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The Impact of Oil Price Instability on the Growth Process of the Nigerian Economy

Dr. M.D. Imobighe, FIIA, FIPMD
Department of Economics, Delta State University, Abraka.. P.M. Box 38

1.0 INTRODUCTION

The oil sector has not always been of importance as it is now. Moreover, beginning with the twentieth century, the importance of oil has increase tremendously a decade or two ago it over took coal as the major source of energy in the world. Petroleum crude oil as we all know today is a dark, evil smelling, vicious liquid composed of a mixture of a number of chemical product mainly carbon and hydrogen hence he name hydrocarbon. There are other minerals such as oxygen and sulphur. Nigeria was not depending on the oil sector as the major source of revenue. Prior to its advent, agriculture has been the backbone of the Nigeria economy. in fact between 1960 and 1966, agriculture contributed about 58.9% of the GDP while it was providing employment for more than 90% of the nation's labour force. However, following the discovering of oil and the sub-sequent oil boom in 1970s agriculture lost its pre-eminent position to mining and specifically petroleum. In terms of export earnings, oil contributed 509.6 million (about 57.6%) to the Nigeria economy in 1970. Production also grew from over 3 billion barrels in 1956 to about 823.3 billion in 1974.

Within the last 50 years, while total consumption has risen fourfold, world consumption of oil has risen by a factor of 16, currently gas and oil accounts for almost 70% of the world energy consumption. The energy transition from coal to oil was partly a response to technological development but even more significant was the steady decline in the real prices of oil. Nigeria has a very large reserve of crude oil and mineral gas. Oil was first found in commercial quantities at Oloibiri in the Niger Delta. There were further discoveries at Afam and Boma which established the country as an oil producing nation. Its oil fields are located in a territory south of a line that can be drawn through Benin City in Edo State, Owerri in Imo State and Calabar in Cross River State. The highly concentrated drilling areas and the greatest oil producing areas are around Port-Harcourt in Rivers State, and Ughelli and Escravos in Delta State.

The analysis of oil exploration in Nigeria dates back to 1908 with the coming of a German firm called the Nigeria Bitumen Corporation whose activities terminated with the outbreak of the first World War in 1914, Shell D' Archy which in 1956 was transformed into Shell-BP resumed prospecting activities in Nigeria, and was covering the entire country. On 4th November, 1938, until 1955, Shell-BP was the only company that had a license to serach for oil in many parts of the country. With time more companies have joined in prospecting for oil and among them are: Mobil oil, Chevron oil, America Oversea Petroelum Company, Agip Oil, Esso Oil, Tennesse, Ashland, and Phillips, Nigeria owned National Oil Co-operation and Henry Stephens which is a joint venture between Nigeria and Japan. The output of crude oil in Nigeria since its discovery by Shell-Bp has risen from 229,629 million barrel of a record of 815 million barrel in 1974. The dramatic rate of increase in production has been the result of a higher success rate in the oil companies' search for new oil fields particularly after 1965, and the increased output rate from the existing oil wells. In 1958, estimated resources given by Shell-BP stood at 22.23 million barrel with a life span of 12 years. Since then with increased production of crude as a result of prospecting, drilling and exploration by some other companies estimates of reserves have been increasing yearly and by 1989 production had hit 625,456,000 barrel while export stood at 525,869,000 barrel.

It is important to point out that because of the need to conserve foreign exchange, job opportunities were created to some extent, in addition to other multiplier effects derivable from setting refineries locally, the federal government in 1962 in awarded a contract for the construction of a refinery at Alesa Eleme, Port-Harcourt, River State. Prior to the construction of oil refinery in Port-Harcourt in 1964 all oil produced was exported. However, after completion of the refinery, part of it was retained to be refined domestically and the other part exported. Between 1970 and 1978, the nation experienced an upsurge in demand for petroleum product averaging a yearly increase of 23.4 percent. Thus in 1978, the Warri refinery was officially opened with a total capacity standing at 100,000 barrels per day. Continued demand pressures led to the building of a third refinery at Kaduna in 1980 with initial capacity of 100,000 Bd but with a potential capacity of 260,000Bd. A fourth refinery has been constructed near Port Harcourt.

Since the first discovery in 1956, with initial production of about 6,000Bd Nigeria's oil production had been on steady increase from 0.55 million Bd in 1966 to 0.96 million Bd in 1970 and to 2.0 million Bd in 1972 till it reach a peak of 2.4 million Bd in 1979. This steady increase in oil production corresponded with the rise in the importance of petroleum in the Nigeria economy. Today, petroleum provides more than 90% of our export earnings and Nigeria has grown to become the sixth largest oil producing country within the Organization of petroleum countries (OPEC). Hence, Nigeria like other oil exporting countries, using the traditional national accounts framework has confused oil proceeds as income against the correct interpretation of being as asset and a component of wealth. This conceptual confusion is a serious issue embodied with implications and signals for making policies and taking decisions that affect several important variables that have national and international significance Anyanwu (1993).

Since the arrival of oil in Nigeria, petroleum has remained the backbone of the Nigeria Economy. In other words, Nigeria as a nation is fully dependent on the revenue generated from oil exports. This revenue is a function of price oil in the international market. Empirical analyses have proved that there are instabilities in world's oil prices and these instabilities have different impacts on various countries depending on how dependent the economy is on oil. So, in a country like Nigeria which this study is based on, more than 80% of her export revenue is generated from oil. As a result of this oil price instabilities have adverse effects on its economy. While positive changes leads to an increase in government revenue its negatives counterpart manifest in form of budget deficit.

The oil sector in Nigeria is an enslave sector employing an infinitesimal portion of the labour force and having little forward and backward linkages with the rest of the economy. There is need for government to diversify the economy to reduce the adverse effects of oil instabilities on the economy.

The impact of petroleum in the overall economy of Nigeria is so great that when petroleum sneezes, the nation not just the economy alone catches cold and trembles to crumbling point. This has become more pronounced because of the over-dependence of the economy on this sector. In the oil boom ear of the 1970s, the government spree on consumption activities and execution of white elephant projects, the result had been chronic budget deficit. But since the global glut and subsequent fall in the price of oil, the Nigerian government has been finding it difficult to adjust with the economy realities of the time. The now permanent feature of belt tightening and belt loosening inherent in the country's budgeting planning and policies is as a result of the over reliance in the petro-oil culmination in the implementation of the structural adjustment programme (SAP) in 1986. The impact of oil instabilities on government revenue is so great that the fourth development plan almost hit the rock. For example in that which was to last for four years (1981-1985) with a capital investment target of 82.2 billion all the resources needed to accomplish this plan was based on a projected oil production of over 2 million barrel per day and selling price of over $40 per barrel during the plan period.

Not fast was the plan launched in 1981 than the world oil market weakened. By 1983, the level of Nigeria's oil production had dropped from 2.1 million barrel per day in 1983 while the selling price also fell from $40 to $30 per barrel during the period; the plan had to be reviewed. This study is expected to assist the government, policy makers, individuals and development planners to plan for the future especially in the diversification of the productive base of the economy with a review to averting the danger of over dependence of oil as the major source of foreign exchange earning.

