

# The Impact of Tax Incentives on Foreign Direct Investment in the Oil and Gas Sector in Nigeria.

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**Abstract:** The government of oil-rich Nigeria strived to attract Foreign Direct Investment (FDI) through tax incentive, because of its acknowledged advantages as a tool for economic development. However, the trade-off between the sacrificed tax revenue and the expected gains from FDI are inconsistent as there is contentious evidence in the literature that tax incentive is actually the attraction for FDI. This study is aimed at filling this gap, therefore, it examines the impact of tax incentives on foreign direct investments in the oil and gas sector in Nigeria.

This study investigates the determinant factors of FDI and analyse whether or not some selected factors such as tax incentives, availability of natural resources, macro-economic stability, market size, openness to trade, infrastructural development and political risk have an impact on FDI in the oil and gas sector. Data from a sample size of twenty-one years (21) from the Central Bank of Nigeria annual statistical bulletin and the United Nations Conference On Trade and Development (UNCTAD) reports were analysed. Karl Pearson coefficient of correlation 'r' statistical method of analysis was employed in analysing the data collected.

The results of the analyses show that there is significant impact of tax incentives, availability of natural resources and openness to trade on FDI in the oil and gas sector in Nigeria. Also, there is no significant impact of market size, macro-economic stability, infrastructural development and political risk on FDI in the oil and gas sector in Nigeria. This result supports the trend of findings in similar studies in the literature.

In view of these findings, the study recommends that in particular attention should be given to institute new regulations to encourage the type of FDI needed to support the economic objectives of vision 20-20-20, such as provision of needed infrastructure especially electricity. This is in order to improve economic growth and the inflow of FDI in Nigeria.

**Keywords:** Central bank of Nigeria, Economic growth, Foreign Direct Investment, Macro-economic statistics, Nigeria, Oil and Gas, Taxation, Tax incentives, Vision 20-20-20

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## I. Introduction

### 1.1 Background

Oil-rich Nigeria has been hobbled by political instability, corruption, inadequate infrastructure, and poor macroeconomic management which have hindered economic development and growth. Government is interested for improvement in all of these areas. Therefore, in recent years Nigeria began pursuing economic reforms in order to meet its target of becoming the world's top 20 economies by 2020. This has led to an interest in the Foreign Direct Investment (FDI) as a means of achieving economic growth.

According to Nwankwo (2006), FDI creates employment and acts as a vehicle of technology transfer, provides superior skills and management techniques, facilitates local firm's access to international markets and increases product diversity. Ayanwale (2007), stated that most countries strive to attract FDI because of its acknowledged advantages as a tool of economic development. This view is supported by Nwankwo (2006)'s study on Nigeria which stated that FDI is an engine of economic growth and development in Africa where its need cannot be over emphasized. Nigeria joined the rest of the World in seeking FDI as evidenced by the formation of the New Partnership for Africa's Development (NEPAD).

In view of the NEPAD initiative, the government is working toward developing stronger public-private partnerships for roads, agriculture, and power through the attraction of FDI among other measures. A National Council on Privatisation was established, in addition the Nigerian Investment Promotion Council (NIPC), has been strengthened to serve as a one-stop office for clearing all the requirements for investment in Nigeria. This is through the promulgation of *Nigerian Investments Promotion Commission Act cap n.117 (1995), LFN*. Also attracting FDI through taxation policy in form of tax incentives is an avenue being adopted.

Taxation is the bedrock of a Country to fulfill its responsibility and ensure its continuity. According to Modugu, Eragbe and Izedonmi (2012), taxation goes hand in hand with economic growth and lifeblood for governments to deliver essential services and to make long-term investments in public goods. However sometime, government waives taxes in exchange for certain gains. This is done in form of tax incentives. Therefore, as part of the efforts to provide an enabling environment that is conducive to the growth and development of industries and encouragement of FDI, the Federal government has developed a package of tax

incentives for various sectors of the economy which includes oil and gas sector. However, the tax sensitivity of FDI has important policy implications.

Although the potential importance of the need to attract FDI in the development process cannot be over-emphasised, two fundamental issues concerning FDI are critical. First what are the determinant factors of FDI in a typical host country? Secondly, are these factors under the control of the host country and not subjected to the manipulations of FDI countries? These questions are widely discussed in the literature but a gap still exists especially in the area of empirical analysis. For instance, tax incentives should be encouraged if there is mutual gain by both the host country and FDI.

Literature buttresses the fact that if FDI is not responsive to tax incentives, then it may be an appropriate target for taxation by the host Country, which can raise revenue without sacrificing the economic benefits of FDI. If however, the volume of FDI declines with taxation, the host country must consider the trade-off between the possible revenue gains from increased taxation and the economic costs of discouraging FDI. For instance, Nwankwo (2006), Edmiston, Mudd, Valev (2003), opined that government often seek to attract FDI by offering tax incentives for firms, but while there seems to be a consensus in the literature that the level of tax rates in host countries is a significant factor in explaining cross-country patterns in FDI. The more limited evidence for tax incentives suggests that the effects in most countries are either small or inconsistent. Edmiston, Mudd, Valev (2003), stated that there is no complete story because at times some FDI receive a windfall from tax incentives as they would still have invested without it. They argued that sometimes offering tax incentives may reduce the level of FDI in the host country if the tax burden falls on firms that do not receive incentives when other firms do receive incentives. This would be the case if the host country provides a certain level of services, the cost of which increases in the number of economic agents.

FDI is attracted by many factors such as availability of natural resources like crude oil for which Nigeria is endowed. According to Ayanwale (2007), Nigeria is endowed with large market size, availability of attractive, scarce raw material of crude oil which translates into huge profit for the FDI. Albaladejo (2003), opined that despite having plentiful natural resources, the largest domestic market in Africa and abundant and cheap labour force, Nigeria's industrial performance has been highly disappointing. He stated that the country has been dangerously dependent on petroleum as the only means to obtain foreign exchange.

Whatever the case, for tax incentives to be effective in attracting FDI, the tax expenditure of the incentive must be offset by improved developmental opportunities such as improved Gross Domestic Product and higher tax revenue. Literature stated that FDI in Nigeria is mostly in oil and gas sector, therefore, this study is narrowed down to cover this area. An empirical analysis of the impact of tax incentives on FDI in oil and gas sector in Nigeria is important in order to know the extent to which FDI in oil and gas is really influenced by the attractiveness of tax incentives among other findings that may be revealed in this study.

## **1.2. Statement Of The Problem**

FDI attraction with further tax revenue reduction in form of tax incentive, may be counterproductive if care is not taken for many reasons. For example Adeola (2011), opined that it is note-worthy to emphasise that there is enormous untapped investment opportunities that exist in the Nigerian economy for the investment appetite of both local and foreign investors.

