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OPEC and its Influence on Member Countries' Economic Development (The Case of Nigeria)

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Abstract: *Nigeria and most OPEC member countries are endowed with abundant natural resources, oil is the countries' major exporting product and their revenue generation is heavily dependent on oil, hence instability in output or price affects the countries' income which always left the countries (especially Nigeria) with a deficit budget, and these, in general, affect the general performance of the economies. OPEC stands as the agency for regulating oil price through quota system. This study uses a simple chart and regression analysis to measure the impact of OPEC membership on the economic growth and global competitiveness of its members (Nigeria), by using updated secondary data. The study found OPEC to be a useful tool for oil price regulation but deterred the ability of its members to maximize their oil production capacity. Also, the second objective of creating OPEC which is promoting the development of member countries was not achieved, especially by the minor member countries.*

Keywords: Economic Development, Global Competitiveness, Nigeria, OPEC

Introduction

The OPEC cartel was formed to promote two economic goals, one microeconomic — the minimization of the volatility of oil markets—the other macroeconomic—the promotion of the economic development of its member countries (Noguera & Pecchecnino, 2007). The aim of OPEC is to provide stabile prices on oil for the member countries by controlling the prices through quotas. OPEC provides equilibrium and sustainability between such market phenomena as consumers demand on crude oil and supply of the producers, by using the tool of quotas on oil producing(Khusanjanova, 2011). Founded in September, 1960, the cartel's member countries supply 40% of the crude oil in the international market and collectively have 80% of the world's proven oil reserves. Currently, the Organisation is made up of 14 Member States one of which is the Federal Republic of Nigeria(Ogunnoiki, 2019). Since the oil sector represents an important share of national income for oil exporting, developing countries, instability in the oil market also can lead to instability in output, and through the Phillips curve, instability in other macroeconomic indicators like inflation; in other words, it can lead to macroeconomic instability. (Noguera & Pecchecnino, 2007)

In the year 1956, crude oil was first discovered in Nigeria at Oloibiri, present-day Bayelsa State, and in the Ogoni region in 1957 by Shell-BP Petroleum Development Company of Nigeria Limited. Following the discovery of crude oil, pioneer production began in 1958 from the company's oil field in Oloibiri. By the late 60s and early 70s, Nigeria had attained a production level of over 2 million barrels of crude oil daily. In order to safeguard it national interest abroad, Nigeria during the military junta of General Yakubu Gowon joined OPEC as the 11th Member State in July, 1971. Over four decades later, Nigeria's membership of OPEC became a topic for debate among scholars, analysts and professionals in Nigeria's oil industry.(Ogunnoiki, 2019)

Nowadays in case of OPEC scholars mainly look at the oil production its reserves, price monopoly and impact of OPEC's quotas on world oil market (see Loderer 1985, Griffin and Xiong 1997,); they test OPEC's behavior and its impact on the oil prices as well as market (see James 1999, Noguera J. and Pecchecnino R. 2006) and its role in providing sustainable development. However, there are a few studies (see (Khusanjanova, 2011) that test whether there is any benefit for the oil producing countries to be the member of organization of petroleum exporting countries and what are they. Specifically, we ask this question, how OPEC membership developed the member countries economy? The cartel has single tool, which is output quotas, which is to be use in achieving these goals, how does output control influence the economic growth and development of the member countries especially Nigeria? This study intend to use simple charts analysis to explain the relationship and benefit of OPEC especially its output regulation (quota system) and its member countries specifically Nigeria.

The remaining paper contain literature review, OPEC, OPEC member countries and global competitiveness, OPEC influence on Nigerian economy, Nigerian trade (export) value, and finally conclusion

Literatures review

Research on oil price volatility, output and or quota system, economic growth and development is reach and almost exhausting though with the recent pandemics of COVID19 and its influence on oil price, it will be interesting area to study. The specific research on OPEC and its influence or benefit on member countries are scarce especially the minor countries like Nigeria whose opinion on decision making in the cartel is relatively inconsequential considering its unilateral economy, heavily dependent on oil and little or no diversification. Researches on oil price volatility and OPEC are versatile and reach see (Oliver, 2019)(Brownback & Republican, 2010) where they explain OPEC's output control for the purpose of influencing world oil price. Data on OPEC member countries shown the member countries oil reserve exceed the rest of the world's oil reserves this ordinarily supposed to mitigate the ability of OPEC member countries to produce more in the world oil market, but the reverse is the case as the rest of the world produce much

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more than OPEC member countries this in turn affect the minor OPEC member countries economic performance who heavily depend on oil export revenue to finance their budget. Recently (Ogunnoiki, 2019) weigh the cost and benefit of Nigerian OPEC membership, in his concluding remark the cost of being an OPEC member by Nigeria outweigh the benefits but he suggest Nigerian to remain as that will boost its potential renewable energy regularization. In general research on Nigerian OPEC membership in relation to general economic performance is scarce.