That there is need to diversify the production base of the Nigerian economy cannot be overemphasized. This has become necessary in view of the current move by the international community especially the west to impose economic section especially oil sanction on Nigeria. the goals of this study however, is to examine the genesis of oil price instabilities, to examine the instability in oil price and the condition for stability, to examine ways and means of diversifying the economy with a view to removing the over dependence of government on this sector and to show the extent to which fluctuation of oil prices affect the Nigeria economy in terms of GDP, government revenue, balance of payment equilibrium and economic growth.

2.0 LITERATURE REVIEW

Although literature abounds in the oil industry perse, not much has been written on this particular topic. The problem became more difficult when econometric analysis became imperative. That the oil industry itself is an enslaved sector was a contributing factor. However, those written and analyst who are specialist in this field, they bear in their mind on the relevance of this industry, the impact the unstable nature of this commodity has on the growth of the economy and the need for Nigeria government to diversity the productive base of the economy.

The Nigeria economy and the oil industry

The importance of oil industry to industrialized societies, cheap energy has supported a complex system of production of economic and cultural progress. Evaluating the contribution of the petroleum industry to the Nigerian economy Rilwan Lukeman (1989) a former minister of petroleum in the overall economy of this country in recent years has been so great what when petroleum sneezes the 'Nigeria nation' not just the economy catches cold and trembles to a crumbling point". He concluded that the operations of the petroleum industry need to be effectively and efficiently regulated to foster economics and orderly technological development of the industry. A famous statement by Lord Curzon (1984) aptly sums up well the strategic value of oil in the world balance of power. He said "the Allied floated to victory on a sea of oil".

With the oil industry determining 95% of Nigeria's export earnings and contributing 455 of government resources, the future of the "reinter" state has clearly become closely tied to one commodity and so to the position of OPEC in the global economy. Caccial (1983). In turn, rates of industrialization let alone the satisfaction of basic human needs (1982) and the modernization programme of the armed forces are now largely a function of oil or at least of the international banker's estimate of credit worthiness based on anticipated oil revenue. Most of the crises in Nigeria can be traced to oil. That oil has now become a political weapon is an open secret. Take the case of botched third republic, in order to force out the interim government of Shoekan, NUPENG embarked upon indefinite industrial action. The crisis almost cripples the national economy. An environmentalist and writer Ken Sarowiwa and some members of his MOSOP were hanged having found guilty by a military tribunal for organizing and obstructing the operations of oil in the Niger Delta are caused by the presence of the "black gold". As the inhabitants of these areas are burdened to despairing levels of crusting they will become desperate (Longe Olayika 1997) and lawless to relieve their condition. The easiest target will always be the oil company's installations and their personnel.

Sam Ilogbunam (1979) an expert in the Niger delta Polities puts it is proper perspective "some if not all the major ethnic in Niger delta have oil undertones because oil production or reserves that a community can claim under its land will influence how much assistance it gets from government and oil company. Nothing has been more disturbing than the spate of crisis which has continued to dominate the Nigeria energy sector the fuel shortage across the country and the most sensitive organ of the economy. at the apex of oil crisis in Nigeria, two federal ministers had a face off. Apparently frustrated by the over dependence of Nigeria oil (Dan Agbese 1997) in an article in Newswatch Magazine had this to say "Nigeria is not an industrialized nation. Nevertheless it has learnt to depend on modern inversions such as electricity, cars and buses and Lorries. These things are useless without fuel. And you cannot have fuel until the fineries refine the crude oil, the sorry story according to him began as a minor league problems left unattended to, it soon became a big and nasty problem. From Lagos, it spread to the rest of the country. And suddenly the important people realized this country which produces so much crude oil as without fuel". Nigeria loses so many resources in importing fuel to ameliorate crisis situation. Reacting (Sam Aluko 1997) who heads the National Economic Intelligence Committee estimates that Nigeria is fleeced of $100,000 on every 30,000 tons of refined fuel imported through private business. According to him "there are a lot of people in Nigeria who would want to create artificial scarcity. And for every ship of 30,000 tonnes imported, the country losses $100,000 which goes into the private pocket of importers".

Taking an analytical view of the impact of petroleum on the Nigeria economy (Obadan 1993) sought to evaluate the impact of the development of crude in several sectors of the economy. on government finances, he declared that the effect of the oil industry on government revenue is quit positive and significant claiming that the fiscal linkage of oil industry arises from the use of increasing oil revenues by government to develop other sectors of the economy such as agriculture, education infrastructure etc. he however affirmed that the problems inherent in this linkage is that the euphoria created by sudden substantial windfall from oil could lead to laxity in the tapping of revenues from other sources. Speaking in a similar fashion Anyanwu (1990) noted Nigeria like other oil exporting countries, using the traditional account framework, has confused oil proceeds as income against the correct interpretation of being an asset and a component of wealth. This conceptual confusion according o him is a serious issue embodied with implications and signals for making policies and taking decision that affects several importance variables that have national and international significance. Still on the impact of the oil industry on the Nigeria economy, Aribisala (1985) observed that "Nigeria was confronted in 1986 with the implication of an ineffectual OPEC and perilous low price. A substantial part of the government budgeting estimates commodities were affected, low price also threatened to re-ignite the country's international crisis as the government usually negotiates a three months debt moratorium between April and June 1986 with its foreign creditor. He concluded that by all indications the oil boom of the 1970s has come full circle leading to the oil gloom of the 1980s". because of oil price instability and the effects it was having on growth of the Nigeria economy, Nigeria began its membership of OPEC. In fact its action almost threatened the existence and survival of the organization reacting on Nigeria's double standard in OPEC.

On the empirical validation of the contribution of oil to the economy, Kogbara (1981) had a regression analysis of oil as a determinant of national revenue; yield an r^2 of 94.64% for the period of 1975/96 to 1980 when the price was between $14 and $34. Ubogu (1984) sought to establish the impact of oil industry government participation and stages of development of the industry, government revenue, foreign exchange earning, employment generation and industry's linkage effects, he noted that the oil industry has been responsible for the radical increase in revenue and further buttressed the stranger dependence in oil revenue as envisaged in our development plans due to the unanticipated decline in oil earnings. He was also strongly in support of diversification and the need for judicious use of the current limited revenue.

The Nigeria oil policy

A policy is a plan of action statement of aims and ideas. It stands for various degrees of goals articulated and normative regulation of government activities. This is what governments intend to do or achieve and how it intend to do it. Consequently, Nigeria oil policy therefore, is government's aim and objectives with respect to oil and how it intends to achieve it. The outlook for Nigeria's oil policy is influenced by five considerations. These include

i. The imperatives of maximizing returns from oil

ii. The need to ensure internal self sufficiency in the supply of petroleum product.
iii. Continuing the effort to increase petroleum revenue
iv. Diversification of the energy and financial base of the economy and
v. The international framework of Nigeria's oil policy.