Therefore, by awarding an incentive in terms of lower tax rate or exemption on one foreign firm may be countered by increased levies on other tax bases on other local firms resulting in multiple taxation. Edmiston, Mudd & Talev (2003), contended that government may attempt to shift tax liabilities from firms that receive incentives to the ones that do not.

Edmiston, Mudd, Valev (2003), stated that there is evidence that much of the foreign investment in the transition economies have been driven by location-specific factors such as attractive privatization deals, new market and geographical location. They argued that tax incentives leaves a country worse off in terms of reduced tax revenue.

Furthermore, the continuing implementation of tax incentives pose management difficulties for tax administration and require well developed accountability system. This view is supported by OECD (2006); Morisset (2003); UNCTAD (2000). In their studies, they argued that tax incentives have many costs such as in the difficulty of administering them effectively, which can distort allocation of resources. Morisset (2003), opined that using tax instruments to attract FDI, favour tax incentives, but tax incentive is a reduction in the corporate income tax rate, through tax holidays or temporary rebates.

Morisset (2003), OECD (2003) argue, that the tax incentives approach have had mixed results, and have been contested by OECD countries and multilateral organisations because they have often been associated with suspicious capital flows. Morisset (2003), stated that the question is whether or not the new investment would have come to the country if it had offered incentive or none at all, if yes, then free-rider investors benefit while the treasury loses and the economy reaps no net gain. These problems illustrate the need to clearly evaluate the impact of tax incentives on FDI both locally and globally.

### **1.3 Aims And Objectives Of The Study**

The aim of this study is to contribute to the literature on tax incentives and foreign direct investment by examining formal guidelines and requirements in this regard with the objective of developing a framework for assessing tax incentives impact on FDI. This is in order to empirically provide evidence on the impact of tax incentives on foreign direct investment in the oil and gas sector in Nigeria. In achieving this, the study is specifically designed to:

- i. examine the impact of tax incentives as a determinant of FDI in oil and gas sector in Nigeria in order to ascertain if FDI is really influenced by the attractiveness of tax incentives.
- ii. verify the impact of availability of natural resources as a determinant of FDI in oil and gas sector in Nigeria.
- iii. examine if macroeconomic stability is a determinant of FDI in oil and gas sector in Nigeria.
- iv. ascertain if FDI is influenced by market size in oil and gas sector in Nigeria.
- v. examine if FDI is affected by openness to trade in oil and gas sector in Nigeria.
- vi. verify the impact of infrastructural development on the attraction of FDI in oil and gas sector in Nigeria.
- vii. verify the impact of political risk on the attraction of FDI in oil and gas sector in Nigeria.

### **1.4. Research Questions**

The problems identified in the study raised some questions for which answers are attempted. They are broken down into research questions as follows:

- i. To what extent is tax incentive a determinant of FDI in oil and gas sector in Nigeria?
- ii. To what extent are FDI enterprises attracted to oil and gas sector in Nigeria in response to availability of natural resources?
- iii. To what extent does macroeconomic stability have impact on FDI in oil and gas sector in Nigeria?
- iv. To what extent does market size have impact on FDI oil and gas sector in Nigeria ?
- v. To what extent are FDI enterprises attracted to oil and gas sector in Nigeria in response to openness to trade?
- vi. To what extent are FDI enterprises in oil and gas sector in Nigeria influenced by infrastructural development?
- vii. To what extent does political risk have an impact on FDI in oil and gas sector in Nigeria?

### **1.5 Research Hypotheses**

The following hypotheses were tested in order to provide answers to the research questions mentioned above. They are stated in the null form.

*Ho<sub>1</sub>*: There is no significant impact of tax incentive on FDI in oil and gas sector in Nigeria.

*Ho<sub>2</sub>*: There is no significant influence of availability of natural resources on the attraction of FDI enterprises in the oil and gas sector in Nigeria.

*Ho<sub>3</sub>*: Macroeconomic stability has no significant influence in attracting FDI to oil and gas sector in Nigeria.

*Ho<sub>4</sub>*: Market size has no significant influence in attracting FDI to oil and gas sector in Nigeria.

*Ho<sub>5</sub>*: There is no significant impact of openness to trade on the attraction of FDI enterprises in the oil and gas sector in Nigeria.

*Ho<sub>6</sub>*: Infrastructural development has no significant impact in attracting FDI to oil and gas sector in Nigeria.

*Ho<sub>7</sub>*: Political risk has no significant impact in attracting FDI to oil and gas sector in Nigeria.

### **1.6. Significance Of The Study**

While many decisions of a company will be affected by corporate taxation, its impact on location decisions is of key interest for tax policy. Since taxation of multinational corporations is highly complex, it is important to understand which specific features of the tax system are important for the location of FDI. Although the debate about the impact of tax incentives in attracting FDI is not new and has accumulated a long history, this study is necessary because of its significance in Nigeria as an oil-reliant mono-economy with enormous untapped local investment opportunities.

According to Buettner & Ruf (2007), several empirical studies have investigated the influence of taxes on FDI, however, in most studies the focus is on the volume and distribution of FDI rather than on the underlying attraction. This study fills this gap.

This study covers the period 1990 to 2010 which witnessed major economic reforms in Nigeria such as Structural Adjustment Programme (SAP), Gradual reform and National Economic Empowerment Development

(NEED). This period covers part of the Military era and witnessed the birth of the third and fourth republic and amendments of the Nigerian constitution, that is Constitution of the Federal Republic of Nigeria (Certain Consequential Repeals) Decree 63 of 1999, LFN was witnessed. Also some tax laws were promulgated during the period of study such as the petroleum profit tax law which was amended as *Petroleum Profits Tax Act (PPTA) CAP P.13 LFN 2004*, *Value added Tax decree 102*, *Nigerian National Petroleum Corporations (Projects), Nigeria Ing(Fiscal Incentives Guarantee and Assurances Amendment), decree 113 of 1993*.

Therefore, tax regulators and policy makers will find this study useful. Multinationals and home countries shall have information on what else to look for in order to establish an FDI enterprise in Nigeria.

Furthermore, it is believed that this study has the potential for improving stewardship which will then translate to improved provision of employment opportunities and a conducive business environment in the Nigerian society. The study is also expected to benefit students, and researchers in the face of dearth of empirical literature available in this area of study. The outcome of the study shall provide reference for the local and international business communities and company directors.

### **1.7. Scope Of The Study**

The focus of this study is rested on tax incentive role in the attraction of FDI in the oil and gas sector in Nigeria. It evaluates the impact of tax incentive on FDI in the oil and gas sector in Nigeria with particular reference to FDI performance reports available in Central Bank of Nigeria bulletin, OECD, and UNCTAD reports between 1990 and 2010.