Organisation of the Petroleum Exporting Countries (OPEC)

In the field of economics, a cartel is defined as an agreement between businesses in the same industry to control a market, to raise the market price of a commodity or good, and act like a monopoly(Ogunnoiki, 2019). OPEC is a good example of cartel. However, according to the statue of OPEC, it define itself as an international organization with aim to influence and maintain the price of oil through the control of production levels and to generate revenue, which goes towards meeting the development needs of its members.(Khusanjanova, 2011). After the Second World War (1939-1945), the business of oil exploration and production in the Middle East was controlled by the western companies. With these western company dominance in the Middle East, there was the need for the formation of an international organisation that would protect the interest of oil producing countries(Ogunnoiki, 2019). From September 10-14, 1960, Venezuela, Iran, Iraq, Kuwait and Saudi Arabia converged in Baghdad, Iraq, for the Baghdad Conference. The outcome of the Conference was the establishment of OPEC. In January 1961, the supreme organ of OPEC, the Conference, adopted the constituent instrument of the cartel, the 'Statute', in Caracas, Columbia. Presently, OPEC's Member States cuts across South America, Africa and the Middle East. Asides the five Founding Members of OPEC i.e. Venezuela, Iran, Iraq, Kuwait and Saudi Arabia, Qatar joined in (1961), Indonesia (1962), Libya (1962), United Arab Emirates (1967), Algeria (1969), Nigeria (1971), Ecuador (1973), Gabon (1975), Angola (2007), Equatorial Guinea (2017) and Congo (2018) (OPEC, 2018). Ecuador suspended her membership of OPEC in December 1992 only to rejoin in October 2007. Gabon left the cartel in January 1995 but reactivated it on July 01, 2016. Indonesia suspended its membership in January 2009, reactivated it in January 2016, but suspended it again on November 30, 2016. On January 01, 2019, Qatar terminated its 57 years membership of the Organisation (OPEC, 2019). Since its formation OPEC quickly began to dominate the oil industry market(Al-farhan, 2003) influence the oil price by adopting a quota system by the member countries which regulate world oil demand and supply hence influence oil price.

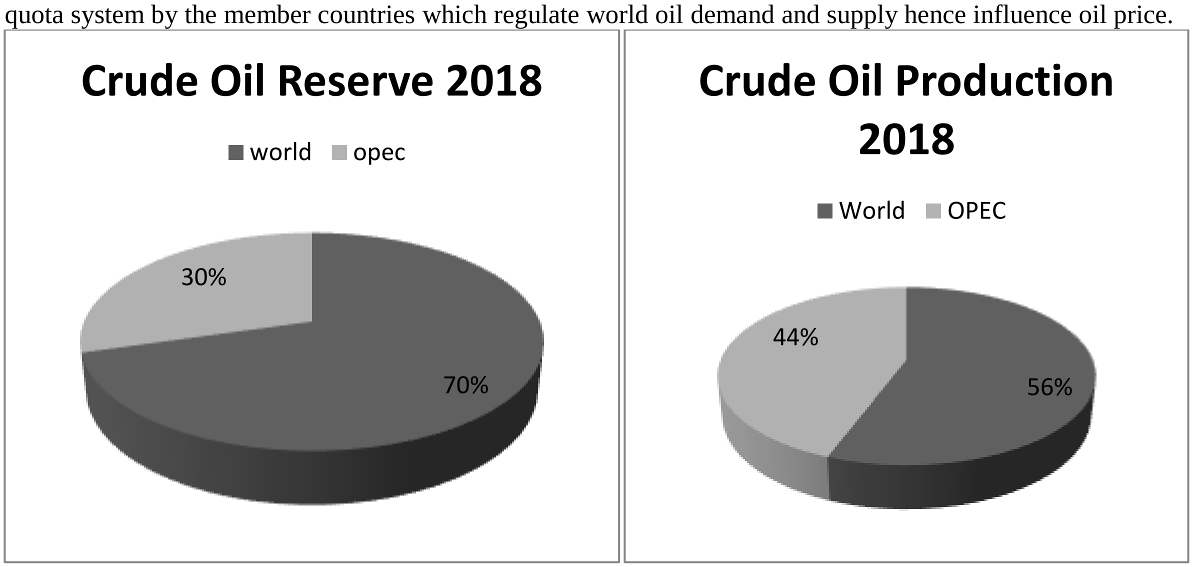

Figure 1 Crude Oil Reserve and production 2018
Sources: authors' computation using OPEC data

