EVALUATION OF THE EFFECTIVENESS OF DEREGULATION ON THE DOWNSTREAM SUB-SECTOR OF THE NIGERIA PETROLEUM INDUSTRY

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A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES AHMADU BELLO UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE (M.Sc) POLICY AND DEVELOPMENT STUDIES

DEPARTMENT OF LOCAL GOVERNMENT AND DEVELOPMENT STUDIES,

FACULTY OF ADMINISTRATION,

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ZARIA, NIGERIA

MARCH, 2020

DECLARATION

I declare that this dissertation entitled Evaluation of the Effectiveness of Deregulation on the Downstream Sub-Sector of the Nigeria Petroleum Industry has been carried out by me in Policy and Development Studies, Department of Local Government and Development Studies, Ahmadu Bello University Zaria. The information derived from the literature has been fully acknowledged in the text and list of references provided. No part of this dissertation was previously presented for another degree or diploma in this or any other institution.

Enenche Anna Owagoyi _____ _____

Name **Signature** **Date**

CERTIFICATION

This dissertation entitled Evaluation Of The Effectiveness Of Deregulation On The Downstream Sub-Sector Of The Nigeria Petroleum Industry meet the requirement of the regulations governing the award of the Degree of Master of Science (M.Sc) in Policy and development Studies Degree of Ahmadu Bello University Zaria and is approved for its' contribution to knowledge and literacy presentation.

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Dedication

This dissertation is dedicated to God Almighty for sparing my life and his guidance throughout my master's programme. I have really seen his hand at every step of the way. This dedication will not be complete without mentioning my Parents and my siblings you have trusted me and invested so much in me may God richly bless you.

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Abstract

In recent times, deregulation has been accepted to be a universal development that came as a product of economic globalization aimed at freeing of government control from the regulation of a system. Deregulation of down-stream oil sub-sector in Nigeria was meant to lessen public sector control and develop an open market while ensuring adequate supply of the product. However, despite the abundant availability of this natural resource (crude oil) in the country, the nation has experienced over the years fuel scarcity, inadequate supply of petroleum products, as well as hoarding, smuggling, adulteration, long queues, inappropriate pricing. The unhealthy development degenerated into poor performance of the nation's refineries, which resulted in excessive dependence on imports. The study thus evaluates the effectiveness of deregulation on the downstream sub-sector of the Nigeria petroleum industry using descriptive statistics and Person Chi-square inferential statistics. The data used for the empirical analysis were generated through structured questionnaire where the respondents were required to read each question carefully and indicate their agreement or disagreement with the statement using a five-point likert scale. Findings from the study revealed that there is no significant relationship between deregulation of the downstream petroleum sub-sector and the supply and distribution of petroleum products in Nigeria. It revealed that the supply and distribution of fuel product by NNPC and oil marketers have not entirely helped reduce scarcity of the product. It was discovered also from the empirical analysis that there is no significant relationship between deregulation of the downstream petroleum sub-sector and the instability in the pump price of the product. NNPC inability to attain a stable price for its products has been a major challenge in the implementation of the deregulation policy. Above all, the deregulation of the downstream petroleum sub-sector was found to have not significantly been able to improve the availability of petroleum product. Smuggling of petroleum products in the downstream sector have not been addressed by the deregulation policy. Based on these findings, the study thus recommends that government should create an enabling environment to engender private investors for the purpose of improving the local refining capacity to meet the ever-increasing local demand of petroleum products and indeed for exportation purpose. Revisions to the petroleum fiscal and regulatory regime should not introduce multiple taxes, high royalties and remove incentives; if these impediments are introduced, oil and gas projects would not be economical for investors.

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CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Nigeria as a nation over the years has been faced with an unresolved policy implementation which is the deregulation of the downstream sub-sector of the petroleum industry in order to get maximum benefit. The hike in pump price of the premium motor spirit (PMS) can be traced fromthe Gowonadministration (1966 – 1975). It was an administration which boasted of the onetime popular adage ‘’money is not the problem of Nigeria but how to spend it.’’ However, the regime pioneered theincrease inthe pump price of fuel from 6 Kobo to 9.5 Kobo; subsequent government administration followed the trend. None of the previous fuel price hikes transformed the country from its dependency nature or diversified the economy.This is in spite of the fact that Nigeria,in addition to having three major oil refineries also imports refined products to satisfy its domestic consumption. In Nigeria there are negative effect of the incessant increase in price, instability of the supply and distribution of Premium Motor Spirit(PMS) as well as availability of the products.Premium Motor Spirit is needed to power automobiles where people from all field of their endeavours need for their daily activities. Similarly petrol is needed to power generating sets in the country, because the electric energy supply from Power Holding Company of Nigeria (PHCN) which is not regular and has been described in many quarters as epileptic. The instability in the supply and distribution, shortage in supply, long queues at the filling stations, hoarding of the product have a way of affecting the Nigeria economy negatively.

The deregulation of the downstream sector, as initiated by the Obasanjo Administration in 2003, involved not just the removal of government control of petroleum product prices but also the removal of restrictions on the establishment and (Adegunodo, 2013)operations including refining,

jetties and depots, while allowing private sector players to be engaged in the importation and exportation of petroleum products and allowing market forces to prevail (Okafor, 2004).Generally, the federal government has been in the process of total reforms of the Nigerian petroleum industry since 2000.Deregulation is a universal development which is a product of economic globalization by these it means that deregulation brings about opening up of the downstream sector to different players through increase competition in the longrun it wouldlead to lower consumer's price.

Deregulation is freeing of government control from the regulation of a system in order for countries to lessen public sector control and develop an open market while ensuring adequate supply of product. For the policy to be successful in countries, they had to strategically map out an effective policy response which transcend into full deregulation. This policy has been successful in some countries of the world like Peru, Chile, Argentina, Mexico, Japan, and USA among others. In Nigeria today, the issue of deregulation of the downstream sector of the Nigerian petroleum Industry has been on for decades without any visible decision in sight. The surest point around the issue is the debate for the removal or sustenance of subsidies for refined products. However unexpectedly, the result of the deregulation has not been encouraging (Lawal, 2014). There has been continuous increase in petroleum prices with continual scarcity of petroleum products, pipelines vandalisation, large scale smuggling, and low capacity utilization at the nation's local refineries (Ehinomen&Adepoju, 2012). As reported by the Nigeria National Petroleum Corporation (NNPC) in (2019) Smugglers of Premium Motor Spirit (PMS) popularly called Petrol,smuggle the commodity toas far as Burkina Faso, Mali cote d'Ivore. Neighbouring countries like Ghana has also been one of their base and these is as a result to the price difference of PMS between Nigeria and West African countries.

The government posited that the prices would only rise in the short-term. Comparing the situation to the development in the telecommunications industry, the government argues that the only way to arrest and correct the structural distortions in the sector is liberalization that would encourage businessmen to invest in building refineries and importing products to sell at prices dictated by the market (Adagba, Eme&Ugwu) (2012). However, this is an argument not supported by empirical evidence. Diesel and engine oil prices have been deregulated for years. Yet, unlike the situation in the telecommunication industry, the prices have been going up. It was expected that deregulation would give room for competition which would transform to price reduction and excellent supply and distribution network (James, 2013).

In one breath, the government says it has deregulated the market partially yet same government does not want to rule out the continuation of the payment of subsidies. This reflects indecision on a critical issue such as this. Since deregulation was a major point of discussion during the last election campaigns in 2014 - 2015, the present government administration of President Muhammad Buhari ought to have taken time out to debate the issues surrounding deregulationand take a major tangible decision to improve the downstream sector. The inability of previous governments to be decisive on this issue is part of the reason why growth in the downstream sub-sector in Nigeria is stunted. Nigeria in the last five years has consistently spent over 1 trillion naira that is about $5b USD annually on petrol subsidies and lesser amount has been spent on road construction and other infrastructural development (note that only N20billion was spent on roads in 2015). However over 1 trillion Naira was spent on petrol subsidies in the same year. The major reasons given by those who resist the deregulation of the downstream sector of the oil industry is that ifsubsidy on petrol is removed, the cost of pump price of petrol will increase.

It is against this backdrop that the study intends to evaluate the effectiveness of the deregulation policy on the downstream sub sector of the Nigerian Petroleum Industry.

1.2 Statement of the Problem

Despite the abundant availability of this natural resource (Crude oil) in the country, the nation has experienced over the years fuel scarcity, inadequate supply of petroleum products, hoarding, smuggling, adulteration, long queues, inconsistent PMS pump price across fuel station (Okafor ,2004). The unhealthy development degenerated into poor performance of the nation's refineries, which resulted in excessive dependence on imports. Thus, government economic reforms became imperative towards reviving the ailing downstream sector by way of deregulation.

One of the most challenging sectors over the years has been the downstream sub- sector, which is the distribution arm and connection with final consumers of refined petroleum products in the domestic economy. The incessant crises in supply of the products culminated in the decision by Government in 2003 to deregulate the downstream sub-sector, deregulations of the downstream sector was initiated with the aim of reducing economic waste and lighten social burdens caused by government control. Lawal (2014) was of the opinion that the experience of petroleum products scarcity in Nigeria has crippled national economic activities and increased the cost of doing business. The resulting scarcities inevitably lead to a flooding of the market with adulterated products, which usually leads to the damage of vehicle and machines. On Several occasion, and in many part of the country particularly outside of the big cities and towns, a greater part of Nigerians have been forced to buy petroleum products at 300% higher than their official price(Richard ,2012).

Balouga (2012) had in fact contended that since 1973, the downstream sub-sector of the Nigerian oil industry was deregulated and that the nation’s first refinery in Port Harcourt was actually a

private initiative of the Shell BP Petroleum Development Company and that it was only through policy reversals and the introduction of uniform pricing of petroleum products that the development of a feasible downstream was truncated. However, the manner of its implementation has been contentious because it fails to put into careful consideration the economic realities in Nigeria. The over-dependence on oil has created vulnerability to the vagaries of the international market. With the recent international trend VicePresident Osinbajo calls for diversification, as reported in Vanguard newspaper

> *As we move to diversify our economy, we are aware that we need oil to get out of oil. Yet, our window of opportunity to benefit maximally from the petroleum industry is narrowing .The increasing breakthrough in renewable energy use; the incredible speed of the expansion of the use of electric vehicles — Japan now has more electric charging stations than gas stations; all point inexorably that the party might be over sooner than we expected .Also, to ensure that the country derives the maximum benefits from the petroleum sector, in spite of the global challenges, Osinbajo stated that the Federal Government had to deal frontally with the critical issues bedeviling the sector, such as the deregulation of the downstream sector and its continuing challenges. (Vanguard Newspaper November 10th2016).*

Drawing from the report of Vanguard Newspaper (November 2016) during a book launch of the Ministers of Petroleum, the Vice President Osinbajo made it clear that despite the most advocated diversification of the economy, Nigeria needs the oil wealth to diversify. Therefore getting the maximum benefit from oil and getting deregulation policy to be successful in Nigeria is crucial.

