



Research Article

Volume-02|Issue-05|2022

Analyzing the Role of Foreign Trade (Oil Exports) in the Growth of Nigerian Economy from 2011 - 2020

Mohammed Sanusi Yuguda*¹, Ibrahim J. Victor², & Maimuna Musa Olorunnipa²

¹Department of General Studies, College of Education Zing, P.M.B 1021, Zing

²Department of Economics, College of Education Zing, P.M.B 1021, Zing

Article History

Received: 03.09.2022

Accepted: 13.09.2022

Published: 28.09.2022

Citation

Yuguda, M. S., Victor, I. J., & Olorunnipa, M. M. (2022). Analyzing the Role of Foreign Trade (Oil Exports) in the Growth of Nigerian Economy from 2011 - 2020. *Indiana Journal of Economics and Business Management*, 2(5), 1-10.

Abstract: Foreign trade is the exchange of products and services between two or more countries. It is a network that facilitates economic transactions between several nations. This study investigates the impact of foreign trade on national development, with a focus on oil exports. The method would essentially aid in measuring the amount to which foreign trade has supported economic growth in Nigeria, with a concentration on oil exports. As a result, the input data required within the scope include real GDP and oil revenue for the period under review. The input data serve as an independent and dependent variable that encourages economic progress. The coefficient of determinant of the level of GDP function is estimated from the analysis as $Y = 75.01 - 0.20X_1$; Where 75.01 denote β_0 and (-0.20) denote β_1 which coincides with the a priori. Furthermore, any change in the value of X_1 will result in a commensurate (increase/decrease) in the value of total GDP (Y). The regression analysis demonstrates positive relationship exists between Real GDP and oil exports. The determinant coefficient (R^2) was used to determine the goodness of fit of the regression line using the Ordinary Least Square method. Thus, the regression equation explains at least 50% of the total variation in GDP, while the error term U_i explains the other 50%. With the evidence far from conclusion, it is persuasive. Trade effects on employment and income, which were most likely negligible in the past, now look to be important. According to our data study, the regression equation only explains 50% of the fluctuation in our dear country Nigeria's Real GDP, with the remaining 50% covered by the error term. The benefits of trade are such that (under very general conditions), it can benefit everyone while harming no one. The researchers recommended that the Nigerian government should do the following: Ensure that trade agreements are drafted with full democratic accountability and citizen engagement, both within the country and among its trading partners.

Keywords: Foreign Trade, Oil Exports, Growth, Nigerian Economy.

Copyright © 2022 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0).

INTRODUCTION

Agricultural commodity exports, primarily cocoa, groundnuts, palm oil, and palm kernels, earned more than the cost of merchandise exports prior to 1950. The country's low income, lack of industrialization, negligible use of foreign inputs in agriculture, and sterling bloc restrictions continue to limit import demand. Nigeria has continued to specialize in foreign products (food, raw materials, minerals, and organic oils and fats) and to import secondary products, such as chemicals, machinery, transportation equipment, and manufactures, for use in the development of the country. Total trade increased by 10.43% in the third quarter of 2021 compared to the second quarter of 2021, and by 58.59% on year 2020 (NBC, Foreign Trade in Goods Statistics Q3 2021).

Total import value was N8, 153.79 billion in Q3 2021, and 17.32% higher than in Q2 2021 and 51.47% higher than in Q3 2020. Imported agricultural goods were valued at 21.01% more than in Q2 2021 and 56.74% more than in Q3 2020. The value of Raw Material imports was 9.08% higher than in Q2 2021 and 29.06% higher than in Q3 2020. Imports of solid

minerals increased by 10.93% in Q3 2021 compared to Q2 2021 and by 53.42% compared to Q3 2020. Imports of energy goods increased by 408.51% in Q3 2021 compared to Q2 2021 and by 24.14% compared to Q3 2020. The value of manufactured goods imports was 13.98% higher in Q3 2021 than in Q2 2021, and 42.73% higher than in Q3 2020. The value of oil product imports was 34.60% higher than in Q2 2021 and 113.18% higher than in Q3 2020 (National Bureau of Statistics (NBS), Foreign Trade in Goods Statistics Q3 2021).

Total exports were valued at \$5,130.30 billion in Q3, 2021, representing a 1% increase over Q2 2021 and a 71.38% increase over Q3 2020. The value of agricultural goods exported in Q3 2021 was 5.9% lower than in Q2 2021 but 31.0% higher than in Q3 2020. The value of raw material exports increased by 135.2% in Q3 2021 compared to Q2 2021 and by 1,241.1% compared to Q3 2020. The value of solid minerals exports increased by 22.7% in Q3 2021 compared to Q2 2021 and 222.8% compared to Q3 2020. The value of energy goods exports in Q3 2021 was 58% lower than in Q2 2021 and 34.5% lower than in Q3 2020. Exports of

manufactured goods were 39.4% higher than in Q2 2021 and 121.6% higher than in Q3 2020. Crude oil exports were 1.3% lower in Q3 2021 than in Q2 2021, but 66% higher than in Q3 2020. Other oil product exports were 3.6% higher in value in Q3 2021 than in Q2 2021 and 57.8% higher than in Q3 2020. (NBC, Foreign Trade in Goods Statistics Q3 2021). Commodity exports (oil and natural gas) are the driving force behind Nigeria's growth, accounting for more than 91% of total exports. In 2014, Europe accounted for 43% of total sales, while Asia accounted for 29%, America accounted for 13%, and Africa accounted for 12% (<https://tradingeconomics.com/nigeria/exports>).