OPEC member (especially minor) heavily relies on earning from petroleum export such as Nigeria. The minor OPEC member countries as explain by the literature are those that have larger population and smaller oil reserve, and are the one that are heavily dependent on oil revenue (e.g. Nigeria, Algeria). The major member whose population is small and larger hydrocarbons reserve are less dependent on oil export such as Saudi Arabia because of the diversifications into for instance service, agriculture. As such oil price fluctuation does not heavily affect major member countries as it does to minor member countries. Unsurprisingly, the performance of the member countries' national economies is closely linked to the fortunes of the domestic oil and gas sector. Investment in oil and gas determines the potential for the sector to provide either leverage financial resources for economy-wide development or diverse it through reinvesting.(Khusanjanova, 2011)

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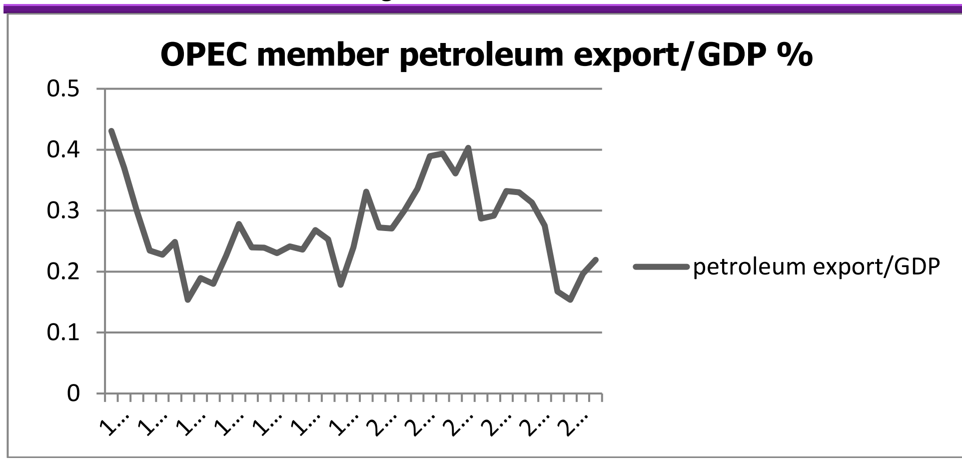


Figure 2: OPEC member petroleum export/GDP %
Source: author's computation
OPEC member countries heavily relies on oil export earning which in case of Nigeria account for more than 80%, this is similar to other minor OPEC members. As for the major member countries like Saudi Arabia who has a greater influence on OPEC quota system and Indonesia whose economy is recently diversified, percentage of petroleum export to GDP is relatively minimal compared to other members as such the quota system as well as the oil price fluctuation affect them less.

OPEC member countries and Global Competitiveness

The major aim and objectives of creating OPEC is to provide stabile prices on oil for the member countries by controlling the prices through quotas and the other aim which is macroeconomics is to promote the economic development of its member countries. This can be done through policies and aid provided by OPEC to its member countries especially minor for the development of their economy. Competitiveness is the set of institutions, policies, and factors that determine the level of productivity of a country, This lead to countries' level of prosperity rates of return obtained by investments (Scwab, 2018). The value of economic growth for society can be seen from the angle of decreasing inequality, technological advancement, and increasing impact of globalization component which include trade in goods, services, and data, and movement of people and capital. (Scwab, 2018). The concept of competitiveness thus involves static and dynamic components among which includes institutions, infrastructure macroeconomic environment, innovation, business sophistication, market size, technological readiness, financial market development, labor market efficiency, goods market efficiency higher education and training health and primary education. This component is use to measure countries level of competitiveness and or stage of development in respect of its GDP per capita which can be seen from the table of Sub Index Weights and Income Thresholds for Stages of Development.

	STAGE OF DEVELOPMENT				
	Stage 1: Factor-driven	Transition from stage 1 to stage 2	Stage 2: Efficiency-driven	Transition from stage 2 to stage 3	Stage 3: Innovation-driven
GDP per capita (US$) thresholds*	<2,000	2,000–2,999	3,000–8,999	9,000–17,000	>17,000
Weight for basic requirements	60%	40–60%	40%	20–40%	20%
Weight for efficiency enhancers	35%	35–50%	50%	50%	50%
Weight for innovation and sophistication factors	5%	5–10%	10%	10–30%	30%

Figure 3: stages of development
Sources: world economic forum 2018
Countries Stages of development can be characterized by its GDP per capita according to world economic forum, as seeing from the table above the countries with GDP per capita of less 2000 is characterized as factor driven economy. This in comparism with OPEC member countries GDP per capita can give us actual level or stage of development of each country.