In particular, the place of oil in the mind of the average Nigerian has become more profound since the deregulation of the downstream sector. The contradiction is more glaring now with the recent fall in crude oil demand at the global markets, which means less external earnings for Nigeria, and also increases expense burden on imported refined petroleum products. It is such contradictions that make the Nigerian economy appear aspeculiar at times, as policies seem to ignore what appears obvious to do. As such, policies intended to address the deficiencies and shortcoming in

the structure end up being poorly implemented because of regional, political or rent-seeking selfish interests. With the deregulation of downstream sector the federal government raises the price of fuel to N145 a liter the policy aims to increase the supply of fuel in Nigeria. To remedy the fuel shortage, the Ministry of Petroleum Resources removed regulations restricting the importation of fuel on the 11th May, 2016. The policy change is expected to increase the supply of fuel in the country and drive up competition, which will eventually lead to a fall in fuel prices (Sahara Reporters, 2016).This development of policy change however barely a year is and the full evaluation of this recent development cannot be fully analysed. Therefore for the purpose of this study we considered evaluation of the effectiveness of deregulation of the downstream sub sector of the Nigeria Petroleum Industry from 2012 – 2016.

The wide-ranging question that come to mind, is how effective is the deregulation policy in ensuring adequate supply of the Premium Motor Spirit(PMS), fostering appropriate pricing mechanisms, stimulatingcompetition and eliminating shabby practices in the industry?

The problems which this study seeks to address are itemized as follows:

i.To what extent has the deregulation of the downstream sector of the petroleum industry improved the supply, availability and affordability of petroleum product?

ii. Has the pump price of petroleum been affordable since the inception of deregulation in 2003?

iii. Will deregulation of the downstream petroleum sector bring about high production and distribution capacity?

iv. Have the rate of long queues at the fuel station and black marketers activities been addressed?

v. Has the issues of artificial scarcity sometimes created by the independent oil marketers been curtailed by the Nigeria National Petroleum Corporation (NNPC).

vi. Have deregulation of the downstream Sub-sector stimulated competition and reduced government spending on subsidy?

1.3 Research Questions

In view of the stated problem, the following questions are raised to direct this study

i. To what extent has the deregulation of the downstream sub sector of the Nigeria petroleum industry guaranteed adequate supply and distribution of Premium Motor Spirit (PMS)?

ii. Has the deregulation policy ensured appropriate and affordable pricing of the Premium Motor Spirit (PMS)?

iii. How has the deregulation of the downstream sub-sector of the petroleum industry improved the availability of petroleum products?

1.4 Objectives of the Study

This dissertation has both general and specific objectives. The general objective of this study is to evaluate the effectiveness of deregulation of downstream sector of the petroleum industry in Nigeria. Other specific objectives are:-

i. to evaluate the extent to which deregulation of the downstream sub sector of the Nigeria petroleum industry has guaranteed adequate supply and distribution of Premium Motor Spirit (PMS).

ii. to examine the extent to which deregulation policy of the downstream sub-sector of the petroleum industry has ensured appropriate and affordable pricing of Premium Motor Spirit (PMS) in the country.

iii. to determine the extent to which deregulation of downstream sub-sector has been able to improve the availability ofPremium Motor Spirit (PMS).

1.5 **Research Hypotheses**

$H0_1$ There is no significant relationshipbetween deregulation of the downstream petroleum sub-sector and adequate supply and distribution of Premium Motor Spirit (PMS) in Nigeria.

$H0_2$ The pricing mechanism of the deregulation policy of the downstream sector of the petroleum industry has no effect on the appropriate and affordable pricing of Premium Motor Spirit (PMS) in the country.

$H0_3$ The deregulation of the downstream sector of the petroleum has no significant effect in improving the availability of Premium Motor Spirit (PMS).

1.6 Justification of the study

Several scholars have written extensively on deregulation of the downstream sub-sector of the petroleum industry.However, this study will attempt to fill in the gaps in these studies. Abuja was chosen as a case study because no prior work has been done using the indicators of deregulation the researcher used with the case study.

Isyaka M Sanni (2014) investigates the implications of price changes on petroleum products distribution in Gwagwalada for a period of 12 years (2000-2012).Questionnaire was used tocollect primary data from ten wards within Gwagwalada Area Council which was used as study area. TheStatistical Package for Social Sciences (SPSS) was used to analyze the raw data.The results from the study shows that, there was a statistically significant effect of price changes of petroleum products distribution in Gwagwalada, the price changes resulted to fluctuation of the supply and distribution of petroleum products and there was statistical significant relationship between price increase and the development of "Black Market'' and long queues at filling stations across Abuja. The study recommends that the government should strive to make Premium Motor Spirit (PMS) available at all times and other resources should be tapped so as to diversify the economy. However for this study the scope would be wider aside Gwagwalada Area Council,AMAC and Bwariwill be part of the sampled population. Availability of Premium Motor Spirit (PMS) was studied as one of the indicators for this study.

Ehinomen and Adeleke (2012) carried out an extensive study on the assessment of the distribution of the petroleum products in Nigeria. Their objective was to examine the various issues regarding the distribution of product and entrepreneurs full participation in the distribution of products. Findings this study put forward were thatthe participation of entrepreneurs will drive the effectiveness in the sector and also bringing down the cost of operations, as well as reduce the price of products for the benefit of all the stakeholders in the industry. The study recommends that the downstream activities of the industry should be completely deregulated to allow private sector and entrepreneurs' full participation in the distribution of the products.

However, for the purpose of this study we considered not just distribution butpump price as while as availability of product. Another study carried out by Hauwal, Umar &Mamman et al (2012)

investigated petroleum product scarcity and higher prices confronting the Nigerian economy. In the light of the ultimate deregulation policy, the study took monthly data ranging from 2005 to 2010, Vector Auto-regression (VAR) model and Ordinary Least Square (OLS) estimation was used to observe the interdependence as well as the impact of the variables on one another. The results revealed that, because of their non-zero coefficients, the independent variables are responsible for the variations in petroleum products distributed. The study recommends for total return to local refining, diversification of the export base, consistency in and efficiency of government pricing and environmental policies as well as total market concept in the chain of petroleum products supply and distribution to cushion the non-sustainability of the deregulation policy.

This study however explored other variables in other to critically evaluate the activities of deregulation in the downstream sub-sector and this study went further to look at the year 2012 - 2016.

According to Iyeomoan (2012) the major gains to be derived from deregulation is reduction in the cost of subsidizing the sector which run as high as $1.5 billion annually. Consequently, it would free resources to meet the socio-economic and welfare needs of the Nigerian people. Boost in foreign direct investment, potential for innovation and growth of indigenous technology as well as increased potential for employment generation.

This study investigated the effect of the deregulation on the availability, distribution and supply of petroleum product, evaluate the effectiveness of the policy to actually address the instability in the pump price of the product. This study is different from other studies because it would fill some loop hole found in other study which would make this study useful in the academic and policy making field. Studies has been carried out on either of the variables pump price, availability,

supply and distribution but has not been done using these entire variable in a research work published. Abuja is the case study in this research and we were able to ascertain the degree to which the policy implementation has actually been effective through the responses from the questionnaire, interviews and observation.

1.7 Scope and Limitation of the Study

This study covers a period of five years: 2012 – 2016. This period was chosen because in 2012 the President Good Luck Jonathan administration took certain purposive measures to deregulate the downstream sub-sector. His administration was targeted at total deregulation of the downstreampetroleum sector and not just removal of subsidy. President Goodluck Jonathan addressing Nigerians in January, 7 2012 saw deregulation as a good entry point for transforming the economy and for ensuring transparency and competiveness in the oil industry. The case study is FCT-Abuja, the capital city of Nigeria. A vast majority of the FCT consist of urban settlement while some other parts are basically Semi-Urban settlement and few rural settlements. The territory is currently made up of six local councils, comprising the City of Abuja (AMAC) and five area councilsAbaji, Gwagwalada, Kuje, Bwari and Kwali. These comprise the urban, semi urban and rural. This study covered three area councils which include AMAC with the population of 1,737,458 people, it has the highest population and it is an urban setting. Bwari with the population of 572,150 people is semi-urban and Gwagwalada with the population of 107,432 is semi-urban.

During the course of the study, the researcher was confronted with numerous constraints that pose difficulties to proper understanding of the subject matter. The first constraint relate to the shortage of adequate literature on the subject of deregulation of the downstream sector. It was rather difficult and in most cases impossible to get hold of severaldocument and record that would have

been vital to the study. The limitation of the study is in the context of research design and the context of the work. The research design adopted is survey research and this caused difficulty in getting the timely response of the respondents. The nature of work required getting data from not just the consumers but also the management of the Nigeria National Petroleum Corporations (NNPC) and the marketers of Premium Motor Spirit (PMS), Filling station Managers. Getting the relevant data was quite cumbersome from the relevant stakeholders.

1.8 Operational Definition of Key Concepts

For the purpose of clarity and common understanding, the researcher has defined some of the terms used in this work.

Downstream Petroleum Sub-Sector: The downstream sub- sector commonly refers to the marketing and distribution and supply of products derived from crude oil and natural gas. The downstream sector reaches consumers through products Premium Motors Spirit (PMS) or Fuel.

Availability of Petroleum Product: - This is the accessibility of petroleum product for consumers at designated place for purchase, i.e. fuel station at an appropriate price rate and sufficient quantity.

Distribution of Petroleum Product: This refers to the transportation of Premium Motor Spiritby independent distributors and NNPC from the depots to the service stations around Abuja and its environment.

Appropriate and Affordable pricing: - This refers to the market forces of demand and supply to determine the price of Premium Motor Sprit.

Petroleum Products: These are useful materials derived from crude oil (petroleum) as it in oil refineries. There are about 300 different types of products that could be acquired from petroleum. For this study we are strictly looking at the Premium Motor Spirit (PMS) also called petrol or fuel.