Nigeria's external trade imbalance, according to the National Bureau of Statistics, is 19.76 billion US dollars, compared to N1.94 trillion in 2021. Because Nigeria's economy is still import-driven and relies primarily on petroleum and agricultural exports to fulfill foreign exchange revenues, this suggests a negative trade balance. In 2020, the country saw its first year trade deficit in four years, with imports outpacing exports by N7.37 trillion. The NBS revealed in its report, "Foreign Trade in Goods Statistics (Q4 2021)," released on Tuesday, that the country's total merchandise trade stood at N11,707.20 billion, an 11.79 percent increase over the value recorded in the third quarter of 2021 and a 74.71 percent increase over the fourth quarter of 2020.

The exchange of goods and services between two or more countries is referred to as foreign trade. It is a network that connects various nations in business transactions. This study examines the impact of foreign trade on national development, with a particular emphasis on oil exports. The value of livestock (animals) exports in 2011 and 2020 was N 1,112,175 million and N 112,028.86 million, respectively (Nigerian foreign trade summit, 2005). On the other hand, the value of crude oil exports stood at N 4,831,452,925 (2014) and N 6,570,653.062 (2021) (Nigerian Economic Summit Group, 2020), representing 90.04% and 96.54% of total exports, respectively. As a result, N 671,861,902 and N 556,664,923 were spent on imports of machinery and transport equipment, representing 42.64% and 40.62% of total expenditure, respectively. As a result, it is important to note that Nigeria has greatly benefited from foreign trade, particularly oil exports. Oil is a very versatile and non-reproductive, depleting natural resource that is a critical input into modern economic activities, accounting for approximately 50% of global energy demand. Oil-exporting developing countries rely solely on oil reserves for foreign exchange earnings and government budgets, with most cases reaching 90% or higher.

The petroleum industry encompasses crude oil exploration and production, as well as petroleum refining; marketing and servicing-specific policy

objectives with regard to petroleum have included government participation in mining operations, diversification, and regulation of mineral resource development in order to maximize their contribution to the overall national development effort.

Despite all efforts to diversify the economy, oil remains the major source of revenue for the nation, which is used to provide social amenities, infrastructure, and other capital and recurring government expenditure. As a result, this study assesses the extent to which oil exports contributed to Nigeria's economic development between 2011-2020.

Aim and Objectives of the Study

The aim of this research work is to analyze the impact of foreign trade (oil exports) to the growth of the Nigerian economy. Thus, the objectives are:

- To identify expenditures initiated with oil earnings in order to boost the Nigerian economy's growth.
- To reveal the composition of Nigeria's foreign trade in the oil sector.
- To project how oil exports have influenced the Nigerian economy's spending patterns.

CONCEPTUAL FRAME WORK

Trade is a growth system in any economy. This is clear since industrialized countries have generally attributed growth levels to trade liberalization and multilateral cooperation with less developed countries, and foreign commerce has historically been a driving force behind economic expansion. In 1958, the World Bank undertook the first complete evaluation of Nigeria's energy resources. The generated study formed the basis for Nigeria's initial energy predictions. However, the petroleum sector became more enticing with the massive growth of the energy supply base as a result of rising oil production in the 1970s. Oil had a tremendous impact on the lives and fortunes of Nigerians back then. As the world's most traded commodity, oil exhibits a highly apparent interplay between policy and economics in determining its investment, production, trade, and pricing policies. Petroleum is defined in both a standard Nigerian oil mining lease and Section 14:1 of the Petroleum Act 1969 as mineral oil (any related hydrocarbon or natural gas as it exists in its natural state in strata, and does not include coal, bituminous, or other stratified deposits from which oil can be extracted by destructive distillation) (Etikerentse, 1985).

The most important way for a nation to grow rich and strong, according to mercantilists, is to export more than it imports. According to Hale, because Nigeria's whole economy is based on oil revenue and the country has very significant oil reserves, the country has a great potential to establish a strong and thriving economy solely on the basis of massive oil reserves. Unfortunately, oil earnings have failed to alleviate

poverty in the country, which was among the lowest in the world until 2002. While the Nigerian government did set targets for some associated expenditure, inflation, and privatization, he observed that very few of these reforms were really implemented, and as a result, the International Monetary Fund (IMF) terminated the stand-by arrangement with Nigeria. Hale also claimed that political insecurity and corruption impede economic development. The study therefore concluded that, in order to speed economic growth, Nigeria should minimize its reliance on oil and focus on the development of other sectors such as agriculture, energy, transportation, and manufacturing.

