. They stressed that petroleum sector is an 'enclave' where the rapid rise in total productivity and creation of a large supply of foreign exchange occur, while zero or marginal increases are occurring in other sectors. For example, the non-oil sector, especially the vast and rich agricultural sector which provided sufficient food to feed Nigerians, generated employment, foreign exchange earnings and government revenue before the oil booms has been neglected. Nigeria becomes a net importer of agricultural products, especially food. Even the enormous solid mineral resources which can fetch the country substantial foreign exchange earnings and revenue, generate employment and diversify the production base of the economy are abandoned. Manufacturing sector is plagued with many constraints such that Nigeria has become net importer of even those manufactured products that can be produced in the country.

Crude Oil has become the mainstay of the Nigerian economy. The crude oil demand and price in the international oil market detects the financial profile and performance of the Nigerian economy. Comparing Bonny light prices with government revenue, it is observed that there is a positive correlation between crude oil price and the financial life of Nigeria and the fiscal profile of Nigeria follows exactly the trend of oil price depicting a perfect symmetry. To further buttress Nigeria's dependence on crude oil exports as the mainstay of the Nigerian economy and the determinant of the economic and political destiny of Nigeria, crude oil price is use as a benchmark in preparing the annual budget estimates of Nigeria. In view of the foregoing background, it is obvious that Nigeria has over depended on crude oil exports. The objective of this study is to analyse the economic consequences of Nigeria's overdependence on crude oil exports. To achieve this objective, the study is divided into five sections. Following this introduction is Section 2, which contains the conceptual discourse, theoretical framework and review of related literature. Section 3 presents crude oil production and exports in Nigeria while the economic consequences of Nigeria's overdependence on crude oil exports are handled in Section 4. Section 5 concludes the paper. This study employs qualitative analysis approach and makes use of data from secondary sources.

REVIEW OF RELATED LITERATURE

Conceptual Discourse

Oil Sector: The oil sector consists of petroleum and gas industry. It is segmented into three major sub-sectors: upstream, midstream and downstream. Upstream subsector consists of oil and gas exploration and production. The midstream oil and gas segment covers activities such as processing, storage, marketing and transportation of crude oil and natural gas. The downstream activities are related to the transformation of oil and gas, and their derivatives into finished products and distributions to consumers. The concern of this study is mostly on crude oil (also

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refers to as petroleum). Petroleum, which means *rock oil* in Latin, is versatile, flexible, non-renewable and depleting natural resources. It is a dark, sticky, viscous liquid naturally formed from marine algal and animal remains as a result of bacterial activity, heat and pressure which changed the plant and animal remains into crude oil and natural gas (Ababio, Akpanisi and Igwe, 2015). It is found in underground deposits in many countries of the world including the Asians countries (mostly the Middle East counties, China and Indonesia), Russia, United States of America (USA), Canada, Venezuela, Australia, African countries including Nigeria, Iraq and Iran. Available data show that about three-fifths of the world oil reserves are in Asia, with most of it concentrated in the middle East while Russia has the next largest oil reserves. Saudi Arabia produces 12.9 per cent of the world's oil supply, Russia produces 12.7 per cent, USA produces 8.6 per cent and Nigeria produces only 2.7 per cent (World Bank, 2013).

As a fundamental input in the modern economic activity, petroleum is a major source of energy in the world in general and Nigeria in particular. It provides about 50 per cent of the total energy demand of the world, excluding the former centrally planned economy (Anyanwu, 1997). Hence, it is one of the highly valued natural resources. Consequently, most of the oil rich countries of the world depend heavily on oil exports for foreign exchange earnings and government revenue. Ailemen and Olesodo (2000) asserted that petroleum revenue has transformed poor nations into rich ones, desert nations into watersheds, and bankrupt nations into creditors; and among such countries include Kuwait**,** Qatar, Libya, Norway and Nigeria. In Nigeria, petroleum is a prominent and most commercially viable mineral resource. The oil sector, which was a mere "supportive" economic sector in the 1960s, has grown to become a predominant sector of the economy. It occupies a very prominent and strategic position in the Nigerian economy as it has becomes a major source of foreign exchange earnings and government revenue, international relevance and most viable access to foreign direct investment. It is the primary determinant of Nigeria national economic performance, the welfare of its citizens and the states of the nation.

Non-Oil Sector: The non-oil sector encompasses all economic activities carried out in a country outside the oil sector (petroleum and gas). It includes agriculture, mining and quarrying, manufacturing, construction, trade, transportation and services. Services consist of mini sectors like telecommunication, financial, health, education, real estate and tourism. Being the central and most important part of economic activities in modern economies, the non-oil sector constitutes the main driving force of the economy and engine of economic growth and development. It has the potentials of opening up and widening the capacity of the economy, enhancing industrialization, generating additional foreign exchange earnings and revenues to the government, generating employment, increasing the income, reducing poverty and contributing immensely to GDP growth (Ijieh, 2014; Uwatt, 2016). Nigeria's non-oil sector is broad and has many natural resources, and the capacity to put the country in the leading league of exporting nations. It was the major foreign exchange earner and source of revenue to Nigeria before the discovery of crude oil in a commercial quantity. For instance, the share of non-oil sector in the total exports was 97.3 per cent and 82.5