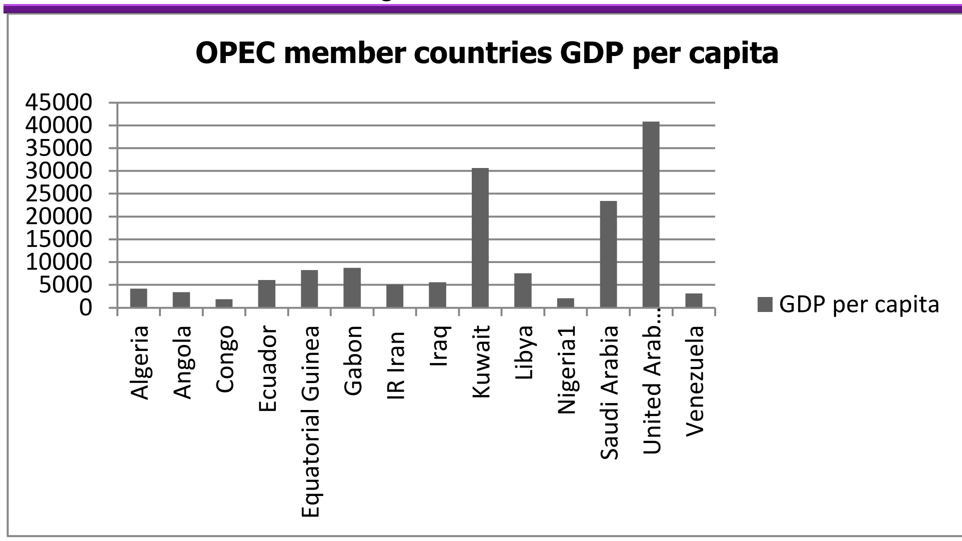
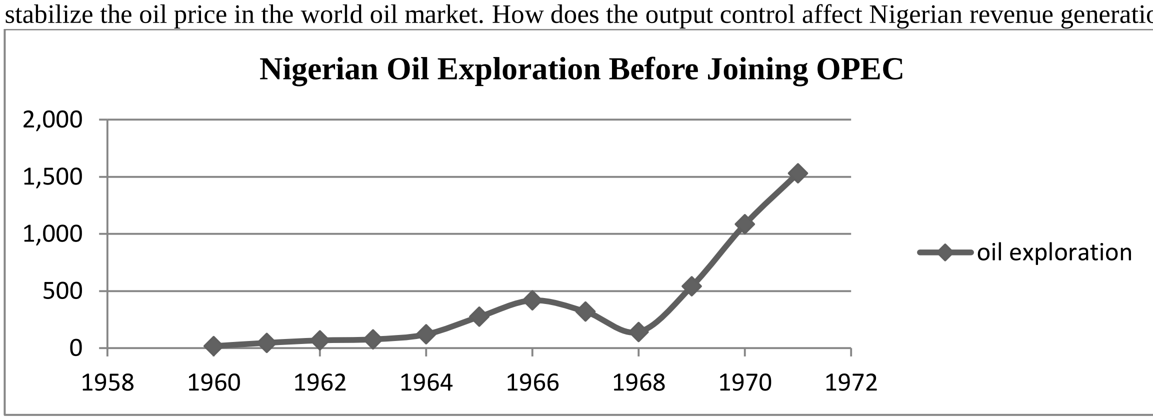


Figure 4: OPEC member countries GDP per capita
Sources: author's computation using OPEC data
Unsurprisingly minor OPEC member countries like Nigeria can be categorized as factor driven economy as most of them falls under the categories of countries with low GDP per capita unlike major OPEC member countries whose economy is diversified or has greater influence on OPEC quota system has larger GDP per capita. And this also reflect on the global competitiveness ranking of 2018 where United Arab emirates, Indonesia and Kuwait ranks 17, 36 and 52 respectively, while Algeria, Nigeria, and Venezuela ranks 86, 125 and 127 respectively. To this end we can conclude that heavily dependency and inability to diversified economy especially by minor OPEC member countries affect not only their influence on global oil market but also their competitiveness in general global market despite their endowment of crude reserves. This also reflects the OPEC failure to achieve the second objective of its creation.

OPEC influences on economic growth of Nigeria
There were five OPEC conferences in 1971, the year that Nigeria entered, the 22nd to the 26th. It was at the 24th conference, held in Vienna in July of that year that Nigeria was admitted to membership.(江小, 2018). Nigeria crude oil production in 1969 was 0.54 million barrels per day, increasing in 1970 to 1.08 million barrels per day. The large increase reflects of course the cessation of the Nigerian civil war (a.k.a. the Biafran war) in 1970. In 1971 there was another dramatic increase and a daily output of 1.53 million barrels per day was recorded. Other factors influence the general fluctuation of Nigerian oil production such a social unrest and security at the region oil walls was deposited, but the major factor is the quota system of output control by OPEC, which in turn stabilize the oil price in the world oil market. How does the output control affect Nigerian revenue generation?