Like many other sectors of the Nigeria economy, the major and crucial activities of the oil industry were in the hands of foreign concern with the Nigeria public sector playing very little role in the industry for so long. The interest of government was limited to the collection of royalties and dues offer it by the oil companies, particularly the producing companies. This was however to change in 1969 when the Nigeria government promulgated petroleum decree of 1969 No. 51 published as a supplement of the official federal government gazette No. 62 volume 56 part A dates 27th November 1969.

The law stipulates that federal government be approached and approval obtained by the issue of relevant licenses before carrying out key operations in the oil industry. The highlight of these laws was the establishment of the Nigeria National Oil Corporation (NNOC) as an integrated oil company. This marked the beginning of greater participation by Nigeria. The company was later merged with the federal Ministry of Petroleum 1977 to form the present Nigeria National Petroleum Corporation (NNPC). The NNPC is involved in all areas of oil industry from exploration, production to refining of crude oil, distribution of natural gas and petroleum product to petrochemical product. The first concerted efforts in the bid to ensure Nigeria's self sufficiency in the supply of petroleum was made when Nigeria established four refineries with two in Port Harcourt (Eleme) and the other two in Warri and Kaduna. Even with these refineries in operation, some proportion of domestically consumed petroleum product is still being imported. And this has a way of negatively affecting the external reserves of the nation. At the climax of the oil crisis in Nigeria, the government ordered the importation of oil for three months to offset the shortfall. Irrespective of where the product was sourced, industry officials questioned the claim by NNPC that it imported fuel at a landing cost of N18 per litre. This put of the first three consignment totaling 120 at N2.16 billion.

OPEC and the oil crisis

For much of the post war era, the international oil market was lightly controlled by an oligopoly of major seven international oil companies BP-Shell, Mobil, Exxon, Texaco California Standard and Gulf which is presently known as Chevron. These companies decided when and where to prospect for oil, how much to produce once it was found and at what price to sell it. The reduction in the international price of oil prompted the formation of OPEC by Venezuela, Iran and Saudi Arabia in 1960. The resolution made it clear that the oil producers' chief opponents are the oil companies and goes on to declare. That members no longer remain indifferent to the attitude here to adopt by the oil companies maintain their prices steady and free from all unnecessary fluctuations that members shall endeavor by all means available to them to restore present prices to the levels prevailing therefore the reduction; that they shall ensure that if any new circumstances arises that in the estimation of the oil companies necessitate price modification, the said companies shall enter into consultation with the member of members affected in order to explain the circumstances.

The objective of OPEC as defined by Fuad Rouhani the first Secretary General of OPEC include:

- Endeavoring by all possible means to restore the price of crude oil to the level existing before the reduction
- Ensuring that the oil companies maintain their prices at a stable level avoiding any unnecessary fluctuations.
- Elaborating a formula to ensure the stability of prices and for this purpose resorting, if necessary, to a regime of control of production etc. But this proved unsuccessful in the 1960s. the marked surplus in the world oil supply continued to depress prices and the OPEC countries could not agree among themselves on an amicable formula for rotating output in order to limit supply.

The London times in September 1969 had reported that OPEC was deeply divided and night split up. However, by the beginning the 1970s a new consultation of factors was emerging in the international oil markets largely to the advantage of OPEC control. As a result of the transition of the U.S. from oil sufficient to an oil importing country and with massive increases in the requirement of the Japanese, there occurred a major increase in the world demand for oil. There occurred a fundamental charge of perception regarding the long term relation between the inexorably increasing demand for oil and the diminishing reserve findings. It soon became apparent that with the demand for oil continuing to increase at its prevailing rate, it would quickly outstrip supply.

For this reason the oil exploration countries of the third world countries quickly capitalized on the new set of circumstances. At this rate government's loss from this first cargos is estimated at N840 million. From about 1.33 billion litre of petrol expected to be imported over three months. Nigeria maintains a uniform parking system throughout the whole country aimed at promoting an effective distribution of product and even development of the country. Towards this direction government established petroleum equalization fund management board and petroleum trust fund. The former handles the payment of subsidies to marketing companies to compensate them for differential in cost of operation. The latter has the responsibility of using the fund collected from petroleum profit tax (PPT) and other sources for the development of the country especially in the area of road maintenance, hospital drug revolving loans and education. The issue of government subsidy of domestically consumed petroleum product has generated a lot of controversies both internally and externally. A removal of the so called subsidy had led government to continue to increase the pump price of petroleum hence exacerbating the already worsening inflation rate in the country.

The third objective of he nation's oil policy is increasing oil production base. To achieve this, incentives are given to oil companies to press ahead with exploration efforts. Such incentives range from generous allowance for technical cost, substantial tax relief for off-shore exploration combined with a favourable international market for oil to spur unprecedented exploration. However, in view of the depressed world oil market government is not optimistic that any further exploration activities would draw similar response. On the policy of diversification, concerted efforts are made by the government to move away from the present precarious position whereby Nigeria relies exclusively on the sale of crude oil as the principal source of her finances. Analyzing the imperative of diversification, Tam David said "the core of the programmes and projects is to set in motion an oil-led structural transformation of the economy by promoting the degree of inter-sectorial linkages between the oil sector and other sectors of the economy. as a matter of deliberate policy according to him, Nigeria are fully integrated into the engineering of some projecting the objective being to developing manpower and technology in the strong NNPC drive for intensified exploration and drilling operations. Speaking in the same vein, Aribisala posit that there can be no question of the need for Nigeria to develop a more coherent policy to deal with medium and long term needs of the economy. According to him recent experience indicates that the country has become hostage to its good fortune in processing oil. The degree of leverage which Nigeria has in the execution of oil policy would have to be reviewed within the institutional framework of membership of OPEC to strike a new deal with the multinational oil companies. Pioneering in this endeavour was the Libyan leader Colonel Gadaffi. He negotiated price increases in 1990. The negotiated higher tax of Libyan oil triggered the operation of the "most favoured nation clause' which had been the basis of negotiation between OPEC and the oil companies throughout the 1960s. to pressure the companies, Libyan began ordering a series of production cutbacks. By 1970, Libyan production had been reduced from 3-6mb/d to 2.8 mb/d. George Piercy explained the significance of the Libyan cutback.

"This was the first time since the Iranian nationalization in the early 1950s that a major middle Eastern producing country was willing to sacrifice current revenues to achieve changes in concession arrangement. Libya was in a unique position to do this. Its population was small, its monetary reserves high and its oil increasingly valuable because of the transportation shortage. The new revolutionary government was determined to purse its nationalistic aims which include ever increasing control over its oil". Thus negotiation between OPEC and the oil companies in the early 1971 led to the establishment of the Teheran Agreement. It was in this context that Nigeria joined OPEC as its 11th member in 1971. In the early 1970s OPEC emerged as the most powerful and potent instrument of third diplomacy which brought about a massive transfer of resources from the rich countries of the North to the relatively poor oil producing countries of the South. OPEC virtually controlled the international oil market by accounting for over 50% of the oil export. This enables it to bring about quadrupling in the price of oil between 1973 and 1974. Coupled with this was the attempt by organization of Arab Petroleum Export Countries (OAPEC) to use oil as political weapon in support of the Arab cause during the Yom Kippur was of 1973. World oil prices began to rise and OPEC established itself as the most Survey published by London's prestigious International Institute for strategic studies noted in its review of 1973. "The successful use of the oil weapon by the Arab States in connection with the middle east war produced the greatest shocks the most potent sense of a new era of any event of recent years.