Vol.10, No.6, pp.48-65, 2022

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per cent in 1960 and 1968 respectively. Following its' displacement and replacement by the oil sector as far back as the 1970s, non-oil sector of the Nigerian economy has remained underutilized. Consequently, its' contribution to total exports has dwindled drastically over the years. The share of non-oil sector in the total exports declined from 97.3 per cent in 1960 to 42.4 per cent in 1970 and 7.4 per cent in 1975. It fell to 3.9 per cent in 1980, 3.0 per cent in 1990 and reached the lowest level of 1.3 per cent in the year 2000. From the year, 2007 there had been some marginal increase. It increased to 5.9 per cent in 2010 and 7.5 per cent in 2015. As at 2016, non-oil sector still contributes less than 10.0 per cent to total exports. Despite of the neglect of the non-oil sector, it has consistently contributed more to GDP than the oil sector. It is on this basis that the National Bureau of Statistics (NBS) unswervingly identified the non-oil sector as the main driver of GDP growth in Nigeria.

Theoretical Framework and Empirical Literature

The theoretical framework for this study anchored on the staple theory of economic growth. The staple thesis stresses the crucial role of natural resources (or staple products) exports on economic growth process as well as the linkages (forward, backward and final demand) of the staple exports with the rest of the economy (Boame, 1998). Developed by Harold Innis and W. A. Mackintosh in 1923 to explain how economic development of Canada was influenced by the exploitation and export of natural resources, the basic framework of the staple thesis is potentially applicable to any economy, Nigeria inclusive, which depend on primary products exports. Altiman (2003) asserted that the staple theory, as a subset of the export-led growth hypothesis, remains an important analytical tool to help explain economic development and growth of natural resource-rich economies. In the context of this theory, staples are commodities like crude oil, cotton, rubber, groundnut, cocoa, among others, which dominates a country exports used to drive the development process. According to this theory, the availability of staples in any region determines the type of economic activity that will prevail in that region, given their strong export demand and this has pervasive effect on the entire economy. This theory attempts to show how natural resource endowments like crude oil can produce linkages (or spread effect) to the rest of the economy and to technological innovations. Well harnessed backward and forward linkages are expected to result in natural resources-industry interdependence leading to diversification around the staples production to the extent that in the long-run the nation may cease to be a staples producer. In a situation where this does not happen, "staples trap" may occur where the economy becomes tied to the boom and burst cycles of primary commodity markets and therefore, unable to achieve diversification, industrialization and long-term prosperity.

Nigeria is one of the natural resources-rich countries of the world. It's staples, especially crude oil, had not produced sufficient linkages to other sectors of the economy like agriculture and solid mineral despite several oil booms that had occurred. Consequently, for many years now, the Nigerian economy has experienced "staples trap", where the economy becomes tied to the boom and bursts cycles of crude oil market and therefore, unable to achieve diversification, industrialization and long-term prosperity. The implication, therefore, is that oil sector should not remain as an enclave, rather should have spread effect to non-oil sector of the economy like agriculture and solid minerals; thereby resulting in agricultural-oil sector interdependence, solid minerals-oil sector interdependence and consequently the diversification of the economic base of the Nigerian economy for long term prosperity. This would happen only if oil exports earning is used by the government to develop the aforementioned sectors of the economy sufficiently.

Although Nigeria has earned about over US$300 billion from crude oil exports during the past 40-50 years and substantial oil resources have been spent within the period, many sectors of the economy have not felt much impacts of such wealth. Petroleum sector has behaved as an enclave in the Nigerian economy. There seems to be no strong forward or backward linkages between oil sector and non-oil sectors especially agriculture and solid minerals. There is high concentration of investment (domestic and foreign) in the oil sector and very little on these sectors of the economy. The problem with the Nigerian economy have been traced to failure of successive governments to use oil revenue and excess crude oil income effectively and sufficiently in the development of other sectors of the economy. Taiwo and Bassey (2012) asserted that the revenue windfall of the oil boom era of the 1970s and 80s did not translate into any strategic investment programmes, rather it culminated into the 'Dutch Diseases' syndrome which adversely affected some sectors of the Nigerian economy. Dutch Disease, an economic malaise named after the collapse of the Dutch economy following the discovery of natural gas in the Netherlands in the 1960s, is a situation in which natural resources-rich countries neglect key sectors of their economy (Middleton, 2007). "Dutch Disease" in Nigeria is very apparent in agriculture, solid minerals and even in manufacturing sector.

Crude Oil Production and Exports in Nigeria

Crude Oil Production in Nigeria

The economic activities in the oil sector of a country encompass the exploration and production of crude oil, petroleum exports, refining, marketing and servicing (Genova, 2003). Petroleum exploration is the act of obtaining crude oil from the ground. Petroleum is extracted in detected oil-bearing area by drilling deep wells into the ground. The drilling is done by a rotary rig which is supported by a derrick. When the well reaches an oil-bearing layer where crude oil is found alongside with other resources like natural gas (which is lighter and therefore float above the crude oil) and saline (which is denser than crude oil, hence lies below it), under high pressure crude oil and gas shoot up to earth surface. The crude oil is pumped out and stored in large steel tanks for export or transported through pipelines and tankers to the refineries.