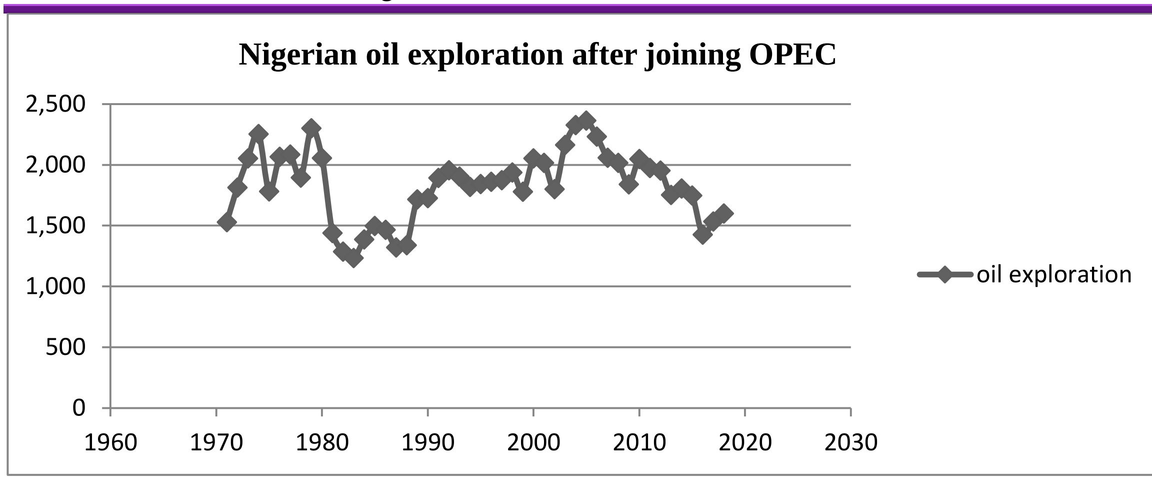


Figure 5: Nigerian Oil Exploration Before and after Joining OPEC
Source: author's computation using OPEC data

OPEC production quota has long been an issue for Member States such as Nigeria, Presently, Nigeria's output level of crude oil is below its maximum production capacity of 2.5 million bpd(Ogunnoiki, 2019) as such the joining of OPEC by Nigeria retard its potential to achieve its maximum capacity of oil production. Nigeria's crude oil and natural gas resources are the mainstay of the country's economy. Because Nigeria heavily depends on oil revenue, its economy is noticeably affected by crude oil price changes. The International Monetary Fund (IMF) projects that Nigeria's crude oil and natural gas exports earned $55 billion in 2018, which is $23 billion higher than in 2016. The growth in export revenue, which can be partly attributed to the rebound in crude oil prices, has helped improve Nigeria's fiscal position. However, Nigeria's fiscal deficit remained flat at 4% of its gross domestic product (GDP) because of a significant increase in capital expenditures and lower-than-expected non-oil revenue collection, in spite of improvements to the country's tax administration. The Nigerian government still heavily relies on crude oil and natural gas revenue; its non-oil revenue comprises only 3.4% of GDP, one of the lowest in the world.(EIA, 2019).