OPEC's achievement and decline

The achievement of OPEC over its 35 years of existence may be assessed in terms of the net benefits member governments have received, whether economic or non-economic. However, to judge its success or failure, one has to understand the main purpose which OPEC proclaimed for itself. The first task which OPEC set for itself was to stabilize oil prices and to keep them steady from all unnecessary fluctuations. The organization to some extent succeeded in preventing the oil companies from imposing further reduction in prices in the words of Joe Stock (1975). "Even through OPEC failed in its endeavour to restore posted prices and in effect helped to diffuse the popular political momentum that had led to its creation, the organization merely by its continued existence and potential power did succeed in preventing any further cuts in the face of the continually, declining oil prices on the European market". OPEC countries finally emerged as the sole determinant of their policies. This rise to power brought in its wake economics dividends. The price of oil quadrupled between 1972 and 1974 and doubled again between 1979 and 1980.

In addition, the organization has diversified from its major operations, to the other functions aimed at improving the lots of its member's countries in particular and the quality of life of humanity in general. For example as at 1992 about 925 developing countries in Africa, Asia, Latin America, the Caribbean and the Middle East had benefited from OPEC more than 570 loans and 325 grants under the supervision of its fund

Governing Board, OPEC fund for international development. And its 60th session, the Board approved U.S $6.4m loan to Mauritanian in support of her land development projects, U.S $5.0m was approved in favour of Nicaragua for her water and sewage system rehabilitation and U.S. $150,000 was approved for Nepal in support of her expanded immunization programme. In OPEC, member countries have successfully eliminated variances allowances and discount by which the large companies secure greater profit and improve the 'take' of the oil producing from royalties. Through individual price negotiation, members have been able to reach an amicable compromise on such issues as taxation, of concession, acreage and output rate. OPEC's basic inability to obtain fundamental charges in the position of the oil exploring government in the 1960s and its failure to achieve its principal objectives can be attributed to several factors:

- As the dollar depreciated in the world exchange market, OPEC considerable dollar reserves also declines, moreover a s more and more petro dollar were channeled into investment, the OPEC countries themselves became hostage to the fact that the European and North America investment market, the developed market economy countries actually acquired new means of applying pressure on OPEC states as opposed to the enhancement of OPEC leverage in the West.
- Rifles within the OPEC block itself were inimical to effective exercise of cartel power. There were divergent views and interest between those countries with huge oil reserves and a surface of surplus revenue over current expenditure requirement and those with limited resources and huge development plans and expenditure.
- The industrialized nation has ganged up to the throat the effect of OPEC in the oil world market in the 1970s. it was an oppressive polities aimed at subjugating OPEC. In addition, the conservation of oil measures adopted by the industrialized western nation has prevented OPEC from better prices for oil since 1981. The exploration of oil in Alaska and North Sea increased in the world oil output especially since the late 1970s. Hence there has been an oversupply of oil relative to demand in world oil market, that is oil glut. This largely explains the violent fluctuation in the prices of oil since 1980s.
- OPEC quota is not usually observed by members such dishonest practices increases the glut in the world oil market which in turn further depress prices.

In spite of its teething problems and the differences among its members with respect to nationality, religious and geographical location, the organization has achieved a reasonable amount of success in its objectives. It has grown to become force to be reckoned within the global political economy.

OPEC and the world oil prices

The issue of crude oil prices is of main concern not only to producers but to the buyer and the ultimate final consumers. The major pre-occupation of OPEC has always been how to stabilize the oil price. OPEC members are also seriously affected by the instability in crude oil prices. Crude oil prices rose from low level of U.S. $36 in 1973 in an oil time peak of U.S. $32.5/b in 1973 in an oil time peak of U.S. $32.5/b in 1981. There and then, crude oil price started to decline. The price fell to U.S $27.5/b in 1987, (see table) and over a period of nine years, it dropped to U.S $21.0/b (about 35% decreases in price). The situation continued to worsen and by 1994, crude oil price had fallen to U.S. $3.7 representing a 57.85% decline compared to 1981 price. This does not anger well for the economic well being of member countries most of whom depend exclusively on oil. World oil market development observed Iwayemi (1992), "has since the second half of the 1980s demonstrated the conventional wisdom in economic that, competitive production and pricing strategies among producers when the industry is characterized by significant excess capability will depend only on the size and utilization of existing capacity but also on the perception of the market as regard of imbalance between demand and supply".

World demand and supply of crude oil

Like every other commodities, crude oil is subject to the general economic laws of demand and supply. From the early days of the industry, supply demand has been manipulated in many ways, for various reasons and with different results. The first Dockfeller, by controlling transport refining had producers at his mercy. The international oil companies by various confidential and gentleman's agreement as well as effective division of the world's market delicately balanced supply and demand in other to maintain prices and profits, and to avoid conflict of interest and influence. As the industry grew in size and strategic, the government of developed countries established statutory control over various aspect of it, both on the production and the down stream sides. In the U.S as early as the 1930s control and regulation of voluntary and mandatory restrictions on oil consumption and it is now difficult to determine the level of real demand. In this condition the application of the economic laws of supply and demand are of necessity based on many assumptions probably the most important and the least predictable of which is the behavior of government.

Table 1

	1990	1991	1992	1993	1994
World Crude Oil Requirement (mb/d)	64.57	64.77	65.12	64.85	65.47
Total World Supply mb/d	64.99	65.17	65.43	65.55	65.86
Balance mb/d	(0.24)	(0.4)	(0.31)	(0.7)	(0.39)

*Represent January average only

Source: Adopted from (1) OPEC Annual Statistical Bulletin pg. 381994. (2) Cachpaz B.P Statistical Review of World Energy.

The table above shows estimated world demand and actual supply of crude oil world wide. From the crude oil supply was persistently in excess of demand. This scenario created imbalance in the supply demand situation. The imbalance was highest in 1993 with excess supply of 0.7 million barrel/day. The result was a significant fall in the price of oil from its $16.17 barrel in 1993 to U.S. $12.66 barrel in late 1993. There appear to be a high correlation between the magnitude of excess supply and the price situation. As at early 1994 when the excess supply came down to 0.39 mb/d, price also rose from its $12.66 barrel in later 1994 to U.S $3.70 barrel early 1994. The situation resulted principally from the increased emphasis by oil producers on sustaining their price of the market. A lucid illustration of the phenomenon is the increase in the world's supply. Compare the sharp reduction in price. Thus as indicated by Subroto (1994) in his address at the 21st Energy policy seminar in Norway, while most business have addressed the impact of low demand by reducing production, oil industry has done the opposite. In fact, the marginal improvement in price observed in 1994 could be attributed to seasonal factor and the increase in world demand.