1.9 Chapter Outline

This dissertation is presented in six (6) chapters, covering all aspects of the study, from the introduction to the summary, conclusion and recommendation. The study started by looking at chapter one, which is the introduction where the background to the study, statement of the problem, objectives of the study, research questions, research hypothesis, significance of the study, scope and limitations of the study were examined. In the chapter two, various literatures on deregulation were reviewed. The overview includes the concept of deregulation of downstream sector of Nigeria, rationale for deregulation in Nigeria. Petroleum products distribution in Nigeria, petroleum product supply,petroleum products pump price, petroleum product availability, empirical studies, theoretical framework and the application of the model to the study

Chapter three was concerned with research methodology. It contains the research design, population and sample techniques, method of data collection, procedure for data analysis, justification of methods, and research instruments were all discussed; while chapter four addresses the relevant provisions and activities of the Nigerian Petroleum industry. Specifically, the chapter discussed the history of the petroleum industry in Nigeria, the origin of deregulation policy in Nigeria and the activities of the downstream petroleum sector in Nigeria. In chapter five the data collected through structured questionnaires were analyzed using a descriptive and inferential statistics.Interview, observation of activities and the secondary sources wereanalyzed using content analysis. The results were then analyzed, interpreted and discussed. Chapter Six presented

the summary of the study and conclusions reached on the bases of the hypotheses tested. Recommendations were also made on the bases of the findings in chapter five.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter focuseson deregulation of downstream sector of Nigeria and rationale for deregulation in Nigeria. Other issues are petroleum products distribution in Nigeria, petroleum product supply,petroleum products pump price, petroleum product availability, empirical studies, theoretical framework and the application of the model to the study will be discussed.

2.2 Deregulation of the Downstream Sector in Nigeria

The concept of downstream oil deregulation is neither new nor restricted to Nigeria, as it has for long been operated in several other oil-producing countries. Most developed countries that

deregulated their oil sector had experienced or achieved economic growth. The countries include Canada, Japan, United States, Brazil, to mention but a few. However, countries like Argentina, Philippine, South Africa amongst others did not find downstream oil deregulation favourable. In Nigeria, there have been divergent opinions expressed by the public since the introduction of deregulation policy to the downstream sector. Some Nigerians see the policy as a way of introducing high fuel prices by the government, while other people view it as a way of ending the scarcity and shortages of petroleum products. In 2016, the Federal Government in a bid to exit the controversial subsidy regime announced that it had deregulated the downstream sector of the petroleum industry to allow market forces determine the price of petroleum products. More bothersome now is the stand of the Federal Government to continue to determine and fix prices of petroleum products, which many stakeholders have said, was bound to fail, describing such as partial deregulation (Daily Trust January, 2017).

The nation's downstream sub-sector of the oil industry engaged in activities relating to the refining, distribution and supply of petroleum products and derivatives throughout the country. The sub-sector is particularly impulsive in recent times due to government's policy on deregulation of the industry, which has removed price control mechanisms that have undermined the growth of the sub- sector in previous years. Centre for Public Policy Alternatives cited inTawio& Dele (2016) viewed deregulation as a policy which is far more than subsidy removal. It involves the total removal of government control in the entire downstream petroleum sector. This requires private sector participation in refining, supply and distribution of infrastructure such as pipeline, depots, terminals and finally petroleum products distributions and retail. This partial understanding of deregulation has created a situation where different stakeholders in this debate interpret the policy based on their perspective. Labour leaders within the industry oppose

deregulation because it will lead to private sector control of the industry. Consumers equate deregulation to increase in price of petroleum products, while civil right activists, civil society organizations and non-governmental organizations (NGOs) oppose it because of its anti-welfare and anti-poor status. This is in line with the view of Luba (2000) who observes that the Nigerian downstream sector major marketers who have capacity and a good network of marketing outlets are benefiting from the policy far above their counter parts, the independent marketers.

Izeze (2013) believes that the Nigeria petroleum industry must not be liberalised, deregulated or privatized completely, for whatever reason and that the status quo should remain, maybe with minor fine tuning "here and there" to improve efficiency, as appropriate, "in the overall national interest". The main notion is that the low capacity utilization of Nigeria's state-owned refineries and petrochemical plants in Kaduna, Warri and Port Harcourt, the sorry state of despair, neglect and repeated vandalisation of the state-run petroleum product pipelines and oil movement infrastructure nationwide, are no excuse for the collateral damage of the economy, large–scale cross–border smuggling of petroleum products. Along this line, some scholars and pressure groups in the country strongly believe and argue that deregulation of the downstream oil sector will have negative impacts on the Nigerian economy. Eson (2002) who sees deregulation of the downstream oil sector as not following the normal trends involving systematic removal of regular structure and operational guidelines, hence deregulation might give marketers the opportunity to fix their prices out of the government regulation to the detriment of the masses. According to Agbonyi (2009), the products were sold to friends of the NNPC officials who have private depots/pumps where they sell at cut-throat prices is the actual cause of the petroleum scarcity cited by the opponents as the reason for deregulation . He further stated that the petroleum marketers have been noted to divert petroleum products meant for some state to private hands far

away from the states, for which they are meant for, is part of the causes of the lingering issues in the downstream oil sector necessitating the call for deregulation.

Akinwunmi&Agwaranze (2005) proposed that deregulation is the elimination of government intervention in the operation of an organization. This implies that rules and regulations by the government in the administration of the organization are being reposed through the pressure of supply and demand. Deregulation can be further defined as the partial or full removal of government control in the distribution and production of goods and services (Obayi, Eme&Emeh (2012).That is to say from the production to the distribution the independent oil marketers take significant part in the activities of the downstream sub sector. According to Hornby (2001), deregulation is the freeing of a trade or business activity from rules and controls. From his perspective, it is the determination of price by the interplay of demand and supply. It means the withdrawal of government control of resources allocation mechanism, thereby allowing the forces of demand and supply to determine the prices of goods and services.

Fashola (2012) conceptualized deregulation as "to allow private enterprises to drive productive activities in the economy of our nation". To him, there are many things that would happen in deregulation and subsidy is one of them. Downstream oil deregulation refers to the removal of protection with regard to importation, processing and retailing of petroleum products as well as the determination of prices of petroleum products. Kupolokun (2005) noted that the main goals of deregulation initiatives include to: dismantle the natural monopoly of the state owned enterprise by privatizing and deregulating price controls.Create competition in the downstream sector by encouraging more companies to get involved and eventually supplying the market at competitive pricing levels. Reduce the cost government incurs on subsidizing the sector which runs as high as $1.5 billion annually, and can consequently use the resources freed up to handle the socio-

economic and welfare needs of the Nigerian people. Boost Foreign Direct Investment (FDI) to the Nigerian economy and reduce transportation costs of petroleum products and people.

In a nutshell, deregulation is to promote competition in areas previously considered to be natural monopoly of an individual, group of people or government enterprises.

Deregulation creates a competitive market that would provide end users with the liberty to make choices out of several options. Deregulation indicates the omission of regulation on prices of petroleum products by the government allowing the forces of demand and supply to determine prices which also put aside the issue of subsidy and enhance competition, effectiveness and optimize the productivity in the petroleum industry (Umoru 2001).Arowolo (The Punch, 2001) posited that it was a paradox when one considers Nigeria a nation, which imports what it has and export what it does not have. He argued that, Nigeria seem to have a one-legged economy whose supply side is disabled or even dead to the huge and overwhelming market around it. In his view deregulation is difficult in a market that was distorted by the overbearing presence of government. He maintained that deregulation without diversifying the supply is bound to macro-economic instability with other far reaching effects.

Anne, Ihonre&Lasbery (2015) discussed extensively on the ‘’Impact of deregulation of the downstream oil sector on economic growth in Nigeria’’. This study was carried out to investigate if the consumption of petroleum products, price of the products and total supply of the product has significant impact on the nominal gross domestic product. The result shows that deregulation has robust impact on economic growth; they believe that deregulation is capable of promoting growth since it is based on free market structure where demand and supply are determined by competition which increases supply and reduces the price. They went further to analyze the anti-subsidy strike action in Nigeria as a result of lack of transparency, credibility and inefficiency by the

government. The paper therefore recommended that the government should initiate policy that would portray a phase of deregulation and work on the price regulation. A similar study that was also carried out by James & Moses (2016) examined downstream oil deregulation and Nigerian economy in this paper they cited that there are two phase of deregulation, partial and full deregulation. In partial deregulation, there is less government regulation in order to increase efficiency and protect consumer's rights, while full deregulation is the complete removal of controls on oil price setting. The objective of their study was to examine the impact of deregulation policy of downstream on Nigerian economic performance. They claimed that increase in prices of petroleum products was not due to deregulation, but increase in international oil prices. Increase in prices of petroleum products significantly influence economic growth within the period of study, because petroleum products are demand inelastic. They recommended that government should get all the four refineries working at all costs. This will help to reduce the huge subsidy burden and the money spent on refined fuel importation will be diverted to infrastructural development for the economy.

According to Adidu and Oghene(2001), the total capacity of all the nation's four refineries put together is 155,000 barrel of crude per day, and the estimated domestic consumption is put at 300,000 barrel per day of crude, which means that there is a short fall of 145,000 barrel per day of crude. Due to the low capacity utilization of the local refineries producing at 50 percent production capacity makes it impossible to meet the domestic needs of petroleum supply. In the circumstance, the option is to import the finished petroleum products to supplement locally refined products, but at a very high cost. The importation of petroleum products has a negative effect on the nation's economy. This is because once the price of crude oil rises in the international market, it automatically affects the price the government pays for its importation and

hence affects the local prices. In order to maintain lower prices at the home front, government had to subsidize the cost of the importation of petroleum products. The subsidies had affected the nation's economy negatively by preventing the government from having enough funds with which to provide the people the much needed social amenities that would have enhanced their standard of living and create an atmosphere of political, social and economic stability in the country.

Reginald (2009) described deregulation of the downstream sector as the opening of the downstream sector to competition where players are to participate at every segment of the value chain and the removal of entry barriers in the supply and distribution of petroleum products. The PPPRA similarly submit that deregulation of the downstream sector means opening up of the downstream sector of the petroleum industry to competition among all players in the industry. It means allowing every player the opportunity to refine or import petroleum products for use in the country in-so far as the product so refined or imported meet quality specification. Igbikiowubo (2011) defined deregulation of the downstream sector to mean loosening the tight rules governing the administration of the downstream sector by opening up the sector to competition among all players in the industry. It means ensuring that every aspect of production, refining, distribution and dispensing of petroleum products is self-financing. Deregulation involves competitive pricing of products.