The exploration of crude oil in Nigeria started in 1908, when Nigeria Bitumen Corporation (NBC), a German company was licensed to explore crude oil. The NBC operation sites were located at Ijorebu Ode and Okitipupa of the present day Ondo State of Nigeria and the duration of its' operation was very short as it was terminated at the onset of the World War 1 of 1914-1918. After the World War 11, the exploration activity commenced in earnest and eventually in 1956, crude oil was discovered in commercial quantity in Nigeria by Shell Petroleum Development Company (Shell BP) at Oloibiri in Ogbia Local Government Area, in the present day Bayelsa State. Other Multinational Oil Companies (MNOC) licensed to explore crude oil in Nigeria include Mobil, Tenneco, Chevron, Nigeria Agip Oil Company (Agip), American Oversea Petroleum Company (Texaco) and Elf. As at 1998, about ten foreign oil companies were operating in Nigeria with other fourteen oil servicing companies; of all of them, Shell-BP has the largest concession in oil prospecting and production in Nigeria (Asua and Umo-Udo, 2016). Available data from the Department of Petroleum Resources show that Nigeria has a total of 159 oil fields and 1,481 oil wells in operation. Out of the 159 oil fields, the Coastal Niger Delta Basin in the Niger Delta region has 78 oil fields.

Located mostly in the Niger Delta basin and Offshore, petroleum exists in the form of crude oil, gas (associated and non-associated), condensates and tar sand. The total reserve of crude oil in Nigeria, based on the OPEC Annual Statistical Bulletin (2016) Report, is 37,062million barrels which positioned Nigeria as the 10th in the world and 2nd in Africa. The estimated natural gas reserve is 5,284.3 cubits metre while the estimate of tar sand is about 31% billion barrels of oil equivalent. Following the discovered of crude oil in commercial quantity in Nigeria in 1956 by Shell BP at Oloibiri, Bayelsa State, crude oil production capacity of country which was about 5,000 barrels per a day (bpd) in 1957, has increased steadily although fluctuations do occur sometimes in response to the existing state of the world oil market. As shown in Figure I, crude oil production was 395,687million barrels in 1970, 760,177million barrels and 660.6million barrels in 1980 and 1990 respectively. In 2000, 2005, 2010 and 2014, it was 828.8million barrels, 919.0million barrels, 777.5million barrels and 708.1million barrels respectively. The average daily production capacity is about 2.4 million bpd. The states in Nigeria where crude oil are found in commercial quantity are Abia, Akwa Ibom, BayeIsa, Cross River, Delta, Edo, Imo, Lagos, Ondo, and Rivers States. About 90.1 per cent of crude oil production in Nigeria comes from Akwa Ibom, Delta, Rivers and Bayelsa States while Ondo, Lagos, Edo, Imo and Abia States are responsible for less than 10 per cent of crude oil production. Available data from the Department of Petroleum Resources reveals that in 2017, the contribution of the states to total oil production in Nigeria were 504,000bpd for Akwa Ibom State, 346,000bpd for Delta State, 344,000bpd for Rivers State, 290,000bpd for Bayelsa State, 60,000bpd for Ondo State, 40,000bpd for Lagos State, 33,000bpd for Edo State while Imo State and Abia State had 17,000bpd and 11,000bpd respectively.

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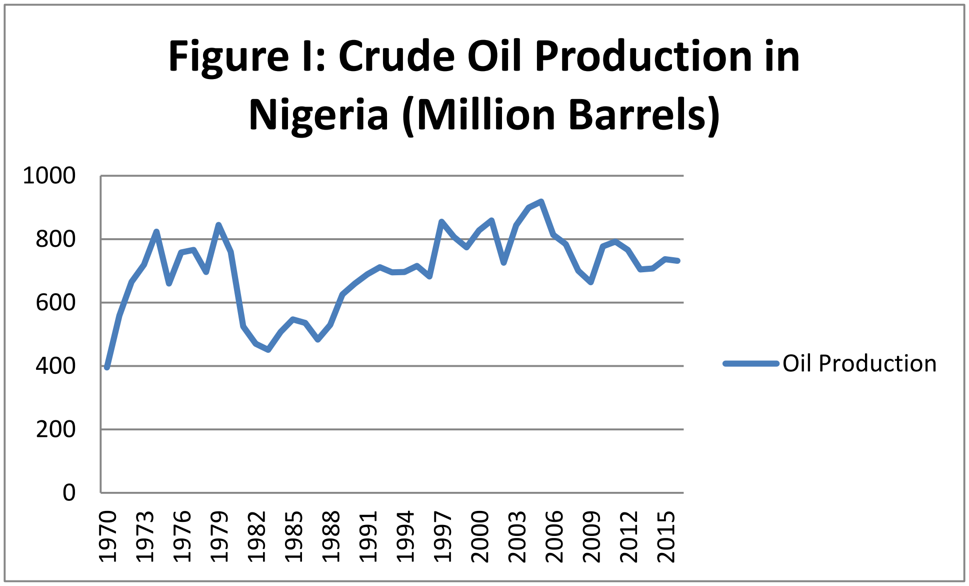

Figure I: Crude Oil Production in Nigeria (Million Barrels)

Source: Sources: (1) CBN Annual Report (various issues)
(2) NBS (2007) (3) CBN (2017)

Crude Oil Exports and Revenue in Nigeria

A crucial aspect of Nigeria's petroleum industry is crude oil exports. Nigeria's crude oil is one of the most high quality and environmentally friendly in the world. Having been classified as "light" and "sweet" because of relatively low density and low sulphur contents of 0.05 to 0.2 per cent; the demand for Nigeria's crude oil in the International Oil Market, most often, is high. Consequently, for many years now, crude oil exports had assumed an increasing trend in Nigeria. Figure II presents Nigeria's crude oil exports and revenue for the period (1960-2016).The Figure reveals that since the discovery of crude oil in commercial quantity in Nigeria, the country has been absorbed by crude oil exports at the expense of non-oil exports. As far back as the early 1970s till date, crude oil exports have remained Nigeria's major export and has assumed over 95 per cent share of the total exports. From 2.7 per cent share in total exports in 1960, crude oil exports increased to 57.6 per cent in 1970, 92.6 per cent in 1975 and 96.1 per cent in 1980. It reached the peak of 98.7 per cent in the year, 2000. In the years 2005, 2010 and 2016, the share of crude oil export in total exports stood at 98.5 per cent, 94.1 per cent and 92.5 per cent respectively (CBN, 2016).