With regard to supply of petroleum, there will be sufficient oil to meet the world's requirement, at least for the rest of the century. The pattern of supply like that of demand may change but the overall supply will be ample. Other forms of energy will gradually increase their share of the consumption but crude oil will continue to be consumed in increasing quantities.

The advantages and disadvantages of Nigeria's membership of OPEC

Nigeria joined OPEC in 1971. One of the advantages it had was greater participation in control of the petroleum industry. This was indicated by the formation of the Nigeria National Oil Company (NNOC) which in 1977 was transformed into the Nigeria National Petroleum Corporation NNPC. NNPC combined the commercial function of the NNOC with the unnecessary duplication of efforts and possible unhealthy rivalry that could be inimical to the national economy. Argument for Nigeria in OPEC before joining OPEC in 1971 the Nigeria government interest was only limited to the collection of royalties and other dues offered it by the oil companies. The revenue accruing to the nation on each barrel of oil produced at that time was very small. With its large population and small per capital income, Nigeria badly needs additional revenue.

Obadon (1991) aptly described this scenario "the revenue coming to the nation on each barrel of oil produced at that time was lower than Libya's even though the trade is similar in quality". Other reasons or benefit the nation intends to derive for joining the organization include;

- The need to correct its faulty administration of problem taxation so that government receipt per barrel and posted prices could compare more with those of OPEC members.
- The urge to keep with Jones and thus benefit from experience of those oil exporting countries at similar stages of development.
- To enable it learn through participation, the process of oil business administration in a profitable manner.

Since joining OPEC some of the benefit that has accrued to the country includes:

- Nigeria was also able to negotiate better terms from oil companies in 1971, Nigeria negotiated and signed the Lagos agreement which called for monthly instead of quarterly payment (time value of money advantage), raised its income tax rate 55% and provided for periodic increases in the posted prices. At the same time the capital allowance enjoyed by the oil companies in 1997. Consequently to the take over, OPEC achieved dramatic increases in oil prices. For instance OPEC reference prices rose from $5.39 barrel in 1973 to $3400 barrel in 1982. During this period, Nigeria's oil prices rose from $8.36 barrel in 1972 to $36.52 barrel in 1992. Since its oil revenue went up so suddenly in 1874-75 the country had problem utilizing its new wealth.

In 1975 Nigeria ordered 16 million tons of cement to be delivered within one year, but this was the middle of 1975 more than 260 ships carrying cement lay off shore waiting berths. The situation got so bad that in the end of the Nigerian government refused to pay for either cement or waiting time. (Schneider 1983).

Nigerian's majority equity participation in the shares of the oil companies was made possible b its membership of OPEC. other benefit in this regard include increases oil exploration activities, more efficient conservation measures and the use of contract for operating the oil industry instead of the traditional concessionaire system as that granted Shell D Archy.

- Identification with OPEC has improved Nigeria's corporate image in the comity of nations. Its political status at the international level and been bolstered especially in 1975 during the Angola independence.
- Nigeria has been able to assist less developed countries. It has therefore benefited from the joy that comes from giving. This she does through her contribution to the OPEC fund for international development.
- As a donor to OPEC fund Nigeria is also entitled to benefit from the organization's loan to member countries.
- The country has also benefited from the prestige that accompanies the president of such a prestigious body. This had further opened the way for Nigeria's appointment to head some other international bodies like the Commonwealth of Nations, Security Council of the United Nations etc.

Arguments against Nigeria in OPEC

In spite of the numerous gains Nigeria has derived from being a member of OPEC, some have criticized Nigeria membership of OPEC. Some of the reasons advanced as noted by Obadan are itemized below;

- As a member of OPEC Nigeria has lost the freedom to fix her oil production level (giving to fact that the country can export up to 2mb/d) and to unilaterally determine the price of her crude oil in accordance with market condition and can produce as much as she want as long as the market can permit without OPEC.
- Outside OPEC, there would be no obligation to contribute to OPEC fund which gives out loans to other developing countries some of which are more developed than Nigeria.

Consequently, there would be substantial savings for the country. The stigma of agreed attached to OPEC can be shaken off since most of the industrial and developed oil prices are unjustifiably high. In this way, the industrial nations and some other LDC's would see Nigeria as friendly and so she may obtain a greater level of co-operation from them especially in areas of oil sales, technical and transfer of technology.

From the two sides of the coin, it is apparent, that the problem of the country is not her being in OPEC. After all, her joining OPEC was principally because of her inability fair prices for her oil from her trading partners and since her entrance into the organization, her fortune has changed for the better. Moreover, there is nothing to suggest that she will be able to negotiate a better price outside OPEC. As noted by Obadan (1991) oil is a deflectable resource which needs to be conserved and not hurriedly sold at given away prices. The gulf area countries that are not in OPEC are obtaining better prices than Nigeria either. Should Nigerian withdraw from OPEC, she would only find to her consternation that she is merely a loner and will therefore again be subjected to the hand fisted dealings of the western world. Whether Nigeria has gained from membership of OPEC or not, what is important is the need for her to diversify the production base of her economy. as noted by Nwankwo (1983), the issue confronting the country is that of resolving the nations economic crises through a judicious use of her oil resources, diversifying the uses and markets, building up robust reserves to withstand further oil shocks, diversification of the economy and massive expansion of agriculture and manufacturing to reduce the heavy dependence on oil.

The role and importance of oil (crude) in Nigeria economy

One of the significant roles of oil is its contribution to government revenue. The works of Obadan et al (1991) among others have extensively discussed the important role of oil in the economy of Nigeria. These can be summarized as follows;

In the area of revenue yielding, we find that between 1960s and 1970s the contribution to government revenue rose from N28, 000 to N3 million of the total budgeted income of N101.2 billion in 1994, N96.11 billion or 87.7% was proposed from the sale of oil. Crude petroleum's GDP rose from N0.43 billion in 1960-69 to N12.86 billion in 1995. Crude oil has remained the main economic growth in Nigeria in spite of the volatility of the oil market and its declining share in GDP. With his revenue from the oil sector the government is able to increase the pace of industrialization and economic growth. Other sources of revenue are royalty's rents, license fees and mineral profit tax.

Another important contribution of the oil to the Nigeria economy is in the area of foreign earnings. Oil has resulted in increase export earnings thereby improving the country's external trade position. Between 1958 to 1974 total amount of foreign exchange earned through petroleum export rose from N2 million to N5, 366 million. The percentage of total exports for the respective years was 7% and 92%. The net effect of this is a significant improvement in the country's balance of payment position.

However, with the increase in foreign exchange earnings, the country was able to import adequately the necessary and required machineries to help in boosting economic development. In addition, the government was able to increase the basic income of the Nigeria labour force, thereby increasing the prevailing purchasing power which boosted the level of economic activity.