From the foregoing in my opinion deregulation of the downstream sub-sector in Nigeria is obviously a partial one. However, there have been some loop holes ‘’here and there’’ that have made the policy not favourable for the common man. There is therefore a need to set up certain mechanism like a committee to review the policy and see how it has succeeded in other developed nations like Canada, United States of America, Japan as well as others where deregulation of downstream was actually effective. I am of a similar view as Izeze(2013) as stated above that the

policy should continue but there should be a restructuring of the policy to ensure that the nationalinterestis protected.

2.3 Rationale for Deregulation in Nigeria

The different administrations of government since the initiation of deregulation in 2003 have given reasons why the downstream sector should be deregulated. Not far - fetch basically the reasons have been centered on low level of competition, smuggling of petroleum products, monopolistic and shabby practices, existence of petroleum subsidy, poor maintenance of infrastructural facilities, distortions in products supply and distribution, inappropriate pricing of products supply and high level of fraud and corruption.

According to the PPPRA, Reginald (2009) and Igbikiowubo (2011), the Federal Government of Nigeria wants to deregulate the downstream sector of Nigeria oil industry in order to:Ensure that petroleum products are made available to the consumers in an uninterrupted manner, eradicate waste and corruption which are consequences of tightly regulated economy. Ensure that the supply and distribution of petroleum products are orderly and consumer friendly. Channel money realized from the exercise to development projects that will be beneficial to the majority of the people.

Notwithstanding the above, the office of the Chief Economic Adviser of the president in collaboration with the NNPC and the budget office of the Federation in 2011 asserted that the rationale behind the Federal Government's plan to deregulate the downstream petroleum sector includes: to improve the efficient use of scare economic resources by subjecting decisions in the sector to the operations of the forces of demand and supply. Deregulation will further reduce economic waste and lightens social burdens caused by government control.

Furthermore, Allison Madueke (2011) harped on the imperatives for deregulation of the downstream sector to include: Saving of cost in petroleum subsidy, job creation opportunities, downtime record in the existing refineries and investment opportunities or foreign direct investment in the sector.On another note Minister of State for Petroleum, IbeKachikwu (11 May 2016), who made the announcement that PMS will sell at N145, says the policy aims to increase the supply of fuel to remedy fuel shortage and drive up competition, which will eventually lead to a fall in price of fuel. Facilitate freedom of importation of the product, subject to existing quality specifications and by Regulatory Agencies.Allow oil marketers to import PMS on the basis of FOREX procured from secondary source.

Summarily, the deregulation of the downstream oil sector will improve the efficient use of scarce economic resources by subjecting decisions in the sector to the operations of the forces of demand and supply. This will attract new sellers, buyers and investors into the market, thereby increasing competition, promoting overall higher productivity and, consequently, lowering prices over time. The ultimate effect of this chain of activities is increased gains for the people of Nigeria who would be getting the most out of their natural resources. Chika Izuora (2016) opined that deregulation of the downstream oil sector promises to be the way forward in expanding opportunities for economic growth and a competitive downstream petroleum sector if regulation in the downstream sector is limited to oversight and supervisory functions, aimed at guaranteeing quality of products and preventing consumer exploitation, then the process of deregulation could help achieve greater cost-effectiveness.

Several administrations in Nigeria, since the inception of deregulation in 2003 have come up with rational on why there is aneed to deregulate and a common issue that cuts across their reasoningis to ensure availability of petroleum product and increase supply and distribution.

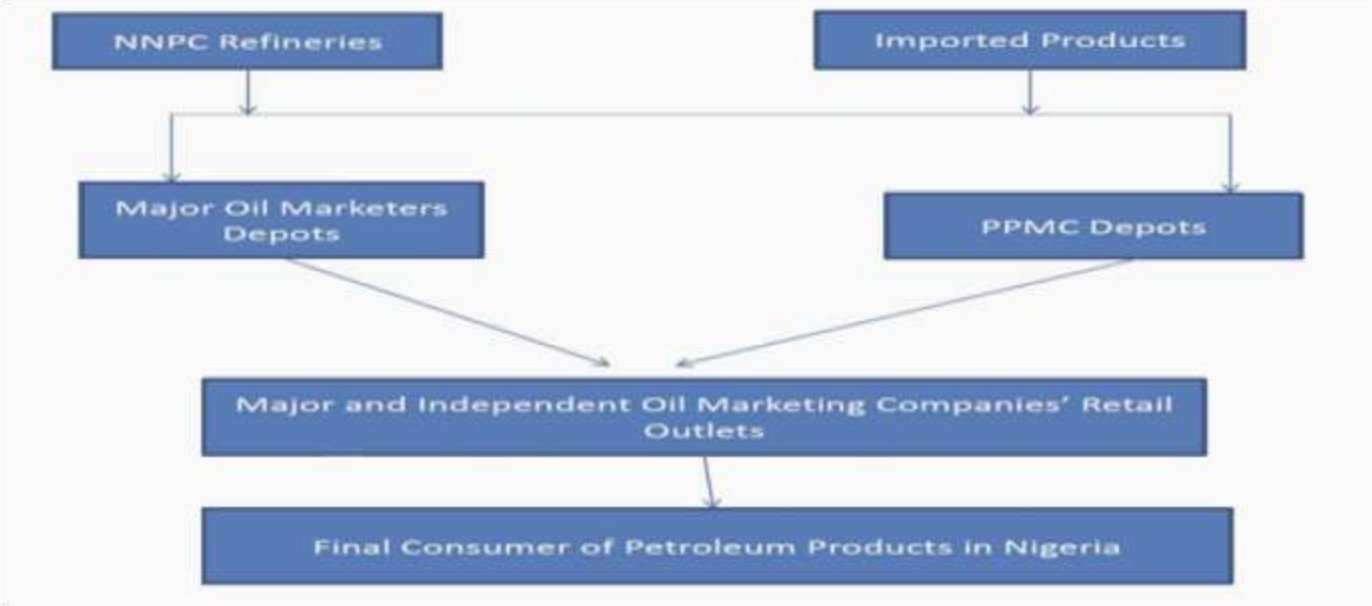
2.4 Petroleum Products Distribution in Nigeria.

Petroleum products distribution is concerned with the movement of refined petroleum from the refinery to the final consumers across various locations for delivery in the country. In the Nigeria situation, the Pipelines and Products Marketing Company (PPMC) is responsible for the wholesale supply, distribution and marketing of petroleum products in Nigeria. Kupolokun as cited in Christopher and Adepoju (2012) highlighted that in the past years, the downstream sector of the petroleum products started under a market structure in which price was determined by the interplay of the forces of supply and demand. Then, the product market was dominated by the multinational oil companies until 1973 when the Government introduced uniform pricing of petroleum products in order to ensure even distribution of products nationwide. As observed by Kupolokun (2006), the introduction of the Independent marketer's scheme in 1978 as earlier mentioned broke the dominance of the multinationals.

Petroleum distribution is a difficult duty that consists of transport and storage all over the country. This procedure is carried out by various players such as major marketers that find the way of transporting products from the refineries to depot stations, independent distributors and they in turn transfer these products to service stations. Nottingham (2004) opined that the distribution section of the petroleum value chain is the most favourable for domestic initiatives. The efficiency of the dispersal is very crucial for economic growth. This suggests why the issue of distribution is applicable in the Nigerian framework. In 1975, the Petroleum Equalization Fund (PEF) was inaugurated to handle the issue of cost differentials coming from transport of petroleum products to different parts of the country, on the ground of uniform pricing policy. Ehinomen and Adeleke as cited in Isyaka, M (2014) shared their views that the distribution of petroleum products in the Nigerian economy is fraught with complex problems resulting sometimes in products outages,

exaggerated price of products and controversy on the pump price of products. Christopher and Adepoju (2012) claim that the distribution system of the petroleum product in Nigeria is ineffective and inefficient as a result of several factors to mention a few low capacity utilization of government owned refineries and petrochemical plants in Kaduna, Warri and Port Harcourt poses a lot of challenge to NNPC, illegal bunkering nationwide, inability to attain uniform price of petroleum product.

The physical flow of products: The retail route used by major and independent companies in Nigeria.



Source: The physical flow of products: The retail route used by major and independent companies in Nigeria (NNPC, 2010)

As shown in the chart above, the oil marketers are responsible for the effective distribution of petroleum products and make their profit from it. The product distribution price is regulated by the Petroleum Product Price Regulatory Agency (PPRA). In Nigeria, major oil marketers comprise mainly multinational oil firms that operate in the downstream sector as well as some indigenized oil enterprises, these include Mobil Oil Nigeria PLC, Total Nigeria PLC, Oando PLC, MRS Oil Nigeria PLC, Forte Oil PLC, Conoil PLC, and Zenon Oil Limited, among others. Many

of these oil firms are listed under the petroleum marketing sector in the Nigerian Stock Exchange. As underlined in the NNPC bulletin the Pipelines and Product Marketing Company (PPMC) is the product distribution arm of NNPC. PPMC is directly responsible for the efficient and easy sourcing and distribution of petroleum product to all parts of the country, at the standardized price. PPMC is an auxiliary of NNPC, which ensures to mention a few, the availability of petroleum products to sustain the nation's industries, run automobiles and for domestic cooking. Petroleum products either imported or refined locally are received by the PPMC through import jetties and pipelines and distributed through pipelines to depots that are strategically located all over the country.

Christopher and Adepoju (2012) identified the means of transportation of petroleum product, from depots service stations which amount to several thousands to where they are retailed to the final consumer through road which supplement the shortage in supply. Pipelines transportation happens to be the most adequate way of transportation of the product; PPMC uses pipelines frequently to convey products from refineries to depots which are located in strategic places across the country. However as observed by Kupolokun (2006) over 75% of the pipelines have been vandalized, and are not currently in use and lastly, transportation by sea involves the movement of large quantity of product with marine tankers, coastal vessels from refineries.