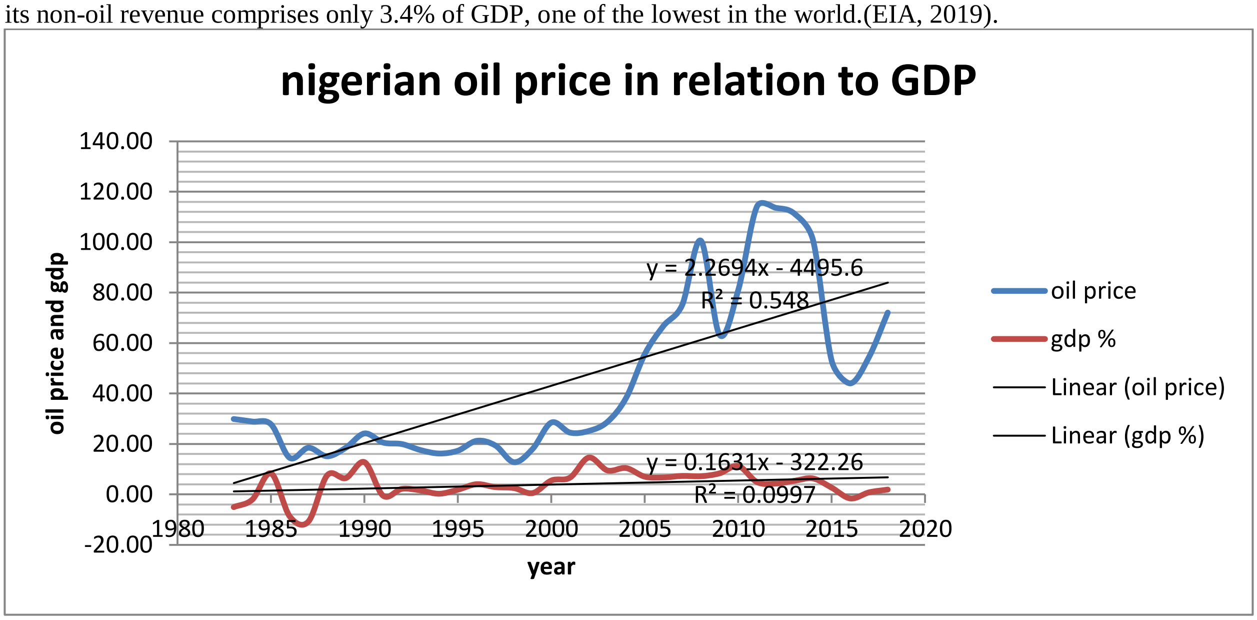
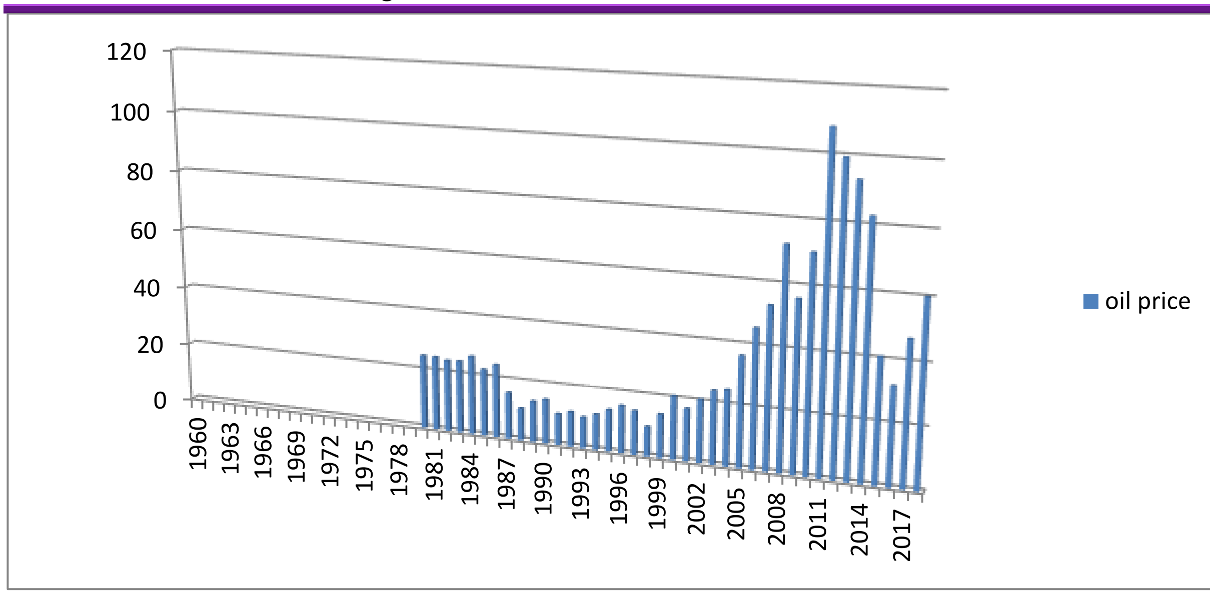