The advent of oil has increased the employment opportunities in Nigeria. The oil companies employ Nigerians in hundreds. In addition many oil service firms have been established; the independent oil marketers, oil transporters etc. are all directly employed by the oil sector.

Oil pays the role and source of fuel and power; it increased its share in total supply from 70% in 1950 to 80 percent in 1974. Within the crude oil sector, there had been some structural changes in world technology. Given the present state of technology, it seems that crude oil will continue to maintain its share in the country's total fuel and power supply. In the political scene Nigeria's image has been boosted especially in 1975 during the Angola political independence.

Oil price increases and subsequent increase in Federal Government revenue has enabled the government to embarked on some ambitions projects; the activities if the National Directorate of Employment (NDE), Director of Foods, Road and Rural Infrastructure (DFRRI) and more recently the petroleum Trust Fund (PFT) which all depend on federal government subvention have had positive effect in the area of road maintenance, provision of drug revolving loan in hospitals, maintenance of educational infrastructures and others.

Linkages effect: Obadan describes four linkage effects of oil as follows;

a. **Backward linkage effect:** This refers to the domestic development of inputs headed to the sectors such as raw materials, intermediate and capital goods, special skill of labour etc.
b. **Forward linkage effect:** This is use of the product of the sector as imputs by other sectors.
c. **Final demand linkage:** This refers to the enhanced purchasing power that rises from either the local payment of wages or salaries or from direct purchases by oil companies and
d. **Fiscal linkage:** This arises from the use of increase oil revenue to develop other sectors of the economy such as agriculture educational infrastructure etc.

We also need to look at the negative effect when discussing the importance of crude oil to the Nigeria economy. some of these include environmental pollution and destruction of landscape of the communities where oil is being drilled for this reason oil companies have had to contend with protesting rural communities who through protest, press for improvement in their lining standard. Gas flaring has also worsened the air pollution of these communities.

Furthermore, the advent of oil has in advertently turned the Nigeria economy into a mono product state which adverse consequence to the nation. Consequently, development in the international oil market is directly translated into instability in the economy resulting in balance of payment deficit unemployment and declining quality of life (Anyanwu, 1997).

Essien described the advent of petroleum into the Nigeria economy as both blessing and curse. "It was a blessing because after the Nigeria civil war there was great demand for fund both internal and external for the construction of demand infrastructure and to return the economy to, at its pre-war level. But it was a curse because oil revenue did not flow into the Nigeria treasury, it poured torrentially as if providence was in the war years. And so it was squandered". That was how Nigeria which ought to have climbed to the back of crude oil to economic power was turned into one of the biggest debtor nation.

3.0 Theoretical framework

The oil industry is so important to government revenue and the country's economic growth that any development in the industry is bound to affect virtually the financial position and the level and tempo of domestic economic activity. For instance the contribution revenue ranged between 82 percent in 1979 and 65 percent in 1982. Given the continued oil glut in the world market since 1981 and the accompanying changes in the use of fossil energy a review of development in our petroleum industry should provide a useful guild for reordering government's social economic priorities and shaping future policy stance.

Crude petroleum production decline persistently from a daily average of 2.3 million barrel in 1979 to 2.1, 1.4 and 1.3 in 1980, 1981 and 1982 respectively. The export of crude oil followed the same downward trend moving from daily average position of 2.3 million barrel to 1.1 million barrel in the same period. The official price of Nigeria market crude rose from $20.95 per barrel in 1979 through $35.41 in 1980 to $38.75 in 1981 but dropped to $35.67 in 1982. The average spot market price of African light crude showed the same pattern of movement rising from $32.11 in 1979 to $35.49 in 1981 and dropping revenue increased from N8.9 billion in 1979 to N12.3 billion in 1980 and thereafter nose-dived to N8.6 in 1981, N6.9 billion in 1982.

The fluctuation in oil prices, production export and revenue is due mainly to oil glut situation in which oil supply substantially exceed its demand. Many factors are responsible for this. The first is the reduction in Iran's oil production to Iranian revolution of 1979 which led to the raising of oil prices by OPEC from a range of $18 - $22 per barrel in 1979 to $32 - $40 in 1982. The oil price escalation resulted in greater exploitation of non-OPEC oil sources such as the North Sea Alaska and Mexico Energy conservation techniques were developed by the industrialized countries to absorb future shock and were supported by the International Energy Conservation Agency (IEA). Following the sput in oil production in 1979 as well as high oil prices in that year and in 1980 federally collected revenue increased to a phenomenal level. Rising to 48.0 and 39.6 percent annually federally collected revenue totaled N10.9 and N15.2 billion in 1979 and 1980 respectively.

The policy of government on revenue is to maximize each of the several sources of revenue from oil royalties and taxes. Premium or bonuses also make vital contributions. By the time Nigeria entered the leagues of oil productions, precedents patterns and policies on royalties and tax had already been set by other countries.

Thus in 1984 the 50/50 profit sharing regime had been established by the Venezuelans, we had been sustained by invoking the most favoured national principle whereby any better term given to another producer country better terms from the companies, Nigeria negotiated and signed the Lagos Agreement in 1971 following the pattern of the Teheran and Tripoli Agreement of the tax rates of 55 percent and provided for periodic increases in the posted price. Under the auspices of OPEC two other agreements known in the industry as the General and Geneva 2 Agreement were signed in 1972 and 1973 respectively. These agreements increased posted prices and corrected for the disturbances in exchange rate between the dollar and other currencies. The Lagos agreement was eventually repudiated and so were the provisions of the General Agreement as any bilateral price arrangement between the producers and the oil companies had become irrelevant. Following production increases in conjunction with improved fiscal payment, there has been a progressive rise in the revenue accruing to the country.

The types of crude oil sales contracts in Nigeria have often varied in relation to market circumstances prevailing at any particular time. When OPEC had firm control of the world oil market, Nigeria, like other member countries sold her crude oil at OPEC official price. However, with the collapse of the crude oil prices from about \$28 per barrel in 1985, NNPC had to device strategies to ensure that Nigeria's crude oil was sold at reasonable prices. Thus in 1989 NNPC drew up the Memorandum of Understanding (MOU) with the joint venture companies whereby the companies stood committed to lifting specific quantities of NNPC equity oil market related prices return for an undertaking to maintain a minimum medium term exploration activities in a global environment of sharply reduced exploration spending due to low oil prices, reduced oil company profit and bleak commercial prospect. The MOU has been under constant review since inception. During the re-organization and commercialization of the NNPC, a decision was made to stabilize the revenue from crude oil sales as much as possible by dealing with only reliable customers. As a result a large number of third party and government to government deals were terminated. This left only three channels for disposing crude oil, the joint venture companies who pick up their own equity crude for direct marketing refining direct sales to refineries and their associated outlets in which NNPC is processing the acquisition of shares, and direct sales to indigenous of shares, direct sales to indigenous and foreign exploration companies which are actively involved in exploration in any part of the country. The benefit of this crude oil sales policy is that in the presence of stiff competition in the international oil market, our market shares are firmly maintained. Furthermore, NNPC does not sell crude oil in the spot market as a matter of policy. This is essentially because of the thinness instability of tat market which led to poor signals for planning.