Obadina (2010) asserted that the country has a high potential for economic growth due to its vast oil reserves. He also noted that, as a result of its management heritage, the country still has serious issues such as infrastructure, high levels of corruption, and inefficient resource development. Oil, rather than being a boon to the economy, has become a huge source of debt. The country bears a hardship as a result of fluctuating oil prices in the global oil market, since it must pay a substantial sum for its import bills. Onayemi (2004) put out that Nigeria's economy is overly reliant on oil and is stagnating due to contradictions in macroeconomic strategies for the growth of various sectors of the economy. When the government exclusively works to protect the interests of oil firms, the price of oil does not remain affordable, and producers must pay more for the energy resources used in the manufacturing process. When there is news of the discovery of additional crude oil wells in the country, foreign investors begin to pay attention, resulting in an increase in Foreign Direct Investment (FDI) as well as the employment rate. In this way, Nigeria's economy is determined by oil production and oil prices. As a result, it is clear that Nigeria remains heavily reliant on oil, which has accounted for 80% of its foreign exchange over the last four decades. This policy has proven to be highly detrimental to the country because fluctuations in oil prices have a severe influence on the economy, producing some level of instability and uncertainty. The government ignored non-oil sectors, leaving Nigeria as the region's last industrialized country.

Concept of Nigeria Foreign Direct Investment (FDI)

Nigeria attracts the most Foreign Direct Investment (FDI) in Africa. Foreign Direct Investment inflows have increased dramatically over the last two decades, from USD 1.14 billion in 2001 to USD 2.1 billion in 2014. According to the United Nations Conference on Trade and Development (UNCTAD), Nigeria's FDI reach USD 2.39 billion in 2020, making the country the world's nineteenth largest recipient of FDI.

Nigeria's most important source of FDI has always been the home countries of the oil majors. According to the most recent numbers available, the

United States had a USD 3.4 billion investment portfolio in Nigeria's oil sector through chevron, Texaco, and Exxon Mobil in 2008. Another important FDI partner is the United Kingdom, which is one of shell's host countries. UK FDI into Nigeria accounts for roughly 20% of overall foreign investment in Nigeria. As China wants to extend its economic links with Africa, it is also becoming one of Nigeria's most important sources of FDI; Nigeria is China's second largest trading partner in Africa, trailing only South Africa. China direct investment in Nigeria is now estimated to be worth over USD 6 billion, up from USD 3 billion in 2003. 75% of China's FDI in Nigeria goes to the oil and gas sector. Italy, Brazil, the Netherlands, France, and South Africa are all key contributors of FDI (Obadina, 2010).

Concept of Investment Framework and Bodies

The Nigerian Investment Promotion Commission Act of 1995 established the basis for Nigeria's participation policy. Under the Act, 100% foreign ownership is permitted in all industries except oil and gas, where investment is limited to existing joint ventures or new production sharing agreements. Foreign and domestic investments are forbidden in a few industries critical to military clothing. Profits and dividends can be repatriated in full by investors (Obadina, 2010).

Concept of Nigeria Economic Development

During the 1990s, the agriculture sector was the subject of significant development attention, with food self-sufficiency as the goal. Agriculture was the focus of a separate three-year development plan in 1990, with governmental and private investment targets centered on the family farmer. Price stabilization programs and schemes to rejuvenate the palm oil, cocoa, and rubber subsectors were included in the program. Agricultural Development programs contributed throughout the decade, although goal implementation was problematic. The majority of the country's wheat is still imported from the United States. Using the output of the nation's refineries, an integrated petrochemical sector was also a focus; Nigeria produced benzene, carbon black, and polypropylene. It was predicted that the construction of liquid natural gas facilities would result in the production of methanol, fertilizer, and domestic gas. Throughout the 1990s, Nigeria's refineries ran at less-than-optimal rates.

The government supported a program of local sourcing in the manufacturing sector, in which locally produced resources were turned into finished products. Manufacturing accounted for less than 1% of the gross domestic product in 1999 (GDP). By the early 2000s, the administration was more concerned with preventing corruption and controlling the public budget than with economic progress. Nonetheless, the Niger Delta Development Commission (NDDC) was established to coordinate the region's economic and social

development. In 2001, Nigeria's foreign debt was estimated to be over \$28.5 billion, with a major amount of that being interest and payment arrears. In the early 2000s, the Obasanjo government supported private-sector-led, market-oriented economic growth and initiated economic reform measures. Privatization of state-owned firms across the continent a stand-by agreement with the International Monetary Fund (IMF) established in 2000 expired in 2001, as the government's economic reform program stalled. These were hints that the country's new IMF program will be negotiated between 2003 and 2014.

Concept of Foreign Trade and Investment

Nigeria has led the way in liberalizing its economy in recent years in order to meet the requirements of international financial institutions and multilateral trade agreements. Trade liberalization has resulted in inexpensive imported products (which are easily made in Nigeria) being dumped on the Nigerian market. This has hampered local productive capacity and resulted in a significant level of unemployment. Thus, trade and investment programs were created to help small-scale producers, entrepreneurs, and local industrialists improve their livelihoods. Its goal was to ensure that local, regional, and global markets, as well as investors and policymakers, take national and regional development priorities more seriously. Foreign trade serves as the foundation for international acquisition of not only goods but also services. In this sense, skill training encourages investment and, as a result, trade, resulting in increased economic development.

Objectives of Trade and Investment Programs

The objectives of trade investment programs are as follows:

- The Nigeria trade network promotes enhanced participation by producer groups in the formation of trade and investment policies in Nigeria.
- Increasing the capability of producers in the economy's low-key industrialized sectors.
- Improving Nigeria's policymakers' and trade authorities' capacity to create and implement pro-poor trade policies that make it easier for small-scale entrepreneurs to access markets.