In terms of revenue generation, it has been the major source of government revenue and foreign exchange earnings. The share of oil export in the revenue of the country increased from 58 per cent in 1970 to over 96 per cent between 1980s and the 1990s while the share of non-oil exports dwindled from 97.3 per cent in 1960 to 42.4 per cent in 1970, 3.9 per cent and 3.0 per cent in 1980s

Vol.10, No.6, pp.48-65, 2022

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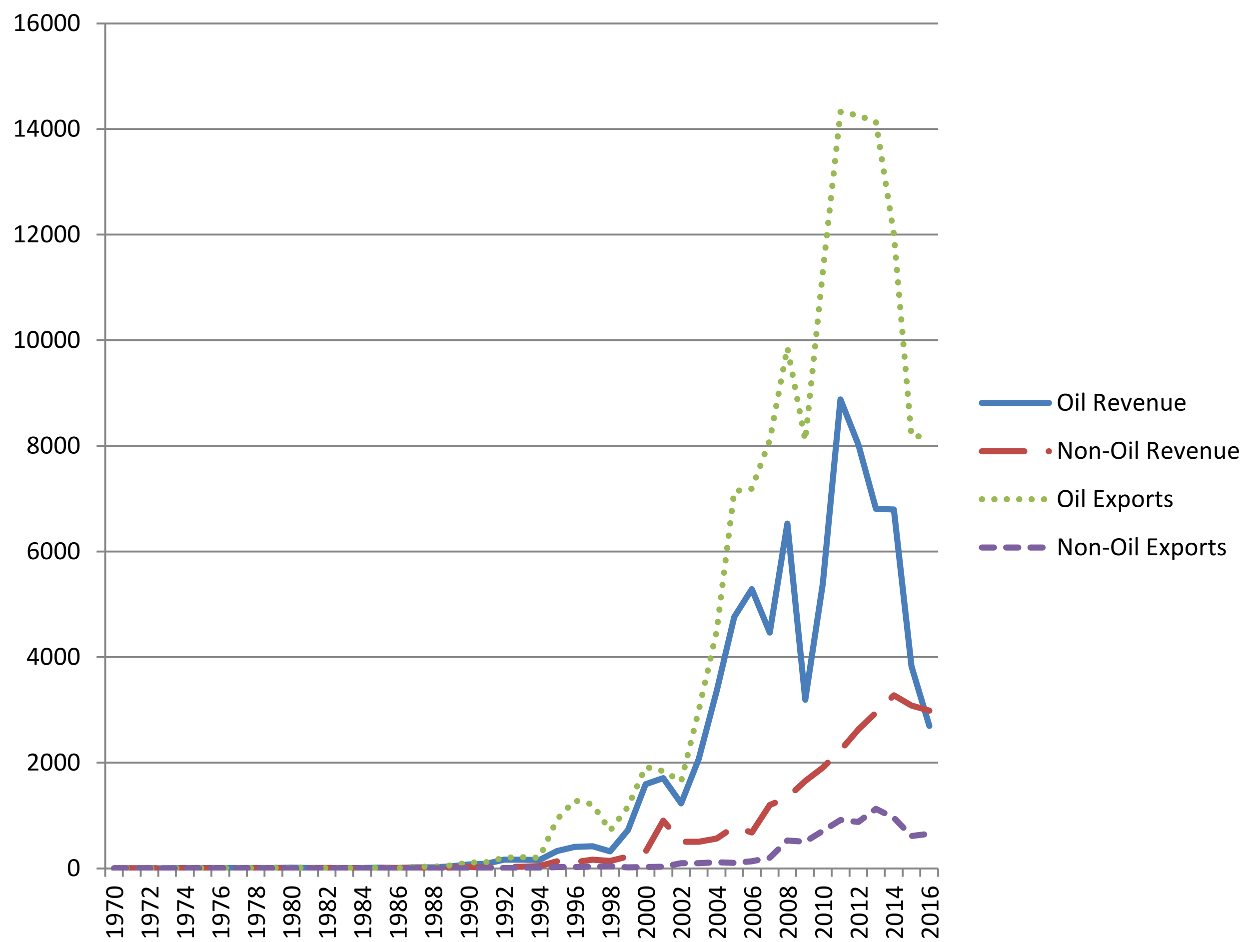
and 1990s respectively. In 2002, oil exports accounted for more than 98 per cent of the export earnings and about 83 per cent of government revenue. The oil export earnings in 2016 reduced slightly to about 93 per cent of the total export earnings of the country.