## **II. Literature Review**

### **2.1 Background**

In recent years, the globalization process has led to the emergence of new issues necessitating the need to attract FDI to complement local efforts. Not only have companies tended to become more mobile, but also governments have to deal with this new dimension in the design of their national tax policy on tax incentive in order to attract FDI. This is because an increasing number of governments compete hard to attract multinational companies as FDI using tax incentive. This trend seems to have grown considerably as evidenced by the number of high profile FDI in Nigeria oil and gas sector such as Shell Petroleum Plc, Mobil Oil Nigeria Plc, MRS Oil Nigeria Plc, Total Nigeria Plc.

The use of tax incentive has generated considerable debate about whether governments have offered unreasonably large incentives to entice those firms to invest in their area. According to Morisset and Pirnia(1999), taxes affect the net return on capital and should, at least in the mind of numerous policymakers, influence the capital movements between countries. For this reason, the early literature attempted to evaluate if a generous tax policy could compensate for other obstacles in the business environment and, thus, attract multinational companies.

Morisset and Pirnia(1999), stated that elimination of barriers to capital movements have stimulated governments to compete for FDI in global markets as well as reinforced the role of tax policy in this process. This recent competitive trend has to be offset by the increasing pressure that governments face to harmonize tax policies. Another important issue has been the recognition that tax policies of the home and host countries are interconnected and that this link influences the behaviour of foreign direct investments.

### **2.2 Foreign Direct Investment In The Oil And Gas Sector In Nigeria**

Literature explained that the adoption of the macroeconomic programme embedded in the SAP started the process of gradual increase in the FDI inflow. As noted earlier, among the details of the SAP policy measures were the inauguration of the Industrial Development Coordination Committee (IDCC), the *Companies and Allied Matters Act (CAMA) 1990, as amended to Companies and Allied Matters Act (CAMA) CAP.C 20.L.F.N.2004*, financial

liberalization and the debt-equity swap programmes. These steps were targeted at encouraging FDI inflow. The programmes were largely successful in that aim, but the inflow was not sustainable. The period 1990–1993 witnessed a drop in the rate of inflow largely due to a protracted political impasse that disrupted productive activities and created a regime of uncertainty, which subsequently encouraged capital flight.

In 1995, in order to improve on the level of uncertainty and liberalise the investment climate in the country, the government promulgated the *Nigerian Investments Promotion Commission Act cap n.117 (1995), LFN.(NIPC)*. The commission took over from the IDCC as a one-step agency to facilitate and encourage foreign investors into the country. The aftermath of the promulgation of the commission was a momentous increase in the FDI inflow into the country especially into the non-oil sectors. Additional policy measures included guided deregulation, Foreign Exchange (Monitoring and Miscellaneous Provisions) Decree 1999, and the establishment of export processing zones (EPZ), all aimed at improving the business environment of the country.

On this basis, the economy of Nigeria continues to see significant growth in the wake of global recession, stimulated by the ever increasing global demand for crude oil and the attendant impact on its United States dollars price per barrel. According to Albaladejo (2003), oil extraction is vital for the development of many developing countries. Yet high dependency to it is considered inappropriate for sustainable economic growth as the sector is often badly affected by changing world prices.

Albaladejo (2003) stated that petroleum was first discovered in 1956, and since then it has become vital to the Nigerian economy and the most important source of government revenue and foreign exchange. However, increased world oil prices in the mid 1970s produced rapid economic deceleration, with a feeble manufacturing sector not being able to reverse the trend.

Albaladejo (2003) argued that within the oil value chain, refined and processed products have higher value added and so bring more economic benefits than crude petroleum. They also embody a higher degree of technological sophistication and require more specialised skills. Adeola (2003), supported this view, and argued that this requirement for technological sophistication and specialised skills necessitates the need for FDI.

Literature linked the attraction of FDI in Nigeria with the availability of crude oil. Albaladejo (2011); Nwankwo (2006), in their studies on FDI in Nigeria, supported the view that Nigeria's total oil exports are relatively large compared to other oil-exporting countries. It accounts for more than 12 per cent of world market share for oil. Nigeria has become increasingly dependent on the oil sector as petroleum exports account for more than 99 percent of total exports

However, Albaladejo (2011); Nwankwo (2006), expressed concern that Nigeria has not capitalised on its oil potential as its refined and processed oil exports have been wiped out from international markets. Exports in higher stages of the oil value chain have declined from US\$ 21 million in 1996 to nil in 2000. Nigeria lacks the oil refineries that can produce the low sulphur light products required by export markets. This has made Nigeria become the biggest net importer of refined petroleum products among all oil exporting countries. For a country that exports nearly US\$40 billion in crude, this is rather distressing and really calls for imminent policy action.

Adeola (2011) supported this view, according to him though in terms of FDI, the country made it to the top 20 global destinations for FDI in the last 10 years, receiving one of the largest amounts of FDI in the Africa continent. Adeola (2011) stated that this is however lower than other oil producing countries in Africa including Angola which has focused on improved infrastructure and sector diversification away from primary oil production. This is contrasted with Nigeria as growth in the FDI was largely oil and gas sector driven with a few non-oil sectors in the areas of telecommunications, banking and Financial Services and Real estate.

This view was supported by Ayanwale (2007), which opined that the inflow into the oil sector witnessed a dramatic surge as a result of the *Nigerian Investments Promotion Commission Act cap n.117 (1995), LFN*. The subsequent sustained increase in FDI inflow may be attributed to further commercialization and privatization efforts of the government and the creation of the Export Processing Zones (EPZs). The hostile macroeconomic environment that encouraged capital flight, coupled with the ineffective operations of the refineries, which occasioned large reliance on imported refined petroleum products, were responsible for the downward spiral of the oil FDI in the early 1990s.

Ayanwale (2007) further stated that the process of privatizing and commercializing public enterprises which the Nigerian National Petroleum Corporation and its subsidiaries were put up for sale was responsible for the sharp upward inflow into the oil sector between 1993 and 1995. The upward trend was pushed further by the promulgation of the NIPC decree in 1995. Further, deregulation of the downstream sector of the oil industry opened up the sector to more FDI inflow after the inception of the civilian administration in 1999.

Although UNCTAD's *World Investment Report 2004* reported that Africa's outlook for FDI is promising, the expected surge is yet to manifest. FDI is still concentrated in only a few countries for many reasons, ranging from negative image of the region, to poor infrastructure, corruption and foreign exchange shortages, an unfriendly macroeconomic policy environment, among others. Nigeria is one of the few countries that have consistently benefited from the FDI inflow to Africa. Nigeria's share of FDI inflow to Africa averaged around 10%, from 24.19% in 1990 to a low level of 5.88% in 2001 up to 11.65% in 2002. UNCTAD (2003) showed Nigeria as the continent's second top FDI recipient after Angola in 2001 and 2002.