Concept of Trade Effects on the Nigerian Economy

Foreign commerce has an impact on the economy because of its ability to generate economic growth and international transformation. Foreign trade has diversified the Nigerian economy, particularly its export base, and, to some extent, liberalized imports, allowing the government to view it as a sector that supports growth through global engagement, particularly in terms of trade. Nigeria received a total of USD 20.43 billion in 2020 from crude oil sales alone, at an average price of US \$46.86 per barrel and an estimated daily sale of 1.79 billion barrels. Nigeria's oil exports are primarily bound for the United States and

Western Europe, with Asia and Latin America becoming increasingly important. Nigeria produced an average of 7,000 barrels of crude oil per day in 2021, accounting for 2.59% of global output and a -3.5% decrease from 2008. Nigeria, Algeria, Angola, and Libya account for the majority of Africa's oil production.

Concept of State of the Oil Sector

The oil sector in Nigeria is organized into three primary sub-sectors: upstream, downstream, and gas. The downstream sector, which is the domestic economy's distribution arm and last consumer of refined petroleum products, has been the most problematic over the years. Because of the never-ending product supply crisis, the government decided to de-regulate the downstream sub-sector in 2003. However, the method in which it has been executed has been contentious due to its disregard for Nigeria's economic reality.

JV oil production accounts for over 95% of Nigeria's crude oil production. With a 55% government stake, Shell controls the largest joint ventures in Nigeria, producing nearly 50% of Nigeria's crude oil (through the Nigerian National Petroleum Corporation, NNPC). The other JVs, in which the NNPC owns 60%, are operated by Exxon Mobil, Chevron Texaco, EN/Agip, and Total final Elf.

As seen in the preceding section, which highlights the contribution of oil to some macroeconomic variables, the country's overdependence on oil has made it vulnerable to the vagaries of the international market. Since the "imperfect" deregulation of the downstream part of the Nigerian oil industry in 2003, the importance of oil in the typical Nigerian's mindset has grown. With the recent spike in global crude oil prices, which generated greater foreign profits for Nigeria but also increased the expense burden on imported refined petroleum products, the paradox is more obvious. Such inconsistencies (or aberrations) make the Nigerian economy appear weird at times, as policies appear to ignore what appears to be clear. Due to regional, political, or rent-seeking selfish aims, the intended to rectify the system's deficiencies and weaknesses end up being insufficiently defined and/or implemented.

Clearly, it is the same rent-seekers that constantly stymie domestic refinery reactivation, forcing Nigeria to rely on imported refined products to meet domestic demand. Nigeria currently has four refineries, totaling 445,000 barrels per day of installed refining capacity (bpd). The first Port Harcourt Refinery, with a capacity of 35,000 bpd, opened in 1965 and was later expanded to 60,000 bpd. The Warri Refinery debuted in 1978 with a refining capacity of 100,000 barrels per day, which was later upgraded to 125,000 barrels per day in 1986. The Kaduna Refinery debuted in 1980 with a refining capacity of 100,000

barrels per day, which was later upgraded to 110,000 barrels per day in 1986. The second Port Harcourt Refinery, with a processing capacity of 150,000 bpd, opened in 1989 with the intention of supplying the domestic market while also exporting surplus. These refineries' overall capacity exceeds domestic demand for refined products, the most noteworthy of which is premium motor spirit (gasoline), which has a daily demand of 33 million liters.

The refineries, on the other hand, are operating at a fraction of their installed capacity, having been abandoned during the military rule, avoiding the routine and mandatory turnaround maintenance that would have made product importation unavoidable. Despite imports, recurring product shortages have bolstered the case for deregulation of Nigeria's downstream oil sub-sector. The known gas reserves in Nigeria are estimated to be greater than 170 trillion standard cubic feet (scf), making it more valuable than oil. Aside from that, different energy sources (both renewable and non-renewable) have become crucial in economic policy planning. Certain gas usage initiatives were established in response to the government's decision and insistence on gas flare out in 2008. The same can be said for fiscal deficits in relation to GDP. The pattern of this ratio indicates the optimism that comes with an increase in oil money, causing the government to engage in wasteful spending or needless activities. Deficit spending nearly invariably leads the government to borrow from the Central Bank through the process of Ways and Means Advances, which eventually turn into short-term debt instruments that are extremely expensive to service at market rates.

In general, the Nigerian economy's oil sector faced (and continues to face) the following issues between 2011 and 2020:

- In comparison to its potential, the sector has received relatively little investment.
- The Federal Government's cash payment delays necessitate JV operations in the upstream
- Sub-sector, with a focus on maintenance rather than growth.
- High production technical costs due to low domestic technological development.
- Petroleum products are overpriced for domestic consumption.
- Crisis-imposed constraints and host-community-caused production disruptions
- Environmental degradation as a result of associated gas flaring
- Subsidy policy for kangaroos
- Commercialization of NNPC for political reasons

At this point, there is enough evidence to investigate how petroleum oil has influenced (or perhaps induced) economic policy formulation in Nigeria. As much as possible, major economic policies implemented since Nigeria's political independence

would be scrutinized in light of the state of the oil sector. This should provide a solid foundation for making a few specific recommendations for reducing dependency.