Figure II: Nigeria's Oil and Non-Oil Revenue , Oil Exports and Non-Oil Exports (₦'b)



Source: (1) CBN Annual Report (various issues) (2) NBS (2007) (3) CBN (2017)

Economic Consequences of Nigeria's Dependence on Crude Oil Exports

Displacement of Agricultural Sector: Agricultural sector was the dominance sector in terms of contribution to output, provision of food, generation of employment, revenue and foreign exchange earnings in Nigeria. It contributed over 64 per cent of the GDP and provided employment to about 60 per cent of the working population, and generated about 90 per cent of foreign exchange

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earnings in 1960s. Nigeria was the leading agricultural nation in the world in the 1960s.The major exports commodities were palm oil and palm kernel in the East, cocoa and timber in the West, and groundnut, ginger and cotton in the North. According to Amoo, Odey, Mbutor and Adamu (2016), the exports of agricultural commodities provided the resources for establishment of major projects like the Ahmadu Bello University, Zaria, University of Nigeria, Nsukka, the television station in Ibadan, the first in West Africa, the impactful free education programme of the government of the Western Region of Nigeria, among others. In contemporary times, agricultural sector in Nigeria has lost this status.

The displacement and replacement of agricultural sector by the oil sector started as far back as the mid-1970s. Monye-Emina (2007) stresses that by the late 1970s, agriculture lost its dominant position to crude oil and natural gas, in terms of its contribution to GDP, exportation, foreign exchange earnings, and contribution to government revenue. It's output deteriorated and the sector stagnated; and Nigeria which was one of the world's leading producer of some agricultural goods, become an importer of food. The non-sustainability in agricultural development emanated from the fact that crude oil exports provide easier source of foreign exchange earnings and revenue to the country. The sudden rise in crude oil prices caused by OPEC's oil embargo to the USA in 1974 following the Arab-Israeli hostilities and other world political developments in the 1970s facilitated Nigeria's revenue windfall from crude oil exports. Crude oil, which was the cheapest energy source in the world, suddenly became expensive, attracting higher prices in the international oil market. The price of Nigeria's Bonny Light crude oil rose to US$38.82 per barrel in 1980, though it felt to US$14.16 in 1986 and between 1987 and 1998, it fluctuated between US$24.04 and US$13.73.

Figure II presents the effect of oil industry on both nation's foreign trade and government finances. The oil revenue rose from about ₦167.0 million in1970 to ₦12,354 million, ₦55,216 million and ₦1,340,000 million in 1980, 1990 and 2000 respectively. In 2005, oil revenue was ₦4,762,400 million. It increased to ₦11,300.5 billion in 2010, ₦6,793.8 billion in 2014 (about7.6 per cent of GDP and 67.5 per cent of total revenue) and ₦8,178.8 billion in 2016. The share of crude oil in the nation's foreign trade gradually rose from 2.75 per cent in 1960 to 57.6 per cent in 1970 and 96.1.0 per cent in 1980. It increased to 97.0 per cent in 1990 and by the year 2000, it reached a peak of 98.7 per cent. In the year 2010 and 2016, the share crude oil exports in the total exports of Nigeria were 94.1 per cent and 92.8 per cent respectively (CBN, 2016). As the oil revenue and export expanded rapidly, non-oil revenue and export, especially the traditional agricultural exports of the country such as groundnut, cocoa, palm oil and kernel, timber, hides and skins waned and were rapidly approaching extinction.

The neglect and abandonment of agricultural sector manifests in many ways, including non-attractiveness of farming as occupation in Nigeria, massive withdrawal of labour force from agriculture and inadequate funding of the sector by the government. This has adversely affected agricultural production in particular and the national economy in general. Agricultural production in the country cannot provide adequate raw materials for agricultural based industries and sufficient food for the populace. For instance, it is disheartening to note that with the discovery of oil, the volume and value of food import in Nigeria has been in the increase. Basic commodities like rice, wheat, fish, vegetable oils, tomato paste, poultry, maize and others, which were produced and could be produced conveniently in Nigeria, are being imported. The value of food import had grown from an average of ₦402.4 million in 1970-1979 to ₦1.4 billion in 1980-1989. It rose to ₦52.4billion in 1990-1999. As at 2015, the value of food import was estimated at ₦167.3billion (CBN, 2016). This has serious adverse effects on the performance of the Nigerian economy. First, it has drained the nation's scarce foreign exchange and crowd-out importation of raw materials, spare parts and machinery for manufacturing industries which the foreign exchange could have been expended on. Secondly, it helps in creating job opportunities for the exporting countries and exacerbating unemployment in Nigeria, the importing country. Thirdly, it compounds the balance of payments problem for Nigeria as well as creates price shock that has affected demand by the poor household (Mobolaji, 2016).