Ayanwale (2007), postulates that FDI is an important vehicle for the transfer of technology, contributing to growth in larger measure than domestic investment. FDI increases the rate of technical progress in the host country through a "contagion" effect from the more advanced technology and management practices used by foreign firms.

On the basis of these assertions governments have often provided special incentives to foreign firms to set up companies in their countries. Carkovic and Levine (2002) noted that the economic rationale for offering special incentives to attract FDI frequently derives from the belief that foreign investment produces externalities in the form of technology transfers and spillover's.

### **2.3 Tax Incentives As Attraction For FDI In Nigeria Oil And Gas Sector.**

The rationale for increased efforts to attract FDI stems from the belief that FDI has several positive effects. Among these are productivity gains, technology transfers, introduction of new processes, managerial skills and technical know-how in the domestic market, employee training, international production networks, and access to markets. Empirical studies explained that FDI is an important vehicle for the transfer of technology, contributing to growth in larger measure than domestic investment.

Therefore, according to Nwankwo (2006), in the face of inadequate resources to finance long-term development in Africa and with poverty reduction looking increasingly bleak, attracting FDI has assumed a prominent place in the strategies of African countries. Fakile and Adegbile (2011), while contributing to the debate on FDI and tax incentives, stated that it is on the basis of these assertions about the advantages of FDI that governments have often provided special incentives to foreign firms to set up companies in their countries.

Fakile and Adegbile (2011); Morisset (2003), supported the view that tax incentive is a tool to attract FDI. In fact Edmiston, Mudd and Valev (2003), opined that government often seek to attract FDI by offering tax incentives to firms in exchange for certain benefits.

Curiously, the empirical evidence of the benefits of offering tax incentives both at the firm level and at the national level remains ambiguous. Although trade theory expects FDI inflows to result in improved competitiveness of host countries' exports, the pace of technological change in the economy as a whole will depend on the innovative and social capabilities of the host country, together with the absorptive capacity of other enterprises in the country (Carkovic and Levine, 2002:4).

According to Morisset (2003), tax incentive is a reduction in the corporate income tax rate, through tax holidays or temporary rebates for certain types of investment or companies. This is supported by Fakile and Adegbile (2011)'s study which stated that tax incentives are part of the tax system of developing countries and usually established by governments in order to grant foreign investors more attractive conditions to invest in their country.

Morisset (2003) stated that other evidence emerging around the world suggests that tax incentives have a more apparent effect on the composition of FDI than on its level. Indeed, most governments use tax policies to attract particular types of investment or to change conduct rather than to increase the overall level of investment.

According to Morisset (2003), tax incentive is a reduction in the corporate income tax rate, through tax holidays or temporary rebates for certain types of investment or companies. The tax sensitivity of FDI has important policy implications.

However, in attracting FDI there is no doubt that more important are such factors as basic infrastructure, political stability and the cost and availability of labour. According to Morisset (2003), some empirical analysis and surveys have confirmed that tax incentives are a poor instrument for compensating for negative factors in a country's investment climate, but that does not mean that tax incentives have no effect on FDI.

Morisset (2003) expressed that in recent years there has been growing evidence that tax incentives influence the location decisions of companies with regional economic groupings such as European Union, North American Free Trade Area and Association of Southeast Asian Nations. Also in the United States of America incentives can play a decisive role in the final location decisions of foreign companies once the choices are narrowed down to a handful of sites with similar characteristics.

Fakile and Adegbile (2011), elaborated on the effectiveness of tax incentives in Nigeria, the effectiveness of tax incentives is likely to vary depending on a firm's activity and its motivations for investing abroad. Growing evidence shows, for example, that tax incentives are a crucial factor for mobile firms and firms operating in multiple markets, such as banks, insurance companies, and Internet-related businesses. This is because these firms can better exploit different tax regimes across countries.

Such strategies may explain the success of tax havens in attracting subsidiaries of global companies and the spending by multinationals on economists and accountants to justify their transfer prices, designed to suit their tax needs. Similarly, tax rates generally have a greater effect on the investment decisions of export-oriented companies than on those seeking the domestic market or location-specific advantages, because such firms not only are more mobile but also operate in competitive markets with very slim margins.

The Nigerian Government has put in place a number of investment incentives for the stimulation of private sector investment from within and outside the country. While some of these incentives cover all sectors, others are limited to some specific sectors. The nature and application of these incentives have been considerably simplified. The incentives include: tax holidays, initial capital allowance, and free duty on equipment. (Fakile and Adegbile 2011: 17).

Never the less, tax incentives being used to attract FDI is not the end of the story, there is the problem of tax compliance on the part of companies. Also tax incentive has its cost. For instance Modugu, Eragbhe and Izedonmi (2012), expressed concern over tax compliance in their study on voluntary tax compliance in Nigeria

they opined that the need to improve voluntary tax compliance has resulted in the various tax reforms by various successive governments. They stated that these reforms have not been able to stimulate the expected increase in tax revenue over the years, and this has snowballed into a tax gap as revealed in the share of income taxes in total revenue profile of the country.

Furthermore, Morisset (2003) argued that competition in the application of tax incentives to attract FDI has already started in some regions, most notably in Asia. The concern is that countries may end up in a bidding war, favouring multinational firms at the expense of the state and the welfare of its citizens. This risk has pushed governments to try to harmonize their tax policies under regional or international agreements. Beyond the risk of a bidding war, tax incentives are likely to reduce fiscal revenue and create frequent opportunities for illicit behaviour by companies and tax administrators. These issues have become crucial in developing countries, which face more severe budgetary constraints and corruption than do industrial countries.

There is no doubt that tax incentives are costly. The first and most direct costs are those associated with the potential loss of revenue for the host government. The second is whether or not the new investment would have come to the country if it had offered lower incentives or none at all. If the answer is yes, free-rider investors benefit while the treasury loses, and the economy reaps no net gains. These examples illustrate the need to clearly evaluate the welfare implications of tax incentives, both at the level of the firm and globally.

Tax incentives also have many other, less obvious costs. Because they influence the investment decisions of private companies, they can distort the allocation of resources. And they can attract investors looking exclusively for short term profits, especially in countries where the basic fundamentals (such as political and macroeconomic stability) are not yet in place. Another problem with incentive measures relates to the cost and difficulty of administering them effectively.

Literature expressed that incentive regimes generally impose a large administrative burden, so they must be more than marginally effective to cover the costs of their implementation and produce a net benefit. Discretionary regimes, which rely on case-by-case evaluations, are especially difficult to administer. These regimes result in delay and uncertainty for investors, which can increase the cost of investment. They have also led to significant corruption, effectively screened out desirable investments, and undermined sound policymaking and the development of competitive markets.

Morisset (2003) opined that to achieve the gains of tax incentives for national development, developing countries must structure tax policies in a way so as to attract foreign investment, without creating a negative impact in the domestic economy. This is to ensure that they do not fall into a harmful tax competition against other countries.