According to NNPC news bulletin (2017) the combined installed capacity utilization of the Nigerian National Petroleum Corporation's refineries located in Port Harcourt, Warri and Kaduna increased by about 29 percent in January 2017 compared with their performance in December 2016. In the latest of the Corporation's Monthly Financial and Operations Report for January released in Abuja, NNPC said the capacity utilization of the refineries rose to 36.73 per cent in

January, 2017, as against 7.55 percent in the previous month of December 2016. The report attributed the improvement to the implementation of the 12 Business Focus Areas (BUFAS) strategy introduced by the Group Managing Director, Dr. Maikanti Baru. According to the report, the refineries benefitted from the introduction of a new Refineries Business Model under the 12 BUFAS strategy which has transformed them from "tolling plants to merchant plants" thereby placing them on the path of profitability. The Port Harcourt Refining Company (PHRC) and Warri Refining and Petrochemical Company (WRPC) also posted surpluses of Five Billion, One Hundred and Fifteen Million Naira (N5,115,000,000) and Four Hundred and Four Million Naira (N404,000,000) respectively.

Christopher and Adepoju (2012) carried out an assessment on the distribution of petroleum products in Nigeria. They observed a progressive increase of private marketers being able to distribute petroleum product and identified theeffort of the government in selling its shares to the public thereby opening up the downstream sub sector to the deregulation policy. The study recommended that the downstream sector of the industry should be fully deregulated, and the invisible hands of demand and supply should determine the price. They went further to suggest that private investor and entrepreneurs should be allowed full participation in the sub-sector, the refineries should be sold to private investors and this will usher in a more effective system and operation in the industry. Isyaka (2014) is of the opinion that one of the ways to ensure effective distribution of petroleum product is to monitor the distribution channel of the product to avoid disruption of the distribution system or scarcity. The Nigerian National Petroleum Corporation (NNPC) should diversify its export/output baskets through adequate downstream activities. This will enhance self-sufficiency in petroleum products and economic growth.

In the distribution of Premium Motor Spirit (PMS) in Nigeria, my opinion is in line with Isyaka (2014) where he gave his opinion onhow to ensure effective distribution of Premium Motor Spirit. The Pipeline and Products Marketing Company (PPMC) should be charged with theresponsibility of overseeing the Independent Oil Marketers to ensure the quantity of the product needed by consumer is equitable and effectively distributed.

2.5 Petroleum Products Supply in Nigeria.

Nigeria ranks high among the community of oil producers both at the world level and among the OPEC eleven. It is therefore, absurd that the supply of all petroleum products is unreliable and has declined sharply in recent times. Nigerians have experienced countless suffering due to heightened shortage of petroleum product supply. Motorists have spent hours queuing up at the filling stations; others resorted to obtaining fuel at exorbitant prices at the "black market".Sabo and Igwo citied in Auwal and Mamman(2012) analyze the supply of petroleum product according to them they opinedwith the new democratic dispensation, the supply and distribution of petroleum products improved but this was with a price frequent increase in petroleum products prices. Nigeria a country heavily endowed with oil, wallows in scarcity of its products.

From the perspective of deregulation policy, the word 'supply' connotes the various quantities of a commodity offered for sale by a producer(Jhingan,1997) or that which will be available for sale (Hanson, 1997) during a given period of time at various prices. Siyan(2005) describes supply as "the propensity to sell;" meaning, the total quantity of products (goods and or service) that the supplier is capable of or able and willing to tender for sale at a given price within a particular frame of time. According to Ibrahim (2007) economic growth of any country and Nigeria in particular is largely dependent on the capacity to supply diverse economic goods to its population. According to Christopher and Adepoju (2012) Product supply is sourced through importation and

transported by road and pipelines to inland depots to meet domestic demand. The first refinery was built in Port Harcourt by Shell-BP in 1965 with a capacity of 60,000 bpd. This was able to meet the domestic requirement of petroleum products, but by 1973 the nation started witnessing supply shortages. This and the call by OPEC to take control of the Industry, prompted government to intervene and the industry gradually became regulated with products being sold at uniform prices nationwide. Despite government intervention, there are notable measures that can improve product supply.

According to Adamolekun (1999) the management and administration of petroleum prices in Nigeria is a very challenging one. This has led to crises, unbalanced supply of products, severe product scarcity, hoarding, smuggling, fake products, and long queues are some of the issues facing the supply and distribution cycle Okafor as cited in Chistopher and Adepoju (2012) observed that the policy of deregulation has globally been embraced by several countries in order to lessen the public sector dominance and for developing a liberalized market while ensuring adequate supply of the products. Countries where full deregulation was implemented the policy has been successful, Okafor went further to say, if Nigeria should borrow the principles from these nations and allow the downstream sector to be fully deregulated, there would be an improvement in the supply and distribution of petroleum products. Ihenacho cited in Eze (2012) shared same opinion he claimed that full deregulation of the downstream sector will encourage private sector participation in the building of refineries and bring down prices in the long run. He continued by saying that petroleum price will go up immediately after the commencement of deregulation but the removal of subsidy will encourage Shell, Chevron, Total and other private investors to build more refineries to create employment opportunities, crash down the price of fuel and engender stability in the supply of petroleum products among other benefits.

Feyide as cited by Christopher and Adepoju (2012) suggested ways of improving supply of petroleum product by advocating for the establishment of more refineries in the country. A refinery could be located along Gboko-Jalingo axis in the north-east of the country, and another one along Ikorodu – Sagamu axis in the South-West. Feyide sees this as a step that will increase the supply of domestic refined products, and reduce or eliminate product importation. Also the writer pointed out that over $35 million was budgeted for Turn Around Maintenanceevery four years with little or no improvement in the functioning and operation of the refineries. Auwal and Mamman (2014) proffered ways to improve the supply of petroleum product they were of the opinion that the government should encourage more private company participation.

Deregulated downstream requires adequate industry facilities, guaranteed security of oil investments, relaxation of some laws, a change in pricing policy as well as provision of transport and storage facilities. To attract new entrants into the market, product prices (before taxes) have to be set by the market in line with economic border prices. The threat of oil workers going on strike alone causes panic buying of petroleum products and hoarding of same by the oil marketers and residents. All the relevant stakeholders must ensure that there is a harmonious labour unions relation in the oil industry.

The supply of Premium Motor Spirit in Nigeria has not been on the fair side.The downstream sector is characterized with product scarcity, hoarding, contaminated product this is an indication that the supply of the product is inadequate.In my judgment fuel deregulation will help a great deal to solve this menace because it will give room for private investors to build refineries and allow the Independent Oil Marketersto import Premium Motor Spirit if necessary. This will curb a great deal thescarcity and hoarding. This way the invisible hands of demand and supply will determine price. The government in my view could also invite foreign investors to build refineries

in each geopolitical zone. It will go in no small way to reduce the negativity of people's opinion about deregulation and scarcity of Premium Motor Spirit will become a thing of the past.

2.6 Petroleum Product Pump Price

Practically all administrations both military and democratic administration have had reasons to increase petroleum products prices in Nigeria. Petroleum prices in the local market have been under government control since 1973 when the government took it over from the private oil companies (Iwayemi, 1993).

Iwayemi and Adenikinju (1996) identified three factors that have influenced government position. First, is the yearning to protect the interest of the poor who could be hurt from higher price, the second is the need to reduce industrial cost as energy products are seen as critical inputs in production processes. The third factor relates to the potential inflationary impact of higher energy prices. Government of both oil producing and consuming countries invariably intervene in the market to influence product price. The extent of such intervention depends on the specific needs of the country and importance of the product in question. It has also been noted that crude oil cost is not the only cost incurred in the supply and distribution of petroleum products as other costs such as refining costs, transportation and distribution costs are involved.

Over the years, Nigeria has experienced unprecedented constant and appreciable increase in the prices of petroleum products. Petroleum products are major contribution to industrial production, they have a lot of domestic uses, in fact, and they are regarded as the life wire of the nation. Consequently any unprecedented increase in their prices would therefore have a multiplier effect in the economy (Gbadomosi, *et al.,* 2007).This is because the price of petroleum products is critical to production cost and the welfare of the people in every economy.

Table2. 1 PRICES OF PMS FROM 1973 TO 2016

Year	Head of State/President	Price Adjustment	Increase Or /Decrease	Change (%)
1973	Gen Yakubu Gowon	6kobo-8.45kobo	Increase	40.8
1976	Gen Murtala Mohammed	8.45kobo-9kobo	Increase	6.5
1978	Gen OlusegunObasanjo	9kobo-15kobo	Increase	66.7
1982	President Shehu Shagari	15kobo-20kobo	Increase	33.3
1986	Gen Ibrahim Babangida	20kobo-39.5kobo	Increase	97.5
1988	Gen Ibrahim Babangida	39.5kobo-42kobo	Increase	6.3
1989	Gen Ibrahim Babangida	42kobo-60kobo	Increase	42.8
1991	Gen Ibrahim Babangida	60kobo-70kobo	Increase	16.7
1993	Ernest Shonekan	70kobo-N5	Increase	0.62
1993	Gen SaniAbacha	N5-N3.25	Decrease	-35.0
1994	Gen SaniAbacha	N3.25-N15	Increase	0.36
1994	Gen SaniAbacha	N15-N11	Decrease	-26.67
1998	Gen AbdulsalamAbubakar	N11-N25	Increase	127
1999	Gen AbdulsalamAbubakar	N25-N20	Decrease	-20.00
2000	Gen OlusegunObasanjo	N20-N30	Increase	50
2000	Gen OlusegunObasanjo	N30-N22	Decrease	-26.7
2002	Gen OlusegunObasanjo	N22-N26	Increase	-18.2
2003	Gen OlusegunObasanjo	N26-N42	Increase	61.5
2004	Gen OlusegunObasanjo	N42-N50	Increase	19.0

2004 2007	Gen OlusegunObasanjo Gen OlusegunObasanjo	N50-N65 N65-N75	Increase Increase	30 15.4
2007	UmaruYar'adua	N75-N65	Decrease	-13.3
2012	GoodluckJonathan	N65-N14I	Increase	116.9
2012	GoodluckJonathan	N141-N97	Decrease	-31.2
2014	GoodluckJonathan	N97-N87	Decrease	-10.3
2016	MohammaduBuhari	N87-N145	Increase	66.7

Source: Fuel Price Hike; How Nigeria Wasted Ten Trillion Naira on Subsidy Vanguard (2016)

General Yakubu Gowon in his nine years in office as Head of State took the price of petrol from 6 kobo to 9.50 kobo per litre. General OlusegunObasanjoincreased fuel price by a leap moving it from 9.5 kobo to 15 kobo. Only the regime General Muhammadu Buhari maintained the status quo as it never increased fuel price (Adagba et al, 2012). Former military President Ibrahim Babangida moved the price of petrol from 15 kobo to 70 kobo in his eight years of governance. But by far the greatest leap of oil price in Nigeria was introduced by Chief Ernest Shonekan, an interim Head of State who took the price from 70kobo to N5.00 within the 87 days of his rule (Lawal, 2014). Late General SaniAbacha moved price of petrol from N5 to N11 within his five years in office while General AbdulsalamiAbubakar increased the price of petrol from N11 to N20 within the ten months he ruled Nigeria. President OlusegunObasanjo under democratic regime raised the price of fuel from N20 to N70 within eight years he spent in office late UmaruYar'Adua reduced the price from N70 to N65.