Neglect and Non-Exploitation of Solid Minerals Resources: Just as there are abundant agricultural resources in the country, enormous solid minerals resources are found in Nigeria. As earlier stated, Nigeria is endowed with about ninety nine (99) types of solid minerals and there are over four hundred and fifty (450) solid mineral occurrences, which are located in all the thirty-six (36) states of the federation and the Federal Capital Territory (FCT), Abuja. The solid minerals include metallic minerals such as iron ore, lead, zinc, lithium, copper and silver; special minerals like tantalite and columbite; radio-active metals such as chromite and uranium; precious metals like gold; industrial solid minerals like gypsum, kaolin, limestone, barities, diatomite, dolomile, granite, marble, clay, mica, phosphate, fluorite, kyanite, silica sand and rock salt; gemstones like beryl, sapphire, emrald, topaz, garnet and ruby; and energy solid minerals such coal and bitumen. Between 1953 and 1963, non-agricultural sectors like mining and services had started gaining prominent in Nigeria (Monye-Emina, 2007) and commercial exploitation and exports of the solid minerals like tin, coal, columbite and diamond began to gain momentum. Nigeria was the leading producer of columbite as at 1960. It accounted for over 90 per cent of the world's total output. In the same vein, Nigeria was ranked the 6th largest world producer of tin as well as remarkable exporter of coal. The exploitation and exports of these solid minerals were of great benefits to the country. First, their exports generated substantial foreign exchange earnings to the country which were used for importation of essential machinery and equipment needed in the early days of Nigeria's development. Secondly, it generated substantial proportion of government revenue as well as employment to a sizable working population. Except for only very few cases, the commercial exploitation and export of solid minerals in Nigeria had long ceased with Nigeria's dependence on crude oil exports. For example, in the year 2013, 2014, 2015 and 2016, solid minerals contribution to GDP was only 0.10 per cent, 0.11 per cent, 0.12 per cent and 0.10 per cent respectively whereas oil sector contribution was 12.9 per cent, 10.8 per cent, 6.4 per cent and 5.2 per cent respectively (CBN, 2017).

Environmental Hazards: The activities of oil industry had resulted in serious environmental hazard, especially in the oil producing areas of the Niger Delta. The negative externalities of oil industry activities such oil spillage, gas flaring and waste disposal has resulted in land degradation, deforestation, ecosystem degradation, air pollution and water pollution. These environmental problems are detrimental to health, economic activities and ecological balance as well as agricultural activities. Nigerian agriculture, for example, consists of four sub-sectors, namely crop, livestock, fishery and forestry. Crop production is adversely affected by land degradation effect of oil industry activities. When oil spills on land, cultivated crops die off and the soil is rendered agriculturally unproductive for many years. In most of the states in the Niger Delta region where swampy rice production was predominant, because of oil spillage, swamps had been destroyed and being highly polluted, have been rendered agriculturally unproductive perpetually.

The forest reserve is fast depleted by deforestation and ecosystem degradation while the fishery sub-sector is strongly affected by water pollution and ecosystem degradation. Among the air pollution effects is emission of high content of sulphur into the atmosphere, which is responsible for acid rain. Acid rain is highly corrosive; and has been responsible for quick wear and tear of roofing sheets on houses in the oil producing areas of Nigeria. In addition, excess carbon (iv) oxide (otherwise known as carbon dioxide) is released into the atmosphere, which upsets and reverses the carbon cycle. High concentration of carbon dioxide levels in the atmosphere has devastating effect on the earth's temperature. It enhances greenhouse effect; trapping more energy within the earth's surface and causing warming of the earth surface and lower atmosphere, thereby resulting in global warming and climate change with it's adverse consequences on agricultural production through its impact on rainfall and wind patterns, cloud cover and sea levels. According Middleton (2007), carbon dioxide prevents heat from escaping from the earth's atmosphere, it produces a greenhouse effect, and trapping heat reflected by the earth's surface, hence the description of carbon dioxide as a "greenhouse gas".

Deprivation of Demographic Dividends: Nigeria has a large population and labour force. Based on 2019 United Nations estimated population of about 198.5 million people, Nigeria is the most thickly populated country in Africa. It ranked eighth most populous country in the world with the highest global rate of growth rate of 26.8 per cent between 2000 and 2011(Umo, 2012). Available data from National Bureau of Statistics shows that the population of females is about 49 per cent whereas that of the males is about 51 per cent in both 1991 and 2006 census years. It has a large youthful population of over 40 per cent. The youth in Nigerian context consists of people between the age of 15 and 35 years. The size of Nigeria's labour force (or working population) was 31.6 per cent of the total population between 1991 and 1995 and 31.8 per cent of the total population in1996 - 2000. Between 2001 and 2005, the share of the labour force in the total population was 31.4 per cent while in 2006 – 2010, 31.6 per cent of the total population formed the labour force

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(UNDP, 2012). As at 2012.the working population of Nigeria was about 53.3 per cent (Umo, 2012).
The demographic profile of a country has serious economic implications. It can be a catalyst for enormous demographic dividends when right policy is implemented couple with quality education and institutions that promotes employment and healthy living. The demographic profile of Nigeria elaborated above is indeed rich and could have earned her demographic dividend as it did in the growth miracle of the East Asian Tigers and that of Northern Ireland. Nigeria failed to reap demographic dividends for a number of reasons. First, Nigeria has been short-changed by continuous reliance solely on petroleum sector and neglect of other sectors of the economy. The crude oil industry has not been able to create sufficient employment opportunities for the teaming unemployed workforce in Nigeria. In addition, it has created social tension in Nigeria by worsening the distribution of income through large wage differentials between workers in its employ and those employed in the local firms in the country and government establishments. The wage differentials increase income inequalities and create social tension in the country and these had been detrimental to the development of Nigeria.