#### **2.4 Theoretical Framework On Foreign Direct Investment**

A number of theories have been developed to explain the determinants of FDI. Extensive reviews of the main FDI theories and determinants of FDI range from the economic theories of Vernon (1966), the internationalisation theories of Rugman (1981) and Dunning's (1993) eclectic paradigm. However, the main theory adopted in this paper are drawn from Dunning (1977; 1993) as cited in Dunning (2011), which suggested that the main factors that drive FDI inflows have been the need to secure market access, the opportunities presented by large scale privatization processes and the degree of political and economic stability.

The eclectic paradigm of Dunning, also known as OLI, proposes that the undertaking of FDI is determined by the realization of three groups of advantages of ownership which arise from the firm's size and access to markets and resources, the firm's ability to coordinate complementary activities like manufacturing and distribution and the ability to exploit differences between countries. Then locational advantages which includes differences in country natural endowments, transport costs, macroeconomic stability, cultural factors and government regulations. And also the internationalisation incentives which arises from exploiting imperfections in external markets. These include the reduction of uncertainty and transaction costs in order to generate knowledge more efficiently and the reduction of state generated imperfections such as tariffs, foreign exchange controls and subsidies.

Considering the objective of this study, an emphasis has been placed on the locational determinants of FDI. According to Erdal and Tatoglu (2011), the locational determinants of FDI can therefore, be summarised as market size and market growth, raw materials and labour supply, political and legal environment, host government policies, geographical proximity and host country infrastructure.

Therefore, this study focuses on market size using Gross Domestic Product (GDP) per capita, raw materials using availability of crude in terms of crude exports as a percentage of GDP. Political environment as affected by the number of coup *de-tat*. Host country policies are viewed from the perspective of macroeconomic stability and taxation policies. Macroeconomic stability is measured using inflation rate and exchange rate separately. Tax incentive policy through effective tax and average tax rates.

### **III. Methodology**

#### **3.1 Introduction**

This section comprises the procedures and activities involved in drawing logical conclusions on the research study. It deals with research design, characteristics of the study population, sample and sampling techniques, data collection schedule, and statistical tools used in the study.

#### **3.2 Research Design**

This research is essentially investigative and explanatory in nature. It seeks to evaluate the impact of tax incentive on foreign direct investment in the oil and gas sector in Nigeria. This is anchored on carrying out a survey. The structure of its process and procedure is therefore, descriptive which belongs to the generic family research design type called survey design.

#### **3.3 Study Population**

Due to the technical nature of the topic of study coupled with the need to ensure that the response obtained is representative and reliable enough, the population of this study covers Nigeria over the period of independence to date. That is fifty two years of 1960 to 2012.

#### **3.4 Sampling Technique**

A sample refers to a part of a population selected for study while a sampling technique is the method adopted for selecting such a sample from the population. Considering the objective of the study, it is expedient to ensure that the sample identified is a statistical representation of the population and stands clear of bias as much as possible. The sample must be adequate and possess stability.

Convenience sampling was adopted to select a sample of twenty -one years from the population of fifty-two years. Therefore the period covered is 1990 to 2010. The choice of this period is to cover the period of major economic reforms such as Structural Adjustment Programme (SAP) and National Economic Empowerment Development (NEED).

All the data used were obtained from a variety of sources such as Central Bank of Nigeria (CBN) annual reports and United Nations Conference On Trade and Development (UNCTAD) reports which provide substantial details on the financial flows in the oil and gas sector. This sample offers several advantages because it spans two decades of tax reforms and economic reforms of debt forgiveness and debt rescheduling with variety of experiences in the areas of the variables covered.

#### **3.5. Data And Data Collection**

Based on the aim of the research, a review of the literature supported by secondary empirical studies was conducted. A literature review was performed to identify the performance assessment methods and practices followed and prescribed in the various FDI and tax incentives practices and guidelines, and to determine the factors affecting FDI attractiveness.

The literature comprised articles published in accredited journals, articles in popular publications, doctoral theses and industry frameworks, guidelines and regulations. Secondary data were extensively utilised in this study. The secondary data were manually gathered from Central Bank of Nigeria (CBN) publication on major economic, financial and banking indicators.

Also the CBN publications on monetary policy, surveillance activities and operations, CBN annual report and statement of account and Federal Ministry of Finance reports, were reviewed. Some of the data were also extracted from Organisation of Petroleum Exporting Countries (OPEC) annual statistical bulletin and UNCTAD reports for 1990 to 2010.

#### **3.6. Method Of Data Analysis**

In order to analyse the data obtained from the reviewed economic and financial reports comprehensively, both descriptive and inferential statistics were applied. Understanding and analysing the overall effect of tax incentives on the attraction of FDI in Nigeria is critical to this study, therefore, the validating procedures were based on statistical analysis.

##### **3.6.1 Statistical method**

The statistical method used includes probability sampling, descriptive statistics and Karl Pearson coefficient of correlation method of analysis. Karl Pearson's  $r$ , is the most widely used in practice to measure the degree of correlation between two series. It is typically denoted by  $r$  which is a measure of the correlation (linear dependence) between two variables  $X$  and  $Y$ , giving a value between +1 and -1 inclusive. It is widely used in the sciences as a measure of the strength of linear dependence between two variables as per the formula below. Based on a sample of paired data  $(X_i, Y_i)$ , the sample Pearson correlation coefficient is



$$r = \frac{1}{n-1} \sum_{i=1}^n \left( \frac{X_i - \bar{X}}{s_X} \right) \left( \frac{Y_i - \bar{Y}}{s_Y} \right)$$

Where

$$\frac{X_i - \bar{X}}{s_X}, \bar{X}, \text{ and } s_X$$

are the standard score, sample mean and sample respectively.

According to Gupta (2009), among the statistical methods used for measuring the degree of relationship, Karl Pearson method is the most popular. The correlation coefficient summarises in one figure not only the degree of correlation but also the direction that is whether correlation is positive or negative. Furthermore, a key mathematical property of the Pearson correlation coefficient is that it is invariant to separate changes in location and scale in the two variables. Therefore, it is adopted because of its qualities which match the expectations of this study.

The formulated hypotheses were tested with the aid of Statistical Package for Social Sciences (SPSS) version 17.0. This is in order to ascertain whether or not the corporate organisations are significantly in agreement.

### **3.6.2 Variables descriptions and measurement**

Unlike the earlier studies by Ayanwale (2007); Nwankwo (2006); Buettner and Ruf (2005), this study attempts to empirically shed light on the critical response or behaviour of FDI towards tax incentives in oil and gas in Nigeria.