In 2012 Nigerians received a New Year package when the former President Goodluck Jonathan removed the subsidy and the price rose from #65 to #141. The Nigeria Labour Congress and Trade Union went on an eight day strike, which resulted to negotiations between the Presidency and the Organised Labour. This meeting led to the reduction to #97 per litres but in 2015 as the presidential election was approaching the price was decreased to #87(Winifred, 2012). The crash of international crude oil price due to economic slowdown in most major economies forced the Pr. G.E.Jonathan administration to reduce the price from N97 to N87 per litre in early 2015. In 2016, the federal government announced full deregulation of the downstream sector of the Nigerian petroleum industry, pushing the price of petrol to N145 a litre. Under every democratic administration, the ugly incidence of petroleum scarcity surfaces and one begins to wonder if there is any solution to the problem.

The trends in petroleum products pricing in Nigeria has a long history. It is also important to note that over time the price of PMS in Nigeria has been increasing, and because of this increase in the price of PMS the government decides to subsidize the price of PMS, kerosene, and diesel so as to enhance the welfare of Nigerians, making it possible for the product to be available to the low income earners thus enabling them to participate in economic activities (Obayi et.al 2012).

But over the years the government has been gradually reducing the amount they pay for subsidy on PMS and this is because such payment is draining the country resources which could lead to the collapse of the economy, thus resulting in the increase in the price of PMS and the prices of different goods and services (Vanguard, March 2016). This increases in the price of PMS has also resulted to different strike actions by Nigerians, for example in June 2000, the price of PMS per liter was increased from #11 to #30, the labor union embarked on an eight day strike and during which economy activities was brought to a halt and after much negotiation the price was increased

to #20 per liter, but in June 2007 the price rose from#65 to #70 per liter which led to a four day strike and the price was taken back to #65. In May 2016 the subsidy on PMS was completely removed with the PMS price increased from #87to #145 as the government complained that they are no longer able to pay the substantial amount on subsidy. (THIS DAY,MAY 2016).Thus the Nigeria Labour Congress and Trade Union decided to embark on strike, despite the National Industrial Court order to stop the strike, but the strike was not successful as not all Nigerians were in support of the strike. Some state complied and still went ahead with the strike while some did not. The strike lasted for only five days and it was called off after much consultation and deliberation. The new price regime now prevails at #145 (Vanguard, March 2016).

The level of adverse effect of increase in pump price on the nation's economy cannot be over emphasised the country have witnessed how increase in the price of fuel have in turn increased the cost of goods and service in 2012 when subsidy was removed the welcome package for Nigeria that year the cost of transportation tripled also food stuff along with several other services increased. In my view if the government can get the supply and distribution of product formula for Nigeria right stable price of fuel can be achieved.

2.7 Petroleum Product Availability

Petroleum product availability in Nigeria has been a bone of contention in the petroleum industry. The ability of supply to meet demand greatly depends on the effective supply and distribution as well as the storing of the product. Isyaka (2014) was of the opinion that the marketing aspect of petroleum products goes beyond production and refining, because pricing policy and effective distribution play a key role in products availability, market stabilization and consumer satisfaction in general. The Petroleum Product Pricing Regulatory Agency (PPPRA) was set up by Act No 8

of May 2003 with the primary mission to eliminate the effect of instability in international crude oil and products and stabilise domestic prices. It also aimed at guarantying effective products availability and distribution nationwide.

According to Kolawole cited in Okarah (2012), despite the nation's huge endowment of crude oil and gas as well as the extensive infrastructures available in the sector for distribution and marketing of petroleum products, the downstream sector has been hit by increase instability, hallmarked by a dearth of product to supply. During this period, sharp practices thrived in the industry with independent and marketers arbitrarily hiking prices beyond approved rates. Product adulteration, diversion/smuggling, bunkering, and other illegal acts were very common. The House of Assembly probe of the Subsector in 2012 revealed that in 2011, the IPMAN got less than 1% of the fuel importation contracts, compared to the huge number of its retail outlets and storage facilities. The association called on the Federal Government to remove the briefcase contractors from the system and ensure that regulatory agencies did not provide a platform that encouraged cutting of corners. This indicated that the fuel distribution system in the nation was defective, resulting into perennial scarcity of the products.

Sobowole as cited by Eze (2012) argues that deregulation of the downstream sector would give rise to efficiency in product usage, product availability and effective competition among investors hence putting an end to the so called NNPC monopoly. He observed that it is only when deregulated regime is put in place that the private refineries that have been licensed can really take off, not that investors who have been given licenses to build refineries are scared of venturing into the multi-million naira project because of the regulated regime in Nigeria. He informed that deregulation is the bedrock for the transformation and growth in the downstream sector. Reginald

cited in Nkogbu and Okorodudu (2015) observed the following are the merits of deregulation: products availability, full cost recovery, response to changing circumstance without political intervention, competition and efficiency will drive prices downward, entry of new participants, facility expansion and investment in the sector. The benefits of deregulation of the downstream sector according to the NNPC are availability of products; non-hoarding of fuel; investment in new facilities- storage tanks, retail outlets trucks, etc; competition among marketers; expansion of facilities; jobs creation and importation of products than sole dependence on NNPC.

A report on status of petroleum industry (2012) explained the fact that to ensureproduct availability in Tanzania finished petroleum products are imported through road and railway to supplement local production. Petroleum products are imported from within region mainly from South Africa, Mozambique and other neighbouring countries. Okarah (2012) examined the Nigerian National Petroleum Corporation (NNPC) in the implementation of the deregulation policy in Nigeria. One of the researchers major findings, revealed that NNPC's major challenges in the implementation of the deregulation policy has been the inability to attain a stable price for petroleum products which had led to product unavailability and increase in the price of petroleum products as official prices of and petroleum products rose sharply from 26 to 65 (Naira) per liter between 2002 and 2011 and to 95(Naira) per liter in 2012. The study recommends that the government should create an enabling environment to engender private investors for the purpose of improving the local refining capacity to meet the ever increasing local demand of petroleum products thereby ensuring constant availability of the product.

Much emphasis has been placedon how to improve the availability of petroleum product all based on Okarah's (2012).When government takes purposive action towards this step the products

would most likely become very much available in sufficient quantity at the designated place of sale.

2.8 Empirical Studies

A number of empirical studies have been carried out on the deregulation of downstream petroleum sector.

Oke John Abisoye (2013) conducted a study onderegulation of the Nigeria downstream petroleum industry: challenges and opportunities. The study explores deregulation as a tool for socio-economic management in the downstream sector of the Nigerian petroleum industry. The research also investigated the policies governing the deregulation of the downstream sector and the economic impact of the deregulation of the petroleum industry in Nigeria. The methods used by the researcher include PESTLE and Comparative analysis using China, United States of America, United Kingdom, Argentina and Japan. The study discovered that deregulation that is practiced in China, United States of America and United Kingdom supports social security system which makes the level of poverty in these countries minimal. However, in Nigeria, there is no social security system in place and as a result there is an increased poverty level among her citizenry. With the deregulation of the downstream sector and a social security system in place, the money realized from this reform can be channeled into social and welfare packages thereby reducing poverty in the nation. The result also identified that deregulation policy in Argentina, China, and Japan accounted for economic management, efficiency in energy management, improvement in economic conditions and increase in infrastructural development while in Nigeria deregulation policy is characterized by deterioration of economic conditions, decrease in infrastructural development, economic mismanagement and no efficiency in energy management.

Finally, the researcher concluded by recommending that the Federal government should put in place strict regulations that will address the issue of pollution and environmental degradation. The researcher further suggested that carbon permit should be introduced as a regulation as this will bring about reduction in carbon emission in the country.

This research failed to use any study area in the country as a case study, but rather used a holistic approach comparing Nigeria as a whole with other developed countries. However for the purpose of this study Abuja-FCT was used as a case study to give a better platform for analysis of the policy.

Aigbedion, I and Iyayi S. E (2007) explicitly carried out a study on Diversifying Nigeria's Petroleum Industry, this study concentrated on petroleum industry and its effect on the Nigeria Economy. They pointed out that the oil industry has risen to the commanding heights of the Nigerian economy, contributing the lion share to gross domestic product and accounting for the bulk of federal government revenue and foreign exchange earnings since early 1970. However, Nigeria's considerable endowment in fossil fuel has not translated into an enviable economic performance; rather, the nation's mono-cultural has assumed an unstable dimension in the past decades susceptible to the vagaries of the international oil markets. The major objective of this paper was to shed light on the imperatives for economic diversification within and outside Nigeria's petroleum industry in the 21st century. The study uses a time series analysis of 2001 - 2004 comparing five sectors in Nigeria Agriculture, Industry, Manufacturing, Building and Construction and Wholesale and Retail Petroleum trade. The major finding from the study was that the petroleum industry was dominating other sectors, the oil industry has accounted for the bulk of the nation's revenue and foreign exchange reserves. The displacement of agriculture as the main stay of the economy created structural imbalances for the economy, undermining economic

performance and national development. This study went forward to recommend that, the Government should encourage further exploration activities in the virgin basin of Nigeria such as Anambra and Chad basins, as well as the Benue trough; this can be achieved through the organization of more licensing rounds by making available open land for prospective investors. Also, the Government and the organized private sector should address the social instability in the Niger Delta through the creation of employment opportunities for the youths of the region.

The scope for analysis in the study was just four years, however for this study we covered over five years and went further to focus on the downstream-sub sector to measure it effectiveness.Ehinomen and Adeleke (2012) carried out an extensive study on the assessment of the distribution of the petroleum products in Nigeria. The study specific objective is to examine the various issues regarding the distribution of product and entrepreneurs full participation in the distribution of products. The study reveals that the participation of entrepreneurs will drive the effectiveness in the sub-sector. The degrees of effectiveness will invariably bring down the cost of operations and reduction of price of products for the benefit of all the stakeholders in the country. They recommended that the downstream sector of the industry be completely deregulated and the apparent subsidy be removed such that the prices of the products will be determined by the market forces of demand and supply.