Concept of Export Incentives

The goal of fiscal policy in terms of exports has been to diversify the century's export base through trade promotion, particularly in non-oil products. Duty drawback schemes are among the export schemes. The government established export pre-shipment inspection services in 1996. The goals were to ensure that the dwindling qualities of Nigeria's domestic exports were properly recorded in order to ensure proper repatriation of export proceeds. Because of its ability to create jobs, raise income, expand markets, facilitate competition, and disseminate knowledge, the government saw trade as the primary engine of its development strategy. Its trade policy is aimed at increasing the competitiveness of domestic industries in order to encourage local value addition while also promoting and diversifying exports. Trade policies also seek to create an environment conducive to increased foreign capital inflows and the adoption of appropriate technologies. In implementing its trade policies, Nigeria has reaffirmed its commitment to adhere to its multilateral and regional obligations. While foreign trade and policies have aided the country's economic development, crude oil remains the most important contributor to total earnings.

THEORETICAL FRAMEWORK

Foreign trade is the network that connects two or more countries in business transactions. In the 1980s, Nigeria liberalized its trade policies significantly. Import quotas have been eliminated, and the Nigerian naira has been converted to a tariff rate of less than 10%. Given these changes and the remaining export subsidies, Nigeria has removed the anti-export bias from its external incentive regimes on average. Several previous studies have examined the impact of Nigeria's import substitution trade policies in the 1970s and early 1980s trade liberalization (Gately, 1984). Beginning with Nigeria's relatively liberal trade regimes in the late 1980s, we use a 40-sector computable general equilibrium model to consider additional trade liberalization options now available to the Nigerian government. The first option is to liberalize the current Obasanjo regime across the board. Nigeria would completely reduce or eliminate its trade distortions under this option. This is reflected in its import tariffs and export subsidies. The second option is to consider sectoral tariff liberalization or export subsidies. In this regard, we assess Nigeria's implementation of tariff redirection and export subsidies in the late 1980s. The analysis of remaining trade barriers yields one of our most important findings:

First, best rules of thumb that may be approximate for highly distorted economies are not necessary for economies as liberalized as Nigeria's (other developing countries that have achieved a

relatively liberal regime in the 1980s include, Turkey, Chile, Indonesia, Mexico and Poland). Piecemeal cross-border tariff reductions in Nigeria, in particular, are not always beneficial from a welfare standpoint and must generally be coordinated with export subsidy reductions to ensure welfare gains. This explains why, as part of his current trade policies, President Obasanjo travels to some of the world's most advanced countries. We show that, because there is no anti-export bias, the main remaining distortion in the trade regime stems from the dispersion of external incentives. The export subsidy structure is the primary source of this dispersion. External incentive neutrality can thus achieve a large proportion of the benefits of full external liberalization.

EMPIRICAL REVIEW OF LITERATURES

Review of the International Oil Markets

Oil is still a major source of primary energy. This dominance stems from the physical properties of oil (Frankel, 1946; Stevens, 2000). Because oil is a liquid that flows in three dimensions, all stages of the value chain benefit from large technical economies of scale, resulting in low costs relative to other fuels. Oil has relatively high energy content when compared to other fuels, with 50% more energy than coal by weight and 170 times more energy than natural gas by volume. Oil is also a truly global business. Crude oil and refined products are the most important single items in international trade, either in terms of volume or value (Hartshorne, 1993). It is regarded as a strategic commodity, entailing it in local, national, and international politics and conflict (Mitchell, Beck and Grubb, 1996 and Parra, 2004).

Finally, as previously stated, oil remains a critical economic variable in determining economic health. Thus, the oil market is important. A particular focus is the recent debate over various explanations for the relatively high oil prices experienced in 2014. This price increase has sparked considerable interest among industry analysts (Horsnell, 2004 and Stevens, 2004). Many observers have been perplexed by the rise to more than \$50 for the Organization of Petroleum Exporting Countries (OPEC) basket. The 'Cyclical school' and the 'Structural school' are two schools of thought that explain such strength. The distinction is significant because the cyclical school believes that what goes up must come down, whereas the structural school believes that prices higher than the average of \$17.68 must come down for the OPEC basket in the 1990s will be here for some time.

Markets have characteristics that determine how they function; they have participants - buyers and sellers - who have something to exchange goods/services for, among other things. The players have goals that they want to achieve. This pursuit takes place in a context governed by legal and regulatory

interventions - the game's rules. The role of market power in a highly oligopolistic market structure is critical to the operation of the oil market. This generates a significant rent in the international oil price, driving crude prices well above marginal cost. As a result, while supply and demand influences price determination, they do so in a highly distorted market. Many policy issues are raised as a result of this.

Review of World Oil Demand for the Last 20 Years

According to Yardeni, Johnson and Quintana (2019), oil demand is markedly different in the old world, which refers to the United States, Western Europe, and Japan, and the new world, which refers to the rest of the world. While crude oil use in the old world has slipped back to research lows of 2020, total demand in the new world surged to 51.5 million barrels per day last year. In 2011, new world oil demand increased by 2.8%, while old world demand fell by 1.2%. Indeed, new world oil demand outnumbers old world demand by 36%. Unsurprisingly, oil demand fell to its lowest level since the end of 2020 in Western Europe. The latest data compiled by oil market intelligence show that global oil demand flattened at 91 mbd, based on the 12 month average.