Figure 6: Nigerian oil price in relation to GDP
Source: author's computation

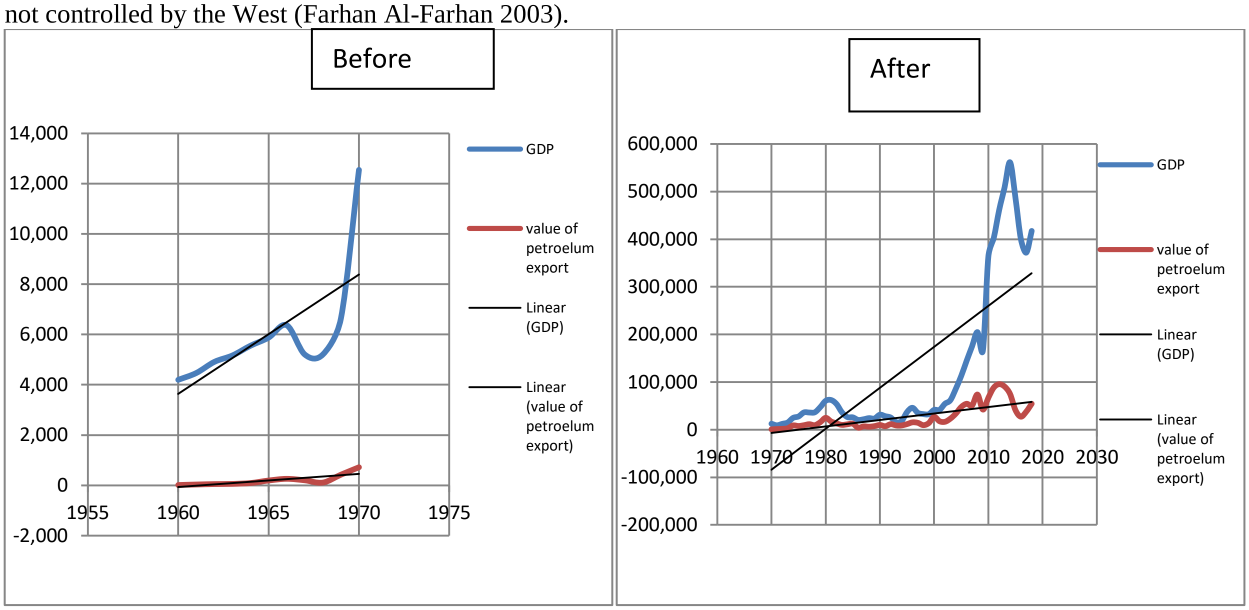
As the oil trend follows that of the GDP exactly, it seems reasonable to believe that, with oil being backbone of the Nigerian economy, as the GDP went down, it would be largely if not entirely due to the fact that the oil revenues were failing(Uwakonye et al., 2011) as the price falls



Source: author's computation using OPEC data 2019

OPEC uses quota system to regulate oil price in world oil market as such, OPEC output control affect Nigerian economy heavily as the country rely heavily on crude oil revenue which account for more than 80%. Quota system affect Oil price to some extend positively, theoretically the nature of supply affect price of a particular product, but in general the production capacity of member countries exceed the actual output which in turn affect the expected revenue from sales of crude hence affecting the economic performances of a country.

However, OPEC's influence on the oil markets has significantly diminished compared to the 1970's OPEC is still the key player of world energy market. Nowadays the organisation supplies about 60% of world oil output and more than 75% of world petroleum reserves are located within OPEC nations; and OPEC policy instruments have consistently been confined to fiscal and pricing measures(Khusanjanova, 2011). Among all international trade organisations, OPEC has proved to be a good example of an alternative international political economy with an undisputed amount of bargaining power and one of the few powerful organisations not controlled by the West (Farhan Al-Farhan 2003).



Source: author's computation using OPEC data

One of the benefits for the member countries can be identified regarding to the primary purpose of OPEC, which is to secure its member countries' fair shares of the value of their oil resources(Khusanjanova, 2011). The chart above shows a linear and progressive value of Nigerian petroleum export before and after joining OPEC which exhibit a positive relationship with GDP.

OPEC's influence on the economy of the member countries is great, since most member countries derive more than 80% of their foreign-exchange earnings, as well as huge share of GDP, from oil and gas exports. (Khusanjanova, 2011)

OPEC and Nigeria's Trade (Export) Value

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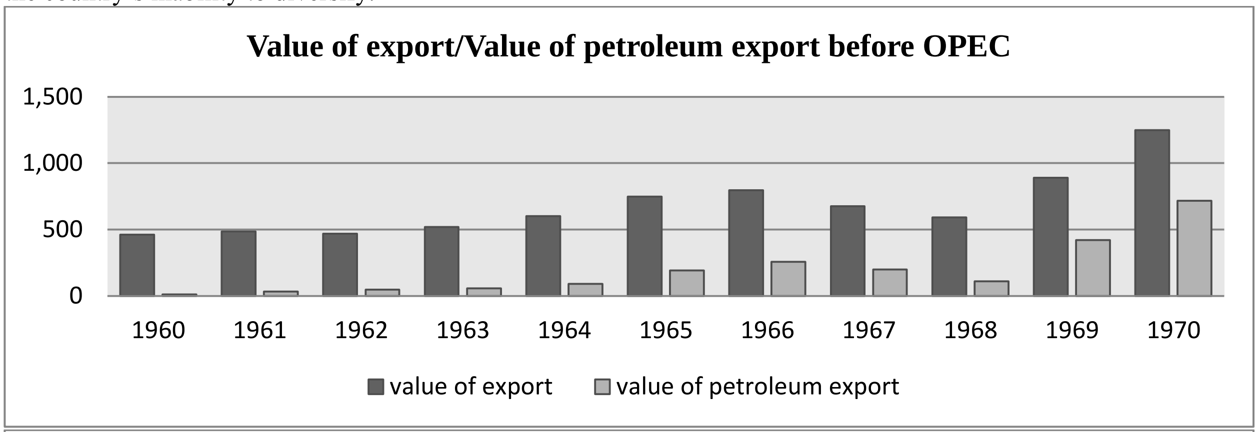
Before the discovery of oil Nigerian mainstay was the agriculture sector which includes crop production, forestry, livestock and fishery, recently it accounted for most of GDP growth, accounting for 42.62 per cent(Igberaese, 2013) However the sector remains primarily informal and production involves the use of simple technologies .Oil, however, accounts for 95% of Nigeria's (World Bank 2013). The argument to make here is the dominance of oil in Nigerian export is to the detriment of other sector, agriculture dominate the export of Nigeria even when the oil was discovered but as time goes by the oil sector dominant this is largely due to the country's inability to diversify.