The study of Ehinomen and Adeleke used the distribution of petroleum product as the major variable in the study; however in this work supply, distribution, availability as well as pump prices were the dependent variable used in this study.

Okarah .A. Chidiebere (2014) carried out an extensive assessment on the Nigerian National Petroleum Corporation (NNPC) in the implementation of the deregulation policy in Nigeria (2003-2012). The study was historical in nature and approach, therefore the researcher relied more

on data collected from secondary sources. In the test of significance of relationship the researcher used the chi-square to test hypothesis. From the data gathered, the study found out that NNPC major challenge in the implementation of the deregulation policy has been the inability to attain a stable price for petroleum products which had led to products unavailability and increase in price of petroleum products. Also, there is a significant relationship between deregulation, product availability and reduction in price of petroleum products. Lastly, it was discovered that thorough monitoring of independent marketers activities in the downstream would help improve the outcome of the deregulation policy in Nigeria. The study recommended among that, deregulation policy of Nigeria should be fashioned to suit her socio- economic challenges. The Government should create an enabling environment to engender private investors' for the purpose of improving the local refining capacity to meet the ever increasing local demand of petroleum products and indeed for exportation purpose. Finally, the full deregulation of the downstream sector should proceed with the passage of the Petroleum Industry Bill (PIB) which will help revise, update and consolidate existing petroleum sector related legislations in Nigeria.

The research work was extensive and provides veritable recommendation however the consumers of Premium Motor Spirit was not part of the sampled population this may result to imbalance opinion in other to avoid such analysis, in this study we went further to get both the managers responses, the consumers and the distributors responses concerning the deregulation of the downstream sub-sector of the Nigeria petroleum industry.

E.F Ogunbodede and Olurankinse .F (2010) conducted a study to investigate the petroleum motor spirit pricing crisis and Nigeria passenger transportation system. Questionnaire was used to collect primary data from six major cities within Ondo state while the perception scale on a four point likert scale was used to elicit response from the operators of public passenger transport system.

The study found that price hike of PMS has increased transport, the motorist fare, led to hoarding of PMS, encourage long queues and black market and the most affected individuals in the society where the poor. They suggested based on the findings that the government should get the four refineries working; government should also check the smuggling of refined oil across the borders. These measures and more could ensure constant supply of PMS and remove some of the bottleneck to achieving effective and adequate public transport services in Ondo state.

The study area for this work is on Abuja F.C.T as a case study, we discover that what was obtainable in Ondo was similar to Abuja where prices of goods and services rise as well as transportation fare when there is an increase in fuel price.

Anyadike (2013) examines the implication of the downstream oil sector on the Nigerian economy. The study drew the views of the proponents and that of the opponents of deregulation and fuel subsidy removal. A likert scale was used in designing the questionnaire for data collection administered to the three core Niger-Delta states (Delta, Rivers and Bayelsa) where 1177 respondents were randomly selected for opinion sampling. Descriptive and chi-square was used and result revealed that deregulation of the downstream oil sector is a good policy that was wrongly implemented hence the existing four refineries are left in their comatose states with promises of a total turn around maintenance. Explicitly, it is recommended that Nigeria should embark on deregulation of the sector but only after the existing refineries have been revived through commercialization to ensure a fair and stable price of the product as well as its availability and stop importation of refined oil into the country. If the four existing refineries cannot provide enough fuel for domestic consumption, the federal government can license another serious bidder to build one or two refineries to augment the four existing ones.

The study revealed that the primary reason why deregulation policy has not succeeded in Nigeria was because our refineries are not functional which has in turn affected the implementation of the policy. However this study went further to find more solutions, to better the implementation of policy through tailoring the deregulation policy of Nigeria to suit our economy andcreate an enabling environment to engender private investors for the purpose of improving the local refining capacity to meet the ever-increasing local demand of petroleum products and indeed for exportation purpose.

Abu. I. Noruwa&Chidi .O. Christopher (2009) explicitly carried out an analysis on deregulation and privatisation of the upstream and downstream oil and gas industry in Nigeria: curse or blessing? The objective of this study was to examine the perception of Nigerians on the deregulation and privatisation moves of the government in the oil and gas industry in Nigeria. The oil and gas industry is strategic to national development and growth in Nigeria. Oil and gas constitute about 90% of Nigeria's foreign exchange earnings and 83% of its GDP. This study adopted the survey research design. Data analysis was carried out with the aid of SPSS (Statistical Package for Social Sciences) version 17.Finding from the study revealed that the deregulation and privatisation of the oil and gas industry will usher in sustainable national development and will be a blessing rather than a curse for the citizenry. 77.8% of the respondents believe that the deregulation and privatisation of the oil and gas industry will be a blessing to Nigerians and 80.6% of the respondents do not believe that the deregulation and privatisation of the oil and gas industry will be a curse to Nigerians. The authors recommend that strategic sectors such as oil and gas as well as the power sector should be deregulated and privatized for sustainable national development. The authors went further to recommend that the government should prepare to address the labour problems, which may arise as a result of deregulation and privatisation. A

proactive programme of education of labour unions should be pursued. More so, safeguards against job losses should be embarked upon.

The study failed to reveal a particular case study where the research was conducted. However thisstudy usedAbuja as a case study and SPSS version 22(chi-square) to analyze the data.

Hauwa, Umar &Mamman et al 2012 carried out a study on petroleum product scarcity and higher prices confronting the Nigerian economy. In the light of the ultimate deregulation policy, the study took a monthly data ranging from 2005 to 2010 and investigated the impact of the petroleum products supply and domestic prices on the domestic distribution. It uses Vector Auto-Regression (VAR) model and Ordinary Least Square (OLS) estimation to observe the interdependence as well as the impact of the variables on one another. The results show that, because of their non-zero coefficients, the independent variables are responsible for the variations in petroleum products distributed. Based on the lagged and dynamic long run equilibrium, domestically refined and prices of petroleum products remain insensitive to the quantity distributed .The study recommends for total return to local refining, diversification of the export base, consistency in and efficiency of government pricing and environmental policies as well as total market concept in the chain of petroleum products supply and distribution to cushion the non-sustainability of the deregulation policy.

This study has a scope from 2012 – 2016, which gave a better picture of the Nigeria deregulation policy presently.

Bobai Francis D (2012) carried out an extensive assessment on petroleum product prices and inflation in Nigeria, effort was made to see if there was any relationship between petroleum

products prices (PPP) and inflation (INF) in the country. The scope of the study covers a period of eighteen years that is from 1990-2008, time series data on quarterly basis were employed for this work. The methodology employed in this study includes; ADF test, VAR model (Vector Auto regression Model), impulse response function and variance decomposition. A stationary test was carried out using the Augmented Dickey- Fuller (ADF) the variable were found to be stationary at difference order at 5% level of significance. The VAR result indicates an increase in PPP leads to rise in the level of inflation. The major finding from this study is that increase in the prices of petroleum products (PMS, AGO, and DPK) has a positive impact on the general price level of goods and services in the Nigeria economy. It was recommended that government should make sure that the existing refineries are functioning at full capacity and also build new ones; by so doing the existing refineries can meet Nigerianinternal petroleum product needs and some excess for export and strategic reserve of product demand. This can be made possible when the nation refineries Turn-Around-Maintenance are consolidated with transparency and accountability. In conclusion the CBN and policy makers in Nigeria should also pay special attention to the supply management of petroleum products in the country.

Bobai Francis D (2012) focus variable was on the price of petroleum product; however for this study went further to analyze other factors that relate to the downstream sector and the consumers i.e. distribution, supply as well as availability of petroleum product.

James Monday &Moses C. Ekperiware.et.al (2010) carried out a study on downstream oil deregulation and Nigerian economy. The Nigerian oil and gas industry has been experiencing some confrontation since the announcement of the downstream oil deregulation policy. This paper, therefore, seeks to analyse the relationship between deregulation of the downstream sector and Nigerian economic performance using annual data from 1980 to 2009. The Ordinary Least

Squares (OLS) regression method was employed to analyze the data. Chow Test was used to determine parameter stability of the regression model, while Granger Causality Test was used to predict the direction of influence. The findings reveal that increase in price of petroleum products and inflation rate were not as a result of deregulation, and deregulating price of petroleum products significantly influence economic growth with marginal inflation. The paper recommends that government should encourage private sector participation in the oil and gas industry also Government through the Petroleum Product Regulatory Agency (PPPRA), should fix prices of petroleum products, and any corrupt official or firm that wants to make abnormal profit should be made to face the law. The study went further to recommend that special attention should be given to indigenes of the Niger-delta region to reduce unrest as well as vandalisation of petroleum infrastructures. This study used primary data as well as secondary data whichadded validity and reliability to the study.

Nkogbu O Godfrey (2015) conducted a study on the role of leadership in the deregulation of the downstream sector of the Nigerian petroleum industry. Primary data was collected through structured interview from 230 respondents via questionnaire with the use of the survey method. Tables were used in the presentation of the data while the mean (x) and simple percentage (%) were used in the analysis of data. This study highlighted the importance and role of leadership in the deregulation of the downstream sector of the Nigerian petroleum industry. The study revealed that corruption, brought about by petroleum subsidy, is obvious in the petroleum industry and that importation of petroleum products to meet local demand by Nigerians is attributable to leadership/managerial problem. It further revealed that leadership upon attainment of independence in Nigeria has not been accountable and transparent in the management of the nation's oil wealth to transform the lives of Nigerians. Leadership role in any organization, public or private, is of paramount importance as the leadership role when effectively carried out or not

do affect the performance of an organization. The study concludes by recommending that involvement of stakeholders in matters of importance as regards policy design, development and implementation. Management and leadership in the petroleum sector, NNPC and its subsidiaries are to be completely overhauled. There is constant need to evaluate what we do in leadership and how we do it irrespective of the position(s) we occupy and/or the sector(s) we find ourselves.

This study considers NNPC as part of the regulatory body of downstream sector, an interview was conducted for staff of the corporation on issues boarding NNPC inability to attain a stable price for its products, product unavailability and what measures has been taken to fix these lapses.