These statistics are often disclosed in the financial reports of Central bank of Nigeria. Thus, all the tax incentives and economic statistics and FDI measurement data were obtained manually from the annual audited financial reports of the CBN. Copies of their 1990 to 2010 annual reports were reviewed and adequately analysed.

Two categories of variables were used in this study, they are the independent variable which is FDI in oil and gas and the dependent variables which are the FDI attracting measures such as tax incentive and the other measures of attraction. The FDI variable is based on the actual figure of FDI in oil and gas during the period under review. The measures of attraction are viewed from seven dimensions of tax incentives, availability of natural resources, macro-economic stability, market size, openness to trade, infrastructural development and political risk.

### **3.6.4 Conceptual underpinning and measurement of the variables used in the study**

All the variables were extracted from the actual performance figures reported in the CBN and UNCTAD annual reports between 1990 and 2010 (Appendix attached).

Tax incentive was measured in two ways, effective tax rate which is annual petroleum tax revenue as a percentage of Gross Domestic Product (GDP). And also average tax rate, which is the average of effective tax rate and presence of tax incentive. The presence of tax incentive is scored as 1 and 0 for otherwise. Buettner and Ruf (2005); Edmiston, Mudd and Valev (2003) used it.

Availability of natural resources; this reduces investment stress of looking for raw materials. It was proxy with total annual export in oil and gas as a percentage of GDP to provide a more robust estimate. Nwankwo (2006) used total annual export. Macro-economic stability, a stable macro-economic development is desirable for FDI. Annual inflation rate, annual exchange rate individually were used to proxy it. Ayanwale (2007); Nwankwo (2006); Edmiston, Mudd and Valev (2003) used it. Market size; this ensures adequate revenue for FDI, annual real GDP growth rate in oil and gas was used to proxy market size. Oyatoye *et al.* (2011); Ayanwale (2007); Nwankwo (2006), Buettner and Ruf (2005); Edmiston, Mudd and Valev (2003) used it. Openness to trade; this improves competitiveness which leads to employment opportunities. Oil and gas export plus import as a percentage of GDP was used to proxy market size. Edmiston, Mudd and Valev (2003), used it. Infrastructural development; good infrastructure facilitates production and distribution at manageable cost. It was measured by electricity consumption per capital as used by Ayanwale (2007). Political risk sends fear and panic that discourages investment, a secured political environment encourages investment. It was measured by number of coup de-tat in Nigeria. Ayanwale (2007); Nwankwo (2006) used it.

## **IV. Data Analysis And Interpretation**

### **4.1 Introduction**

This section discusses the analysis of data gathered from field survey which was used to conduct the study. The results of the analysis were used to test the propositions made and answer the research questions. In Table 4.1, the descriptive statistics used mean and standard deviation to measure the dispersion, deviation or how far an average is representative of the mass. Gupta (2009) opined that the mean deviation measures deviation more precisely. Therefore, the mean deviation in the descriptive statistics in Table 4.1 is used to

explain the reliability of the variables. Karl Pearson coefficient of correlation statistical method of analysis was used to determine the results of the hypotheses tested as shown in Table 4.2.

**4.2. Results Interpretations And Answers To Research Questions And Hypotheses**

In Table 4.1 below the descriptive statistics carried out suggests that the model correctly classifies 100% of the variables tested as shown in item numbers 1,2,3 and 4 of the Table, the mean effective tax rate during the period under consideration was about .6206, that of average tax rate is about 1.31. The mean availability of natural resources is .0025 with a low level of standard deviation at .00403 indicating availability of crude in Nigeria which is reliable, in view of the low deviation from the mean.

In items 5 and 6, the statistics for macro-economic stability under inflation rate showed a mean of 21.31 with a high deviation from the mean at 19.44 standard deviation while that based on exchange rate is a mean of 80.71 at 56.29 standard deviation. This result call for concern over the management of Nigerian economy in the area of inflation and exchange rates.

Market size in item 7, records a mean value of about 7.15 with a high standard deviation of 13.85 which indicates that there is market for FDI in oil and gas though it is not reliable in view of the high deviation and as such not a major attraction. In item 8, openness to trade records a mean of .00278 with a higher standard deviation of .00450 suggesting the low relevance of this variable in attracting FDI in oil and gas in Nigeria.

Item 9, infrastructural development records a standard deviation of .2664 which is rather high and of little effect in attracting FDI. In this study it is observed from item 10 of the descriptive statistics that the political risks recorded a low mean of .19 and a standard deviation .00402 which buttresses its irrelevance in attracting FDI. This indicates protection to FDI investors in oil and gas in Nigeria and as such makes the Country attractive.

RQ I:

Table 4.1 below shows the result of the descriptive statistics which indicates a mean of .6206 with a minimal standard deviation of 1.1019. Therefore, tax incentive is to a large extent a determinant of FDI in oil and gas sector in Nigeria.

**Table 4.1: Descriptive statistics of FDI dependent and independent variables**

Item No.		N	Mean	Std. Deviation
1.	Fdi Oil % Of Gdp Oil	21	5.9690	10.34625
2.	Effective Tax Rate	21	.6206	1.10198
3.	Average Tax Incentives	21	1.3103	.55099
4.	Availability Of Natural Resources	21	.0025	.00403
5.	Macro -Eco Stab - Exchange Rate	21	80.7161	56.29691
6.	Macro- Eco. Stab - Nflation Rate	21	21.3186	19.44726
7.	Market Size	21	7.1510	13.85551
8.	Openess To Trade	21	.00278333	.004505758
8.	Infrastructural Dev.	21	101.7171	26.64567
10.	Political Risks	21	.19	.402
	Valid N (Listwise)	21		

Source: Central Bank of Nigeria annual reports 1990 to 2010

*H<sub>0</sub>*:

Table 4.2 indicates that there is a positive relationship between tax incentives either as effective tax rate or average tax and the relationship is statistically significant at a Pearson correlation .490 each at 0.05 level of significance. Therefore, we reject the null hypothesis and conclude that there is significant impact of tax incentive on FDI in oil and gas sector in Nigeria. This result supports the findings in Edmiston, Mudd and Valev (2003), which concluded that tax incentives have a stimulative effect on FDI, but only when well targeted. This result supports the findings in Buettner and Ruf (2005), which explained that the statutory tax rate shows a significant negative impact on FDI.

**RQ2**

In Table 4.1 above, the analysis of the descriptive statistics show a mean of .0025 with a low standard deviation of .00403. This indicates availability of reliable crude in Nigeria. Therefore, FDI enterprises are to a large extent attracted to oil and gas sector in Nigeria in response to availability of natural resources.

*H<sub>02</sub>*: In Table 4.2 below, the Pearson correlation coefficient for availability of raw material shows a positive and statistically significant relationship of a Pearson correlation of .450 at 0.05 level. Therefore, we reject the null hypothesis and conclude that there is significant influence of availability of natural resources on the attraction of FDI enterprises in the oil and gas sector in Nigeria. This result supports the findings in Nwankwo (2006); Edmiston, Mudd and Valev (2003) which concludes that availability of natural resources encourages foreign investment in Nigeria.