Instability index

Instability is generally taken to imply fluctuation around a trend. There are many methods of calculating instability indexes. The more commonly used method has been the linear and exponential trend of correction. In order to establish the cause and effect of oil price instability on economic growth variables, a simple regression analysis will be undertaken.

The equation of the model

$GDP = F(OXPE + U_t)$…………………………………. (1)

Where G = Growth

OXPE – Oil Export Earnings and U_t disturbance term.

Equation (1) can be expanded so that the dependent variables can capture the effects of the independent variable. This is shown below:

$GDP = (\alpha + \beta_1 OXPE + \beta_2 SAPD + GDP\text{-}1 + U_t)$ ………………………..(2)

Where GDP = Gross Domestic Product
OXPE = Oil Export Earnings
SAPD = SAP

GDP-1 = One period lag value of GDP

U_t = Disturbance term

The observation on the independent variables is treated as fixed numbers expect when specified otherwise. The parameters of this model are α, $\beta 1$, β_2 β_3.

In classic statistics the two main problems are to estimate the unknown parameters and to test hypothesis concerning them. In other words we need to know the null hypothesis (H_0) and the alternative (H_1) of the statistical analysis of the econometric result.

Any study concerning instability or fluctuation must of necessity involved the calculation of the index of such instability. The calculation is central to whatever inquiries the researcher intends to make about instability. Some studies however, especially those concerning the impact of instability on the economy, the method of instability on the economy, the method of index calculation are not shown. But this is not to say that such studies do not use instability indexes, rather it implies that they considered the index calculation as taken for granted and so kept them out of display in their work. The method of calculating export instability indexes recognizes the long and short term fluctuation that characterized export growth. The long run fluctuation are seen as relevant to the trend of export while the short run variations are related to instability of export proceeds. Thus export instability accounts for the extent to which export fluctuate around their trend values. The general tendency for export earnings to fluctuate around their trend values. The general tendency for export to increase or decrease over time may therefore be seen not as fluctuation but as a trend that explains growth or decline. The general approach to index calculation is to recognize that export depend on time and use the residual therefore to calculate the export instability index.

Glazako defined instability index as the arithmetic mean of the absolute values of the yearly changes in a time series corrected for trend and expressed as a percentage of average of all the observation. To strip the fluctuation of the past influences Glazako subtracted the previous export value from the residual by regressing export on time.

Is = instability
X = export
b = trend value obtained

For regressing export on time

In a more simplified from the index of instability can be calculated as follows:

$$Is = 100/x \sum_{t=2}^{n} \frac{xt - xt - 1 - b}{n - 1}$$

Where = mean of export value
a= intercept
b = slope
X_t = export at period t.

4.0 Regression result and interpretation

GDP = 1.0959339 + 1.41185 (OXPE) – 0.009356(SAP) + 0.998981 (GDPLAG)
SE = (.051245) (3.5853) (.017210) (6.5844)
T-test = (21.386) (.394) (-.544) (1517.189)
R^2 = .99999
$F_{(3, 25)}$ = 1226056.4
D.W = 2.20159
N = 28
A-priori expectation
$\beta 1, \beta_3 > 0; \beta_2 < 0$
$\beta 1$, β_3 assumed valued greater than zero and β_2 assumed values less than zero.

Interpretation of result

From the result shown above, it can be ascertained that there is a positive relationship between growth, oil export earning and other variables with the exception of SAP dumming which has a negative relationship with the growth.

i) The estimate of the intercept α is zero is 1.096 billion. The slope coefficient β_1 = 1.41185, indicate that 1% increase in oil export earning generate an increase of 1.41185 in GDP. In the coefficient β_2 = .009356, indicate that 1% increase in SAP, will decrease GDP by .009356. the coefficient β_3 = 008981, also indicate that 1% increase in GDPLAG will increase GDP by 998981.

The coefficient R^2 = .99 it implies that 99% total variation in the dependent variable (GDP) has been explained by the independent variables (OXPE, SAPD AND GDPLAG), taken together while the unexplained variation is 1%. During this period the R^2 which is the adjusted R square is 99%

F-test: the overall test shows that the regression is statistically significant at 1% level of significant.

T –test : the t-value indicates that the parameter of the slope coefficient of α is highly statistically significant at 1% level of significant, the coefficient $\beta 1$ and β_2 are not statistically significant at 1% level of significant, but β_3 is highly statistically significant at 1% level of significant.

The Durbin Watson statistics is 2.20159, which indicate that there is a presence of serial correlation in the model.

Using the OLS and auto regression inverse interpolation method one can make the following observation.

1. That a positive relationship exist between the dependent variable GDP and the regressor (oil export earnings OXPE) as shown by the sign.
2. The coefficient of determinant using SAP dumming (SAPD) one period lagged value of GDP (GDP_{-1}) as explanatory variable records a high coefficient of determinant R^2 and R^2.
3. Durbin Watson statistics (DW) shows the presence of auto-correlation.

Test of hypothesis

The null hypothesis is $H_0 = \beta = 0$ and the alternative is $H_1 = \beta \neq 0$. If the null hypothesis is true, it implies that there us no relationship between the dependent variable and the independent variable.

On the other hand if the alternative hypothesis is true that test is said to be significant. That is a relationship between GDP and OILXPE exist so that knowledge of the independent variable (OILXPE) is useful in making production on the variable. in the various results the alternative hypothesis was true i.e. $H_1 : \beta \neq 0$ except in few cases where the null hypothesis $H_0 : \beta = 0$ (see regression results).

On the whole there is a significant relationship between oil export earning (OILXPE) and growth GDP.

Effect of changes on key economic variables in the Nigeria Economy

There are diverse views on the impact on oil resources on key economic variable. to appreciate the extent of the impact (positive or negative) of the oil industry on the Nigeria economy, certain indicators of economic development have to be identified.

a. Gross Domestic Product (GDP)
b. Agriculture
c. Government Revenue and Expenditure
d. Foreign Exchange Earning and B.O.P

Gross Domestic Product

The significant impact of the petroleum sector on the Nigerian economy has been clearly shown in the consistent rise in GDP from N73.8 billion in 1973/74 fiscal year. The main reason for the growth in the oil sector has been the rapid rise in the oil prices. Between 1978 and 1982 the spotted price of Nigeria crude oil rose from U.S $13.9 to U.S. $35.25. This brought about increase in government revenue. Crude petroleum's GDP rose from N0.42 billion in 1960-69 to N12.86 billion in 1995, the highest contributing period being 1975-79 at N17.91 billion (see table 4). Thus the percentage share of cruse petroleum in Nigeria's GDP rose from 1.6% in 1960 period to 17.4/5 in 1970-74 periods and to a peak of 24.3 in the 1995-79 period. It was 22% in 1980, falling to 15.06% in 1985 and to 12.90% in 1990. In 1995 it further fall to 12.44% crude oil petroleum has remained the main engine of economic growth in Nigeria in spite of the volatility of the world oil market and its declining share in GDP.