Review of World Oil Supply

Shortfalls in oil production compared to what would have been expected based on the 1983-2020 growth pattern totaled 4.7 million barrels. This is far more than any country claims to have in reserve. This is without a doubt one of the reasons why oil prices are so high right now. High oil prices tend to stifle economic growth in oil-importing countries. Short falls in growth occur most notably in crude oil. Based on EIA data, global oil and other liquids supply is broken down into crude and condensate, natural gas plant liquids, other liquids (mostly ethanol), and processing gain (volume increase from refining heavy oil).

Review of Nigeria Trade: Exports

Oil and natural gas are Nigeria's most important export products. According to 2007 figures, the country exports approximately 2.327 million barrels per day. In terms of oil trade, Nigeria is ranked eighth in the world. Nigeria has approximately 36.2 billion barrels of oil reserves as of 2021. Despite large-scale liberalization efforts, this sector is closely monitored by government agencies. The Nigerian National Oil Corporation (NNOC) is the oil and gas industry's regulatory body. Prior to the rise of oil production in the 1970s, agricultural production was Nigeria's largest export sector. After the country became primarily an oil-intensive economy, agriculture took a back seat. However, it still employs nearly 70% of the total working population. According to 2020 figures, the country's total export volume is \$42.2 billion USD. Oil, cocoa, and timber are the most important exports. Nigeria's main trading partners are the United Kingdom and the United States.

Review of Nigeria Trade: Imports

Nigeria's import trade is able to balance its export revenue due to high international oil prices. According to the 2020 figures, the country's imports grossed over US \$ 72,178 million. The major imports are machinery, heavy equipment, consumer goods, and food production. A large portion of imports come from the EU, specifically the Netherlands, the United Kingdom, France, and Germany. China, the United States, and South Korea are also significant import trading partners.

SUMMARY OF THE LITERATURE REVIEW

The researchers reviewed relevant literatures to aid in the analysis of the impact of foreign trade (oil exports) on Nigerian economic growth. The researchers were able to highlight the importance of oil exports to the development of the Nigerian economy, as well as discuss the theoretical background of the study, which included the inclusion of a sectorial computable general equilibrium model to consider further trade liberalization options now available to the Nigerian government. The first option is to liberalize the Obasanjo regime completely. Nigeria would completely reduce or eliminate its trade distortions under this option. That it imposes import tariffs and provides export subsidies. The second option is to consider sectorial tariff liberalization or export subsidies. In this regard, we assess Nigeria's implementation of tariff redirection and export subsidies in the years under review. The analysis of remaining trade barriers yields what we believe to be our most important findings. The study also listed the breadth and depth of relevant empirical literatures on International Oil Markets, World Oil Demand for the Last Few Decades, World Oil Supply, Nigeria Trade: Exports, and Nigeria Trade: Imports.

METHODOLOGY

Essentially, the method used will aid in determining the extent to which foreign trade has stimulated economic growth in Nigeria, with a focus on oil exports. As a result, the input data required are total export value and domestic consumption within the scope. The input data act as an independent variable that promotes economic growth.

Data source

DATA PRESENTATION AND FINDINGS

Data Presentation

The researchers use secondary data, which includes information from the Central Bank of Nigeria, journals, textbooks, and other resources, such as internet materials. The researchers use findings from sources in order to extrapolate the contribution of foreign trade to Nigeria's economic growth.

Study Area

Nigeria is a West African country with a land area of 924,000 square kilometers and a population of over 200 million people (Population 2021 estimate). Nigeria, as a country, holds a significant position in Africa in terms of resources, including human, natural, and capital resources, to name a few. Agriculture, which employs over 75% of the labor force and accounts for more than a quarter of GDP, is a key component in the government's poverty-reduction efforts. About 24% of GDP is generated by the private sector. Nigeria, the study area, denotes a country with various sectors, with petroleum oil accounting for the majority of its total revenue. As a result of the foregoing, these studies assess the oil sector's contribution to Nigeria's economic growth in terms of exports.

Model Equation

To demonstrate case empirical evidence with real contribution of oil export to Nigerian economic growth, the researchers used a linear regression model, which will spell out parameters and variables used to proffer statistical evidence. The linear regression model is used to analyze data for this study, explaining variables that serve as trade stimulants and how they affect the country's total national income. The following parameters are used:

- Gross Domestic Product (Y)
- Value of Oil Exports (X)
- Intercept
- Disturbance term

Explanation of parameters

$$y = \beta_0 + \beta_1 x_1 + \mu_i$$

Where:

Y = Total Gross Domestic product (GDP)

β_0 = intercept

β_1 = coefficient of oil GDP

x_1 = independent variable

μ_i = disturbance term

Table 1: Regression Analysis of Real GDP and Oil Revenue (billion)

<i>n</i>	<i>Y_i</i>	<i>X_i</i>	<i>Y_i²</i>	<i>X_i²</i>	<i>X_iY_i</i>	<i>y_i = (Y_i - \bar{Y})</i>	<i>x_i = (X_i - \bar{X})</i>	<i>x_iy_i</i>
2011	58.18	68.44	3,384.91	4,684.03	3,981.84	-9.01	29.05	-261.72
2012	60.67	62.84	3,680.85	3,948.87	3,812.50	-6.52	23.45	-152.87
2013	63.98	58	4,093.44	3,364.00	3,710.84	-3.21	18.61	-59.71
2014	67.98	54.55	4,621.28	2,975.70	3,708.31	0.79	15.16	12.01
2015	69.78	24.79	4,869.25	614.54	1,729.85	2.59	-14.60	-37.83
2016	68.65	17	4,712.82	289.00	1,167.05	1.46	-22.39	-32.73
2017	69.21	20.98	4,790.02	440.16	1,452.03	2.02	-18.41	-37.22
2018	70.54	32.62	4,975.89	1,064.06	2,301.01	3.35	-6.77	-22.68
2019	72.09	34.21	5,196.97	1,170.32	2,466.20	4.90	-5.18	-25.37
2020	70.8	20.43	5,012.64	417.38	1,446.44	3.61	-18.96	-68.47
Σ	671.88	393.86	45,338.08	18,968.08	25,776.07	0.00	0.00	-686.59