Secondly, overdependence on petroleum resources and its petrol dollars had been responsible for non-diversification of the Nigerian economy in the true sense of it. It has seriously militated against the deepening of the capacity of the economy to generate sufficient employment for the growing labour force in the country. Nigeria's economic growth, for many years, had been a jobless growth and has been driven mostly by rising global oil prices. This is evidenced by the fact that whenever crude oil prices increase in the international market, the Nigerian economy will experience significant growth but when global oil prices decline, Nigerian economy is thrown into recession. This had been the Nigerian experiences over the years. For example, from 1982 to 1986, following a fall in global crude oil prices which resulted in drastic reduction of Nigeria's oil revenue earnings from US$25.4 billion in 1980 to US$6.0 billion in 1986 (CBN, 2002), the Nigerian economy was thrown into serious recession which culminated into the introduction of Structural Adjustment Programme (SAP) in 1986. On the other hand, from 1999 to 2013, the increase in crude oil prices in the International market resulted in a remarkable increase in government revenue from crude oil exports and consistent growth in economy evidenced by pronounced increase in GDP. However, this growth did not translate into improvement in the welfare of the people. The rate of unemployment and poverty incidence was still very high, and life expectancy was low. For example, life expectancy which was 54years in 2010 reduced to 47.6years in 2012, 2013 and 2014. The unemployment rate which stood at 13.1 per cent in 2000 increased to 21.1 per cent in 2010 and 23.9 per cent in 2011 before reducing drastically to 10.6 per cent in 2012 and 7.8 per cent in 2014. The official unemployment rate of 7.8 per cent in 2014 is doubtful because it is at variance with the reality on ground. The poverty incidence which was 51 per cent in the year 2000, increased to 69.0 per cent in 2010 and 71.5 per cent in 2011 before stagnating at 72.0 per cent in 2012, 2013 and 2014.

Vol.10, No.6, pp.48-65, 2022

Print ISSN: 2053-2199 (Print),

Online ISSN: 2053-2202(Online)

Excessive External Dependence: Overdependence on petroleum exports has resulted in excessive dependence of the Nigerian economy on external forces thereby reducing its sustainability and endangering its self-sufficiency. First, the overdependence of the economy on external forces is reflected on the share crude oil exports earning in the total exports earning of the country, crude oil revenue contribution to the total government revenue and crude oil earnings contribution to foreign exchange earnings. The share of oil exports earning in Nigeria's total export earning was 88.5 per cent between 1970 and 1975, 96 per cent between 1980 and 1998, and 94.8 per cent between 2011 and 2016 (CBN, 2003; 2016). The high rate of dependency coupled with unstable oil prices in the international market has caused extreme volatility in the economy; rendering development plans, budgets and programmes unsustainable. Secondly, as a result of petro-dollars, there has been excessive imports dependency. The Nigerian economy is characterized by unnecessary and suboptimal importations of goods and services, even those items that can be conveniently produced locally, with resultant distortion of the nation's balance of trade and devaluation of her currency, naira (Imandojemu, 2017). For example, the total imports of the country increased from ₦8,164.0billion in 2010 to ₦11,076billion in 2015 and because of economic recession experience in the country, it slightly fell to ₦9,480.4billion in 2016 (CBN, 2016). The import/GDP ratios of Nigeria were 14.95 per cent in 2010, 19.12 per cent in 2011, 16.05 per cent in 2015 and 13.96 per cent in 2016. Imports dependency represents an unsustainable leakage of funds from a country since payments made are to the oversea entities. In addition, it constitutes a drag on the economy.

A disturbing aspect of Nigeria's imports is that despite the fact that Nigeria is a major producer and exporter of crude oil, she is also a major importer of refined petroleum products. Fuel importations which stood at about N0.3 billion in 1990 assumed an increasing trend. It increased from ₦1,757.1billion in 2010 to ₦3,064.3billion in 2012. In 2016 fuel imports was ₦2,384.4billion (CBN, 2016). The pertinent questions that require answers concerning the Nigerian four refineries are: Are they too old to function again? If they are too old, what prevents the government from constructing new refineries from excess oil revenue? If the government cannot build new refineries, why are private investors not licensed by the government to build refineries in Nigeria in order to stop importation of fuel? Or, is fuel importation in Nigeria serving some interest? There is no gainsaying that fuel importation is a major drainage on the nation's foreign exchange reserve.

Exposure of the Nigerian Economy to Unhealthy Shocks: It has been observed that continued dominance of oil exports made the Nigerian economy susceptible to external shocks. Oil price shocks are sudden price fluctuations resulting from changes in either the demand or supply side of the international oil market (Hamilton, 2003). In Nigeria, oil price is a major determinant of government revenue and expenditure, foreign exchange availability and the output; hence, oil price shocks make these macroeconomic variables highly volatile. Consequently, fiscal management becomes complicated resulting in macroeconomic instability. Oil price shocks could be positive (a rise in oil prices) or negative (a fall in oil prices). In times of positive shocks, critical issues like fiscal sustainability, intergenerational equity and fiscal prudent are not always given due attention because there is always pressure to spend the windfall oil revenue. The impacts created in the economy by positive shock include overvaluation of the foreign exchange rate. The overvaluation reflects an increase in relative price of non-traded goods with factors of production being shifted away from the tradable sector into the production of the non-tradable. This in turn, increased the oil dependency of the economy and results in the popular "Dutch disease" (Udo, Ebong and Ekpeyong, 2007). Available data show that, so far, about five oil price shocks had been experienced in Nigeria between 1972 and 2017 (ie 1972-1978, 1979-1980, 1990, 2003-2006, and 2014-2017). The shocks of 1972-1974, 1990, and 2003-2006 were positive while that of 1979-1980 and 2014-2017 were negative caused by a crash in the world oil market prices. Negative oil shocks results in drastic reduction in the foreign exchange inflow into the economy. This weakened the external reserves position through low accretion and drawdown. The low level of external reserves limits the intervention in the foreign market by the Central Bank of Nigeria (CBN); and with growing foreign exchange demand pressure, resulting in further depreciation of the naira exchange rate, contraction in imports, increased cost of production, constrained growth of real sector, increased inflation rate and low standard of living.