**RQ 3:**

Table 4.1 above indicates a mean of 80.71 with a high standard deviation of 56.29 for macro-economic stability on term of exchange rate whereas that measured with inflation rate results into a mean of 21.31 with a standard deviation of 19.44. Thus the attraction of FDI enterprises to oil and gas sector in Nigeria in response to macroeconomic stability is not to a large extent.

*H<sub>03</sub>*: The result in Table 4.2 below shows a positive relationship at a Pearson correlation of .056 which is not statistically significant between macro-economic stability and FDI when measured with exchange rate. Although when the relationship measured with inflation rate is not statistically significant but it is also negative, that is, in opposite direction at Pearson correlation -.158 for macro-economic stability. Therefore, we accept the null hypothesis and conclude that macro-economic stability has no significant influence in attracting FDI to oil and gas sector in Nigeria. This result negates the findings in Nwankwo (2006); Edmiston, Mudd and Valev (2003), which concluded that macroeconomic stability when measured by exchange rate is an important positive influence on FDI. Also it negates the findings in Ayanwale (2007), which concluded that the various economic policies of Nigeria yield good result.

*RQ4*: In Table 4.1 above, the aforementioned analysis indicate that every 1% GDP oil annual growth leads to only 7.15% growth in FDI with a high standard deviation at 13.85, FDI enterprises attraction to oil and gas sector in Nigeria in response to market size is not to a large extent because of the low responsiveness of FDI to market size as discovered in the study.

*H<sub>04</sub>*:

In Table 4.2 below, at a not significant Pearson correlation of .134, though positive relationship, market size in terms of economic growth has no significant influence in attracting FDI to oil and gas sector in Nigeria. And as such we accept the null hypothesis. This result supports the findings in Oyatoye *et al* (2011), in their study on foreign direct investment, export and economic growth in Nigeria. It supports the findings in Ayanwale (2007), in a similar study in Nigeria. Furthermore, it supports the findings in Buettner and Ruf (2005), where it proves not statistically significant under linear regression. However, it negates the findings in Nwankwo (2006), in a similar study on Nigeria which concluded that an impressive rate of economic growth will be taken as a favourable signal by foreign investors when making investment decisions.

**Table 4.2: Pearson Correlations of the independent variable with the dependent variables**

	FDI OIL % OF GDP OIL	EFFECTIVE TAX RATE	AVE. TAX INCEN	NAT. RESOU	MACRO STAB EXCH RATE	MACRO STAB INFL RATE	MKT SIZE	OPEN TRADE	INFR A DEV.	POL RISKS
FDI OIL % OF GDP OIL Pearson Correlation Sig. (2-tailed)	1	.490*	.490*	.450*	.056	-.158	.134	.455*	.027	-.175
N	21	21	21	21	21	21	21	21	21	21
EFFECTIVE TAX RATE Pearson Correlation Sig. (2-tailed)	.490*	1	1.000**	.960**	.445*	-.246	.381	.957**	.442*	-.256
	.024		.000	.000	.043	.283	.089	.000	.045	.263

N		21	21	21	21	21	21	21	21	21	21
AV. TAX INCENTIVES	Pearson Correlation	.490*	1.000**	1	.960**	.445*	-.246	.381	.957**	.442*	-.256
	Sig. (2-tailed)	.024	.000		.000	.043	.283	.089	.000	.045	.263
	N	21	21	21	21	21	21	21	21	21	21
NA RESOURCES	Pearson Correlation	.450*	.960**	.960**	1	.411	-.271	.358	1.000**	.458*	-.257
	Sig. (2-tailed)	.041	.000	.000		.064	.235	.111	.000	.037	.261
	N	21	21	21	21	21	21	21	21	21	21
MACRO EXCHANGE	Pearson Correlation	.056	.445*	.445*	.411	1	-.495*	.266	.407	.619**	-.549*
	Sig. (2-tailed)	.810	.043	.043	.064		.022	.244	.067	.003	.010
	N	21	21	21	21	21	21	21	21	21	21
MACRO INFLATION	Pearson Correlation	-.158	-.246	-.246	-.271	-.495*	1	-.203	-.274	-.157	.402
	Sig. (2-tailed)	.495	.283	.283	.235	.022		.377	.230	.497	.071
	N	21	21	21	21	21	21	21	21	21	21
MKT SIZE	Pearson Correlation	.134	.381	.381	.358	.266	-.203	1	.356	.375	.017
	Sig. (2-tailed)	.561	.089	.089	.111	.244	.377		.113	.094	.942
	N	21	21	21	21	21	21	21	21	21	21
OPEN TRADE	Pearson Correlation	.455*	.957**	.957**	1.000**	.407	-.274	.356	1	.456*	-.259
	Sig. (2-tailed)	.038	.000	.000	.000	.067	.230	.113		.038	.258
	N	21	21	21	21	21	21	21	21	21	21
INFRASTRUCTURE	Pearson Correlation	.027	.442*	.442*	.458*	.619**	-.157	.375	.456*	1	-.249
	Sig. (2-tailed)	.907	.045	.045	.037	.003	.497	.094	.038		.276
	N	21	21	21	21	21	21	21	21	21	21
POLITICAL RISKS	Pearson Correlation	-.175	-.256	-.256	-.257	-.549*	.402	.017	-.259	-.249	1
	Sig. (2-tailed)	.447	.263	.263	.261	.010	.071	.942	.258	.276	
	N	21	21	21	21	21	21	21	21	21	21

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Source: Central Bank of Nigeria and UNCTAD statistical reports, 1990 to 2010

RQ5:

Table 4.1 above shows that FDI enterprises attraction to oil and gas sector in Nigeria in response to openness to trade results in a mean of .0027 with a standard deviation of .0045. This influence is not to a large extent.

$H_{05}$ :

In Table 4.2 above, the Pearson correlation of .455 shows that there is a positive relationship between openness to trade and FDI. There is also statistically significant influence of openness to trade on the attraction of FDI enterprises in the oil and gas sector in Nigeria. Therefore, we reject the null hypothesis. This result supports the findings in Asiedu (2001), Edmiston, Mudd and Valev (2003), which concluded that more open economies and those with greater endowment of natural resources receive more investment.

RQ 6:

In the descriptive statistical analysis as shown in Table 4.1 above, FDI enterprises attraction to oil and gas sector in Nigeria in response to infrastructural development results into a mean of 101.71 but with a high level of standard deviation of 26.64 which makes the relationship unreliable and not to a large extent.