Sources: Real GDP: www.cbn.gov.ng/rates/RealGDP.asp

Oil Revenue: <https://www.thecable.ng/report-nigeria-earned-394bn-revenue-oil-revenue-in-10-years>

Where:

Real GDP = *Y*

Oil Revenue = *X*

Findings

Given;

$$Y_i = \beta_0 + \beta_1 X_i + \mu_i$$

1

Where:

β_0 = intercept/slop of the function

β_1 = coefficient of oil GDP

X_i = independent variable

μ_i = disturbance term

Hence;

$$\bar{Y} = \sum \left(\frac{Y}{N} \right) = \frac{671.88}{10} = 67.19$$

$$\bar{x} = \sum \left(\frac{X}{N} \right) = \frac{393.86}{10} = 39.39$$

Using the estimator β to solve the regression;

$$\beta = (X'X)^{-1} X'Y$$

Where;

$$(X'X) = \begin{pmatrix} n & \sum X \\ \sum X & \sum X^2 \end{pmatrix}$$

$$X'Y = \begin{pmatrix} \sum Y \\ \sum XY \end{pmatrix}$$

$$\Rightarrow (X'X) = \begin{pmatrix} 10 & 393.86 \\ 393.86 & 18,968.08 \end{pmatrix}$$

$$\Rightarrow X'Y = \begin{pmatrix} 671.88 \\ 25,776.07 \end{pmatrix}$$

$$|X'X| = 189,680.80 - 155,121.76$$

$$\therefore |X'X| = 34,559.04$$

Note that,

$$(X'X)^{-1} = \frac{Adjoint}{|X'X|} = \frac{1}{34,559.04} \begin{pmatrix} 18,968.08 & -393.86 \\ -393.86 & 10 \end{pmatrix}$$

$$(X'X)^{-1} = \begin{pmatrix} \frac{18,968.08}{34,559.04} & \frac{-393.86}{34,559.04} \\ \frac{-393.86}{34,559.04} & \frac{10}{34,559.04} \end{pmatrix}$$

$$\therefore (X'X)^{-1} = \begin{pmatrix} 0.5489 & -0.0114 \\ -0.0114 & 0.0003 \end{pmatrix}$$

Hence;

$$\beta = \begin{pmatrix} \beta_0 \\ \beta_1 \end{pmatrix} = (X'X)^{-1} X'Y$$

$$\beta = \begin{pmatrix} \beta_0 \\ \beta_1 \end{pmatrix} = \begin{pmatrix} 0.5489 & -0.0114 \\ -0.0114 & 0.0003 \end{pmatrix} \begin{pmatrix} 671.88 \\ 25,776.07 \end{pmatrix}$$

$$\begin{pmatrix} \beta_0 \\ \beta_1 \end{pmatrix} = \begin{pmatrix} (0.5489 \times 671.88) + (-0.0114 \times 25,776.07) \\ (-0.0114 \times 671.88) + (0.0003 \times 25,776.07) \end{pmatrix} = \begin{pmatrix} 368.77 - 293.76 \\ -7.66 + 7.46 \end{pmatrix} = \begin{pmatrix} 75.01 \\ -0.20 \end{pmatrix}$$

$$\beta = \begin{pmatrix} \beta_0 \\ \beta_1 \end{pmatrix} = \begin{pmatrix} 75.01 \\ -0.20 \end{pmatrix}$$

Thus:

$$Y_i = \beta_0 + \beta_1 X_i$$

$$Y = 75.01 - 0.20X_1$$

Hence; from the analysis, the coefficient of determinant of the level of GDP function is estimated as;

$Y = 75.01 - 0.20X_1$ Where 75.01 denote β_0 and β_1 (-0.20) agrees with the a priori. Furthermore, any change (increase/decrease) in the value of X_1 will lead to a corresponding (increase/decrease) in the value of total GDP (*Y*). Thus, in order to assess the contribution of oil to GDP in the period under review, the values of oil X_1 is substituted into the equation $Y = 75.01 - 0.20X_1$, and all values resulting from each added substituted equation are summed up to ascertain the total contribution of oil to GDP in the economy.

Statistical Significance

It measures the significance of the function which provides a degree of acceptability for the function, since all analysis is based on estimates and is prone to error.

Thus:

$U_i = Y - \bar{Y}$ And the result of the above equation is reviewed. The regression analysis demonstrates the relationship that exists between Real GDP and oil exports.