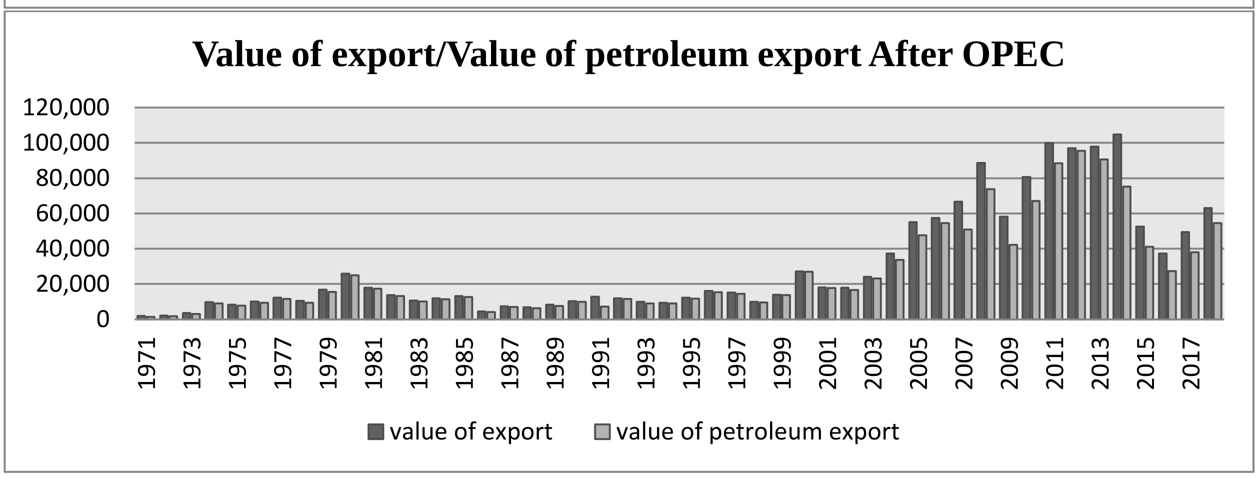


Figure 7: Value of export/Value of petroleum export before OPEC
Sources: author's computation

Nigeria is the largest exporter of crude oil in Africa (Solomon and Olakunle, 2019) . We have seen from the chart how oil sector dominate the Nigerian export, this lead to the negligence of other sector and as such the joining of OPEC by Nigeria which gave the country a strong bargaining power was not adequately utilize to the betterment of other sectorial export product, this makes the country heavily dependent of oil. As for the other purpose of creating OPEC which is to developed the socio economic of member countries was not achieved, especially to minor countries.

Conclusion

Nigerian and other members oil export within OPEC despite the quota system affect the countries production capacity as most of them export less than their exploration capacity (especially Nigeria) which to some extent leave these countries with deficit budget as such affect the overall economic performance of the countries. The Nigerian and other member's dependency on oil revenue as well as inability to diversify (especially minor member countries) their economy retard their export earning, global competitive advantage, and other export trade influence over trade partner. And also, these affect the countries influence even in OPEC's quota system decision. As famously quoted by Nigerian former president general Yakubu Gowon in 70's "Nigeria problem is not the money but how to spend the money" this is largely due to the oil price hike and Nigerian export on other product apart from oil, with Nigerian oil and gas reserves the country has a great potential on oil and gas market and other related export product market such agricultural product which was the country's major export earnings before the discovery of oil. It is to this note that the following conclusion has been made; Nigeria and other member's (especially minor members) benefit from joining OPEC does not equate the potential benefits that the countries might enjoy if they didn't join. Therefore since the deed has been done, it is recommended especially to minor member countries that

I. Increasing Investments be made into oil and gas projects that will stretch beyond maintenance and production expansion this would significantly benefit these natural resource heavy economies.

II. Investment in social capital; education, transportation, telecommunications, healthcare, etc and the investments toward economic diversification. If these investments are made while oil revenues are steadily increasing, OPEC member countries will benefit socially and economically in the future.

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