*Ho<sub>6</sub>:*

Table 4.2 shows a not significant Pearson correlation of .027 between FDI and infrastructural development. Therefore, we accept the null hypothesis and conclude that infrastructural development has no significant influence in attracting FDI to oil and gas sector in Nigeria. This result negates the findings in Ayanwale (2006), which calls for constructive attention to be given to infrastructure especially power generation and distribution to enhance economic power.

*RQ7:*

In Table 4.1 above at a mean score of .19 and a standard deviation of .402, FDI shows that enterprises attraction to oil and gas sector in Nigeria in response to political risk is not to a large extent.

*Ho<sub>7</sub>:*

Also in Table 4.2, the Pearson correlation recorded a negative relationship that is not statistically significant at -.175 between FDI and political risk. Therefore, we accept the null hypothesis and conclude that political risk has no significant influence in attracting FDI to oil and gas sector in Nigeria. This result finds an advocate in Ayanwale (2006); Nwankwo (2006) studies, which concluded that FDI oil and gas is so profitable that the return on investment after adjusting for risks is quite substantial and as such foreign investors, are not discouraged by political risk. Also this result negates the findings in Edmiston, Mudd and Valev (2003), in their study on incentives targeting, influence peddling and foreign direct investment which concluded that the progress recorded in transition to democracy is an attraction to FDI.

## **V. Summary, Conclusion And Recommendations**

### **5.1 Summary**

The aim of this study is to empirically provide evidence on the impact of tax incentives on foreign direct investment in the oil and gas sector in Nigeria. A sample size of FDI and other economic indicators for twenty-one (21) post-independence years from 1990 to 2010 was used for this study. Pearson coefficient of correlation 'r' statistical method with the aid of Statistical Package for Social Sciences (SPSS version 17.0) was adopted for the data analysis.

This study examined FDI as a percentage of GDP. Tax incentives was measured with effective tax and average tax rates, other economic performance indicators of availability of natural resources, macro-economic stability, market size, openness to trade, infrastructural development and political were tested as to how far they attract FDI in oil and gas sector in Nigeria. This study drew from trend and issues from a diverse range of sources in the CBN and UNCTAD reports in order to examine these key areas of FDI determinants. The study combines literature review with analytical review to ensure proper education of the intention of the researcher.

This study answered seven research questions and tested seven hypotheses, the study provides the answers in section four. The study found out that there is significant impact of tax incentives on FDI. This result supports the findings in Edmiston, Mudd and Valev (2003), which concluded that tax incentives have a stimulative effect on FDI only when well targeted. This result supports the findings in Buettner and Ruf (2005), which explained that the statutory tax rate shows a significant negative impact on FDI.

A significant influence of availability of natural resources on the attraction of FDI enterprises in the oil and gas sector in Nigeria was predicted. This result supports the findings in Nwankwo (2006); Edmiston, Mudd and Valev (2003) which concludes that availability of natural resources encourage foreign investment in Nigeria.

This study shows a not statistically significant impact between macro-economic stability and FDI when measured with exchange and inflation rates. Although when measured with inflation rate the relationship is also negative, that is, in opposite direction. Therefore, it is concluded that macro-economic stability in terms of exchange rate has no significant influence in attracting FDI to oil and gas sector in Nigeria. This result negates the findings in Nwankwo (2006); Edmiston, Mudd and Valev (2003), which concluded that macroeconomic stability when measured by exchange rate is an important positive influence on FDI. Also it negates the findings in Ayanwale (2007), which concluded that the various economic policies of Nigeria yielded good result.

In this study, market size in terms of economic growth has no significant influence in attracting FDI to oil and gas sector in Nigeria. This result supports the findings in Oyatoye *et al* (2011), in their study on foreign direct investment, export and economic growth in Nigeria. It supports the findings in Ayanwale (2007), in a similar study in Nigeria. Furthermore, it supports the findings in Buettner and Ruf (2005), where it proves not statistically significant under linear regression.

Furthermore, there is statistically significant influence of openness to trade on the attraction of FDI enterprises in the oil and gas sector in Nigeria. This result supports the findings in Asiedu (2001); Edmiston,

Mudd and Valev (2003), which concluded those more open economies and those with greater endowment of natural resources receive more investment.

In this study, it is concluded that infrastructural development has no significant influence in attracting FDI to oil and gas sector in Nigeria. This result negates the findings in Ayanwale (2006), which calls for constructive attention to be given to infrastructure especially power generation and distribution to enhance economic power.

In addition the study evidenced a negative relationship that is not statistically significant at Pearson correlation coefficient of  $-0.175$  between FDI and political risk. Therefore, it is concluded that political risk has no significant influence in attracting FDI to oil and gas sector in Nigeria. This result finds an advocate in Ayanwale (2006); Nwankwo (2006) studies, which concluded that FDI oil and gas is so profitable that the return on investment after adjusting for risks is quite substantial and as such foreign investors are not discouraged by political risk. Also this result negates the findings in Edmiston, Mudd and Valev (2003), in their study on incentives targeting, influence peddling and foreign direct investment which concluded that the progress recorded in transition to democracy is an attraction to FDI

These results are in line with the trend of findings in similar studies as it supports the findings in Oyatoyeet *al* (2011); Ayanwale (2007); Nwankwo (2006); Buettner and Ruf (2005). Edmiston, Mudd and Valev (2003), Asiedu (2001). However, there is no consensus as to the impact of infrastructure on FDI. This should be a concern to researchers.

## 5.2 Conclusion

A major contribution of this study is that it provides an insight into the determinants of FDI in the oil and gas sector in Nigeria, the major determinant is tax incentive, followed by openness to trade and then availability of natural resources. This study finds compelling evidence of the usefulness of tax incentives. This study is able to satisfy the set objectives. This study contributes to literature in its consideration of determinants of FDI in oil and gas sector, which is available for future accounting and finance researchers. This would enhance the comparability of future research findings.

## 5.3 Recommendations

Based on the findings from this study, the following recommendations are made:

- i. Constructive attention should be given to infrastructure especially power generation and distribution to enhance economic growth in Nigeria.
- ii. In addition to improved infrastructure, there should be sector diversification into other areas where there is availability of natural resources.
- iii. The macro-economic policy of Nigeria should improve exchange rate and especially inflation rate which was found to have a negative impact on FDI oil and gas.
- iv. The tempo of political stability as experienced in Nigeria by 2010 should be maintained, urgent attention should be paid to the security threat presently posed by 'Boko haram' fundamentalist sect in order to continue to attract foreign investors.
- v. There should be open communication and dialogue through the sustenance of peace in the country.
- vi. This study is limited to oil and gas sector. Future research is necessary to extend the scope of the study to cover all the sectors in Nigeria.
- vii. The determinants of FDI was a major focus of this study, it is suggested that the whole aspect of FDI in terms of its contribution to the development of the host country may be covered in future.

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