Elusive Sustainable Development: Sustainable development refers to development that meets the need of the present without compromising the ability of future generations to meet their own needs (Akatugba and Ogisi, 2005). The principles governing sustainable development as highlighted in Evbuomwan (2016) include:

(i) the principle of intergenerational equity - which advocates the necessity to preserve nature for the benefit of future generations;

(ii) the principle of sustainable use - which implies that natural resources should be exploited in a sustainable or prudent or rational or wise or appropriate manner;

(iii) the principle of equitable or intra-generational equity - acknowledges that the use by the one sector must take account of other sectors, and

(iv) the principle of integration - suggests that the environmental consideration be integrated into economic or other development plan, programmes, and projects, and the developmental needs are taken into account in applying environmental objectives.

The operation of oil industry in Nigeria seems not to pay attention to the principles governing sustainable development highlighted above. Consequent upon the activities of oil industry, there have been serious environmental problems which are inimical to health, economic activities and ecological balance in Nigeria, especially in the oil producing areas. The environmental effects of oil industry activities in Nigeria, as earlier mentioned, are land degradation, air pollution, water pollution, deforestation and ecosystem degradation. These are caused by oil spillage, gas flaring and improper waste disposal. Oil spillage, which is accidental and unwanted discharge of petroleum products from vessels, pipes or drilling well into the environment during the course of drilling, producing, processing or transporting crude oil, produces serious harmful effects on

Vol.10, No.6, pp.48-65, 2022

Print ISSN: 2053-2199 (Print),

Online ISSN: 2053-2202(Online)

organic and inorganic matters whenever it occurs. The affected areas are always exposed to hazards that are inimical to health, means of livelihood, aquatics lives, agricultural activities and output, and development. For instance, it causes long lasting damage to the soil thereby leading to incidence of soil infertility and poor yields from land. It destroys vegetation and swamps (and it's inhabitants) and consequently end-up in deforestation and ecosystem degradation. It pollutes available streams, creeks and even underground water, hence making water from them useless. Gas flaring by oil companies through which various particles, chemicals and gases are emitted causes air pollution. For example, dangerous chemical like sulphur is emitted into the atmosphere which is responsible for acid rain. There is emission of high concentration of carbon dioxide, a green-house gas, into the atmosphere through fossil fuel burning and gas flaring which results in global warming and eventually climate change. Hence, overdependence on petroleum sector is capable of making sustainable development in Nigeria elusive.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This study attempted an examination of the economic consequences of Nigeria's dependence on crude oil exports. The study adopted a qualitative analysis approach and made use of secondary data. The findings of the study established that since the discovery of crude oil in large quantity in Nigeria, the country has been trapped in the illusions of oil wealth and the ease of obtaining foreign exchange earnings and government revenue through crude oil exports. Consequently, the country has progressively over-depended on crude oil exports thereby resulting in the displacement and replacement of the non-oil sector exports (mostly agriculture and solid minerals) by crude oil exports. The oil sector has remained as an enclave in the Nigerian economy with no strong forward or backward linkages with aforementioned non-oil sectors. In addition, successive governments have failed to use oil revenue and excess crude oil income effectively and sufficiently to develop these non-oil sectors of the economy and as a result, these important sectors had remained neglected, unexploited and abandoned over the years with adverse consequences on the Nigerian economy. In particular, the study identified ways which overdependence on crude oil exports has impeded agricultural sector to include the reduction of agricultural production through environmental hazards and displacement of agricultural sector through non-attractiveness of farming as occupation in Nigeria, massive withdrawal of labour force from agriculture and inadequate funding of the sector by the government. This study observes that, in addition to depriving the country of additional foreign exchange earnings and revenue from agricultural and solid minerals exports, overdependence on crude oil exports has resulted in excessive external dependence, deprivation of the country of demographic dividends and shrink the capacity of the Nigerian economy thereby perpetuate high level of unemployment, poverty, low output and income, and income inequality in the country. In addition, it has exposed the economy to unhealthy shocks as well as makes sustainable development elusive.

Vol.10, No.6, pp.48-65, 2022

Print ISSN: 2053-2199 (Print),

Online ISSN: 2053-2202(Online)

In view of the fact that crude oil is a non-renewable and depleting natural resources which cannot be reproduced and is subject to extinction, overdependence on crude oil exports at the expense non-oil sectors is not economically healthy for Nigeria. It is therefore, recommended that the government should make frantic effort, evolve and implement appropriate and workable policies toward the diversification of the Nigerian economy. The policies and institutions already in place for this purpose should be overhauled, strengthen and made effective. For a period of seven to ten years, a sizeable percentage of government earnings from crude oil exports should be devoted to the development of agriculture and solid minerals sectors to bring them to a reasonable level comparable to that of other emerging economies. Proper development of agricultural sector for greater output will stem food importation and provide raw materials for manufacturing firms in the country. A proper national policy on the solid minerals exploration and refining should be formulated and strictly followed; and the same vigor government employed in the development of petroleum sector should be adopted in the case of solid minerals development.

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