Agriculture

In spite of its positive contribution, the oil industry has also produced some very serious negative impacts on the Nigeria economy. It has often been stressed that agriculture which was the country's economic mainstay before the discovery of oil commercial quantity has been neglected in favour of the liquid gold. (Essang, 1976). During the same period prices paid to farmers progressively decline relative to wages paid by the federal government to unskilled labour which continue to increase. For example it was estimated that between 1950-52 to 1962-63 the overall index for southern Nigeria prices paid to famers fell from 100 to 73 while that for wages paid by the federal government to unskilled labors increased from 100 to 279 (Asiodu 1980). The export of agriculture product also suffers the same fate. The contribution of agriculture to total export dropped from 1955 level of 84% to 63% in 1969 and a mere 14% in 1973 (Essang 1976).

Government revenue and expenditure

The posted prices of Nigeria crude oil were increased by 40-40 percent a barrel and the nations effective revenue rose from N166.5 million to N3,726.7 million between 1970 and 1971 (see table 2). Government expenditure also increase from 633.2 million in 1970 to N4,537 million in 1974. As a result of the fall in oil price in 1978/79 total revenue fell to N6,815.2 million in the same year. This was to pick up again to N8,880.8 million as a result of the rise in oil price in 1979. But from 1980 to 1984 oil revenue have been declining only to pick up again in 1985. It fell in 1986 to N8,107.3 million and rose sharply to N19,027 million in 1987 and continue in that trend (see table 2). The increase in government revenue is easily demonstrated by the tremendous increase in the size of Nigeria's subsequent development plans. With increase in government revenue deficit in government account can be eliminated and a meaningful part of development could be charted for the country.

Balance of payment

The effect of petroleum on Nigeria's balance of payment reveals that the growth of the petroleum export earnings was the major factor in the increase merchandise trade balance from deficit into surplus in 1966. The surplus rose from N13.0 million in 1980. Oil sector contributions capital transactions have been positive. The reason being that the sector exerts a major attraction to foreign investors. The overall net contribution of the oil sector to the balance of payments has grown tremendously from a very low level of N15,004.00 million in 1960 to N6,491.9 million in 1977 and to an estimated N11,717.7 million in 1980.

Year	1984 Constant factor cost		U.S. $ Per barrel
	Annual table (GDP) (Nb)	Oil Nm Export	Spotted/Posted price
1970	54.2	510.0	2.4
1971	65.7	953.0	3.2
1972	69.3	1156.4	4.4
1973	73.8	1983.5	4.0
1974	82.4	5365.7	11.3
1975	79.99	4560.9	11.3
1976	88.9	6321.6	13.9
1977	96.1	7969.2	14.5
1978	89.0	5401.6	13.9
1979	91.1	10166.8	21.3
1980	96.2	13632.3	35.4
1981	70.4	10533.5	38.9
1982	70.1	8003.2	35.25
1983	66.4	7201.2	29.16
1984	63.0	8840.6	29.16
1985	68.92	10890.6	28.25
1986	71.1	8368.5	14.93
1987	70.8	28208.6	18.55
1988	77.8	28435.4	14.42
1989	83.5	55016.8	18.42
1990	90.3	106626.5	24.24
1991	94.62	116626.5	20.46
1992	97.44	201384.8	19.84
1993	100.01	213778.8	17.50
1994	101.3	200710.2	16.17
1995	103.50	728265.3	17.0
1996	106.9	1286215.9	18.34
1997	111.1	303124.85	-

Source: CBN Statistical Bulletin June 1995 and FOS Review of Nigeria Economy 1996, July 1997.

Table 3

Yearly Crude Oil Production, Export and Domestic Consumption 1958-1997 (thousand barrel)

Year	Production	Export	Domestic consumption
1958	1876	1,820	
1960	6374	6,244	
1965	99355	96985	
1970	395689	383,455	12243
1975	660148	627638	32510
1980	760117	656260	134857
1985	547088	486580	60449
1990	660559	548249	112310
1991	689850	585838	104012
1992	711340	604300	107040
1993	691400	563614	127786
1994	696190	578044	118746
1995	715400	616900	98500
1996	740190	648690	91500
1997	759710	673960	85750

Source: 1) NNPC, Nigeria Oil Industry Statistical Bulletin 1983
2) CBN, Annual Report and Statement of Accounts, various years Statistical Bulletin, June 1995/1997.

Table 4
Crude petroleum contribution to Nigeria's GDP at 1984 factor cost 1960-1995.

Year	Annual total GDP (b)	Crude petroleum GDP (b)	Crude petroleum GDP growth rate	% of crude petroleum GDP in total GDP
1960-69	26.8	0.4288	84.8	1.6
1970-74	58.2	10.1268	3.2	17.4
1975-79	73.7	17.9091	7.2	24.3
1980	73.1	16.104	-2.1	22.0
1985	68.92	10.38	0.8	15.06
1990	90.34	11.65	12.2	12.90
1991	94.64	12.72	9.2	13.44
1992	97.44	13.06	2.7	13.41
1993	100.63	13.09	0.2	13.09
1994	101.3	12.75	-0.6	12.62
1995	103.5	12.85	0.8	12.44
1996	106.9	-		-

Source: Computed from CBN Annual Report and Statement of Accounts: Statistical Bulletin June 1995a.

5.0 Summary and Conclusion

Summary

In this study, an attempt has been made to analyze the relative impact of oil price instability on Nigeria's economic growth. The study begins with an examination of Nigeria economy. We look at the pivotal role of the agricultural sector in terms of revenue and employment generation, food supply and foreign exchange provision. We examine the importance of oil the Nigerian economy. The history and role of OPEC were discussed with emphasis on the price stabilization role. Its inability to stabilize oil prices should not been seen as weakness and in efficiency on its part.

The study ends with specific recommendations including one that the current world oil prices cannot be resolved through a unilateral efforts. Hence, all the oil exporting countries should work together and adopt a co-operative production strategy based on the concept on non-envy in production allocation (Iwanyemi, 1992). It is only through such mutual understanding that the industry can move forward.

Recommendations

Arising from the analysis in the study, the following recommendations are suggested in the hope that would contribute to a balance attainment of balanced growth, rapid economic recovery reduce over dependence on oil revenue.

i. The setting up of petrochemical plants and the prohibition of gas flaring are must because of the benefits of such a social economic investments. While petrochemical will stimulate a healthy growth of industries that utilizes its product gas re-injection policy will add to foreign exchange earnings.

ii. Effective commercialization of each of NNPC's subsidiaries presently engaged in refining, product distribution, petrochemical gas utilization, data processing and engineering services should be pursued through adequate government finding and short and medium term leases to investors under joint venture arrangement. Such commercialization of those subsidiaries will free the co-operation from direct commercial activities. The subsidiaries would then run as independent enterprises with full responsibilities for their operations.

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