Test of Goodness of Fit (R^2)

The determinant coefficient (R^2) is used to determine the goodness of fit of the regression line obtained using the Ordinary Least Square method, and thus it is very useful in testing the explanatory power of the line regression of Y on X from our result.

$$R^2 = \frac{ESS}{TSS}$$

$$TSS = \sum Y - n\bar{Y}$$

$$ESS = \beta' X' Y - n\bar{Y}$$

Where;

TSS = total sum of squares

ESS = estimated sum of squares

Hence;

$$TSS = \sum Y^2 - n\bar{Y}^2$$

$$TSS = 45,338.08 - 10(67.19)^2$$

$$TSS = 45,338.08 - 45,142.3$$

$$TSS = 195.80$$

$$ESS = \beta' X' Y - n\bar{Y}^2$$

$$\Rightarrow ESS = (75.01 \quad -0.20) \begin{pmatrix} 671.88 \\ 25,776.07 \end{pmatrix} - 10(67.19)^2$$

$$\Rightarrow ESS = 45,242.51 - 10(4,514.23)$$

$$\Rightarrow ESS = 45,242.51 - 4,5142.30$$

$$\therefore ESS \square 100.21$$

Thus;

$$R^2 = \frac{100.21}{195.80} = 0.5$$

Hence;

$$R^2 = 50\%$$

This means that the regression equation explains at least 50% of the total variation in GDP, while the error term

U_i explains the other 50%.

CONCLUSION

For decades, analysts in Nigeria rebuffed the conclusion that trade, for all of its many benefits, has also played a significant role in job loss and stagnation of middle-class incomes. Rather than focusing on trade, economists contended that other factors, particularly

"skill-biased technical change," or technological innovation that places a premium on skilled workers, were the most important in keeping middle-class wages low. However, economists are starting to change their minds. Many top economists cited globalization as a leading cause of income stagnation in a recent Time survey on the causes of income stagnation. While the evidence is far from conclusive, it is quite compelling. Trade effects on jobs and income, which were probably minor in the past, now appear to be significant. According to our data analysis, the total variation in our dear country Nigeria's Real GDP as explained by the regression equation is only 50%, with the remaining 50% captured by the error term U_i . The gains from trade are such that (under fairly general conditions), it can make everyone better off and no one worse off. If the actual result is that all of the gains go to the top of the income distribution while all of the costs go to the working class if the distribution of gains results in a large class of losers then it is much more difficult to defend.

Recommendations

Nigerian trade strategy must not be focused solely on narrow commercial goals, but must also consider Nigeria's long-term interest in a secure, stable, and just world. Global security and true human security can be realized in a world where poverty and inequality are disappearing and all people have the resources they need to live dignified, self-sufficient lives and participate in their communities. Trade policies must strike a balance between creating a predictable structure for international trade and preserving the policing space necessary for governments to foster and secure economic, social and human development for all their citizens. The Nigerian government should do the following:

- Ensure that trade agreements are drafted with full democratic accountability and citizen engagement, both within the country and among its trading partners.
- Adopt trade policies that have a clear pro-development impact on developing nations, such as boosting domestic markets, expanding livelihoods, supporting small-holder farmers, encouraging local agriculture, and alleviating poverty.
- Develop trade policies and agreements that prioritize long-term ecological sustainability and climate stability, as well as protect and conserve the natural world's richness and diversity.
- Require (before and post) nation impart reviews to examine the effects of trade agreement provisions on eco-systems, poverty eradication, employment growth, food security, and attainment of MDGs.

REFERENCES

1. *Etikerentse, G. (1985). Nigerian Petroleum Law. Macmillan, London.*

2. Frankel, P. (1946). *The Essentials of Petroleum*, London, Chapman & Hall.
3. Gately, D. (1984). A ten-year retrospective: OPEC and the world oil market. *Journal of Economic Literature*, 22(3), 1100-1114.
4. Hartshorne, T. S. (1993). Psychometric properties and confirmatory factor analysis of the UCLA Loneliness Scale. *Journal of personality assessment*, 61(1), 182-195.
5. Horsnell, P. (2004). *Oil in Asia Market, Trading, Refining and Deregulation*, Oxford, University Press.
6. <https://tradingeconomics.com/nigeria/exports>
7. <https://www.cbn.gov.ng/rates/RealGDP.asp>
8. <https://www.thecable.ng/report-nigeria-earned-394bn-revenue-oil-revenue-in-10-years>
9. Mitchell, J. V., Beck, P., & Grubb, M. (1996). *The New Geopolitics of Energy*. London, Royal Institute of International Affairs.
10. Nigeria Bureau of Statistics (2021:Q3). Foreign Trade in Good Statistics.
11. Nigeria Economic Summit Group (2020). *Foreign Trade Alert*. March, 2021
12. Obadina, T. (2010). Nigeria's Economy at Crossroads.
13. Onayemi, T. (2004). Nigeria Oil: Prices, Politics, and People, *Nigeriatoday.com*.23. Feb. 2004. [http://www.nigeriatoday.com/Nigeria oil.htm](http://www.nigeriatoday.com/Nigeria%20oil.htm)
14. Parra, F. (2004). *Oil Politics: A Modern History of Petroleum*. London I. B. Taurus
15. Stevens, P. J. (2000). *Energy Economics* (Vol. 1). Cheltenham, Edward Elgar.
16. Stevens, P. J. (2004). The Future Price of Crude Oil. *Middle East Economic Survey*, 47(37).
17. Yardeni, E., Johnson, D., & Quintana, M. (2019). *Market Briefing: Oil Prices*. Yardeni Research, Inc