Isyaka M Sanni (2014) conducted a study to investigate the implications of price changes on petroleum products distribution in Gwagwalada for a period of 12 years (2000-2012).Questionnaire was used to collect primary data from ten wards within Gwagwalada Area Council which was used as study area. The statistical package for social sciences (SPSS) was used to analyze the primary data. The results from the study show that, there was a statistically significant effect of price changes of petroleum products distribution in Gwagwalada, that the price changes significantly cause fluctuation to supply and distribution of petroleum products, the price increases of PMS significantly lead to increase in cost of distribution of other commodities including agricultural products and there exists significant statistical relationship between price increase and the development of "Black Market'' and long queues at filling stations across Nigeria. Finally the study recommends that government should strive to make the product available all times, monitor effectively the distribution channels to avoid disruption of distribution or scarcity, consistency and efficiency of government pricing policy, the government to encourage

more private participation and deregulation of the downstream sector and fight corruption as well as total market concept in the chain of petroleum product supply and distribution.

Three local government council formed the sampled population for this study in Abuja which comprises of an Urban community (AMAC) and two Semi Urban community (Gwagwalada and Bwari).Unlike the study of Sanni .I, this study has a larger scope.

Lawal, YekiniOlawaiye (2013) examined subsidy removal or deregulation: Investment challenge in Nigeria's petroleum industry. This work was to examine the various regimes of petroleum products price increases, subsidy payments and its effectiveness or otherwise in stimulating investments in the industry in Nigeria and make recommendations on how to attract private investments. Secondary data were collected from the Nigerian National Petroleum Corporation (NNPC), Central Bank of Nigeria (CBN), Petroleum Products Pricing and Regulatory Agency (PPPRA), and government records. Goggle alert and social network sites were established to generate real time primary data which was supplemented with data obtained using structured questionnaire and interview. Findings revealed that subsidy removal had not generated investment in the downstream of the petroleum sector rather; it had generated violent reactions from the people. Investors who got licenses for the construction of new refineries failed to take off for various reasons. Deregulation was recommended, deregulation would have immediate negative effects on real household incomes. Negative reactions can be mitigated with adequate palliative measures and effective education and public enlightenment. On the short run, the prices of petroleum products would go up significantly but would drop when the products of the new refineries are released into the market.

The study lacked scope of the study and focused on petroleum product price. However this study made further analysis with other variables like distribution and supply of petroleum product.

Michael Baghebo&Niyekpemi O. Beauty (2015) investigates the performance of the downstream petroleum sector over the years and its impact on economic growth in Nigeria. The time horizon covered 1980-2012. The study used a simple regression model with ordinary least square (OLS) techniques for data analysis. The result shows that OR, NOR, FDI and CONSUMPT are positive and statistically significant on RGDP. Also the adjusted R2 shows that the overall model is statistically significant and that deregulation of the downstream sector cannot be avoided. Therefore the study recommends that government should deregulate the downstream sector in order to attract foreign investors to the sector, this has the tendency of combating unemployment problem in the country, encourage the consumption of petroleum product since competition will make petroleum products readily available and also the overall standard of living will improve.
The studyused primary data, questionnaire, structured interview as well as secondary data so as to get a valid result as well as the perception of individuals in the community.

Karikpo Ernest (2012) conducts a study on the deregulation of the downstream sub-sector of the petroleum industry. This study arose out of the need to find solution to the sorry state of the four refineries, the inefficiency in the distribution, the poor pricing of petroleum products and the negative effects of monopolistic structure of the downstream sub-sector. The study identifies the challenges associated with the deregulation of the downstream sub-sector and examines the effects of deregulation of the downstream sub-sector on petroleum product pricing in Nigeria. The study progressed to identify what policy options are there for improved performance in Nigerian downstream sub-sector. The descriptive survey research design was used and data was collected using questionnaire method. Chi-square and simple statistical methods was used for data analysis. The findings of the study amongst others review deregulation of the downstream is to open the market for new investors and reduce government spending on subsidy payment. Finally

this study recommends that government need to create an enabling environment for private individuals and companies to establish refineries and should double the quantity of crude for domestic refining needs, in this way, the country should target supplying the refined needs of these would be investors.

The scope of this study is from 2012 -2016 which will fill the gap of this study that stops in 2012.Also variables like distribution, supply and also pump price of petroleum product is considered in this study.

2.9 Theoretical Framework

A great potential of progress in evaluative research exists today because of the very nature of the society. As the demand increases for social change and problems arises in satisfying these demand there is also a concern for assessing the effectiveness of a program. The development of Program evaluation as a field of professional practice was spurred by a number of seminal writing to mention a few Tyler (1942,1950),Cronbanch (1963), Stake (1967), Suchman (1967), Yin(1992), Sanders and Fitzpatrick (1997). Policy evaluation is a family of research methods that are used to systematically investigate the effectiveness of policies, programmes, projects and other types of social interventions with the aim of achieving improvement in the social, economic and everyday conditions of peoples' lives (Government Social Research Unit (2007). The real purpose of the evaluation is not just to find out what happened, but to use the information to make the project better.

According to Stuffleban (2001), Program Evaluation encompasses assessment of any coordinated set of activities directed at achieving goals. On another note the Joint Committee on Standards for Educational Evaluation (1994) defines Evaluation as a study designed and conducted to assist

some audience to assess an object merit and worth. With these given definition of evaluation program and evaluation approaches were classified into four categories the first category includes approaches that promote invalid or incomplete findings while the other three include approaches that agree more or less with the definition(i.e. Questions and /or Methods Oriented, Improvement/accountability and Social Agenda/ Advocacy).Accountability oriented approach emphasizes that program evaluation should be used practically to help improve a program as well as retroactively to judge its merit and worth.

The evaluation theory of Edwards A. Schuman was found appropriate and will be used for the study and it was chosen to give suitable framework for assessing effectiveness. Effectiveness is the degree of attainment of the set objective. Schuman's was one of the pioneers to use experimental studies. This approach is labeled a quasi-evaluation strategy because it starts with a questions and a methodology that address only a narrow set of program issues. The frequent question in the experimental study iswhat is the effect of a given program/policy on a specified outcome variable?

Suchman (1967) visualized the evaluation process as a circular one for the evaluation of a policy or ascertain its success or failure. It also provides a model yardstick for measuring specific effects and efforts of policy or program. Suchman asserted that evaluation is a process that aims at assessing the successful attainment of set objectives and involves designing and redesigning of action program in a cyclical way. Suchman (1967) defined evaluation as ''the determination of the results attained by some activity designed to accomplish some valued goal or objective''. Suchman went further to identify four evaluation categories.

I. Effort (the amount of action)

II. Effect (result effort)

III. Process (how can an effect be achieved)

IV. Efficiency (effects in relation to cost).

In this study the evaluation is aimed at assessing the amount of success achieved in attaining the set objectives of the deregulation policy.

2.9.1 Application of the Theory to the Study

Measuring effectiveness of the deregulation policy has to do with the degree to which the objective of deregulation which was to stimulate adequate supply of the petroleum product, foster appropriate pricing mechanisms and eliminating shabby practices in the industry among others has been attained. Evaluating effectiveness concept comes in when the result obtained is compared with the result target.

From the foregoing usingSuchman's evaluation model we were be able to determine if the target results are achieved and to what degree. The success or failure of every policy can be determined when it is evaluated.

Suchman's evaluation Categories, *'EFFORT'*. Effort here is in terms of the amount of action put in place by the regulatory bodies as well as the government to the success of the deregulation policy the objectives has been set but it takes more than just paper work, purposive action needs to be in place. This has to do with the input, what effort and how well has the government ensured that there is stability in the pump price, availability and supply of the petroleum product and the distribution of it are adequate. How well has these been put in place and it goes to show the conscious effort for the problem to be met.

The next category by Suchman is *'EFFECT'* these is the measure of the impact the deregulation policy has on the individuals in the society and feasible result of the policy. It was drawn from the perception of individuals, observation of the researcher on the stability and uniformity of pump price in filling station, questionnaires and through interviews the researcher was able to evaluate the deregulationpolicy and the level of stability and adequacy in terms of supply quantity for consumption of petroleum product.

The third category is *PROCESS* these basically have to do with how the government would achieve the set objective in terms of performance. Deregulation policy has experienced different turns over the years in terms of restructuring and setting the rationale for the policy. According to Reginald (2009) and Igbikiowubo (2011), deregulation is to ensure that petroleum products are made available to the consumers in an uninterrupted manner, eradicate waste and corruption which are consequences of tightly regulated economy, among others.Madueke (2011) harped on the imperatives for deregulation of the downstream sector to include: Saving of cost in petroleum subsidy, Job creation opportunities. On another note the Minister of State for Petroleum, Kachikwu (11 May 2016), who made the announcement of increase of price of PMS to N145/liter, says the policy aims to increase the supply of fuel to remedy fuel shortage and drive up competition, which will eventually lead to a fall in price of fuel.

These have been to mention a few as the targets the government has tried to achieve. Aside their effort government agencies such as NNPC and PPRA are set aside to set agenda to achieve these objective for the purpose of this study NNPC would be the regulatory body and form part of the sampled population so that we will be able to better evaluate the process put in place.

The fourth category is *EFFICIENCY*this has to do with the cost, money, personnel and public convenience. For this study the NNPC staff, managers at the fuel station and the perception of a sampled population in Abuja will be used to ascertain the level of efficiency of the policy.

CHAPTER THREE
RESEARCHMETHODOLOGY

3.1 Introduction

This chapter focuses on the research design, populationsample and sampling technique. Others are sources of data, administration of instruments, and method of data presentation and analysis. According to Miller (1997), Research methodology is a body of knowledge that describes and analyses methods, indicating their limitations and resources, clarifying their suppositions and consequences, and their peculiarities to research advances.

3.2 Research Design

The researchdesign used for this study is survey research because it best serves to answer the questions and the purposes of the study. Survey research is a research method involving the use of standardized questionnaires or interviews to collect data about people, their preferences, thoughts, and behaviours in a systematic manner (Arnold, 2012). In survey research a group of people are studied by collecting and analyzing data from only a few people considered being representative of the entire group. Similarly, McBurney (1994) defines the survey assessing public opinion or individual characteristics by the use of questionnaire and sampling methods.

The researcher used questionnaires which lead the test instrument. Interview and systematic observation methods is used to support our findings.

3.3 Population of the Study

A population can be a group of individuals whose characteristics are under study or consideration. Therefore, the population of this research would be a representative sample of Abuja. This study will cover the consumers of Premium Motor Spirit (PMS) in three area councils within Abuja, the

distributors of the products i.e. fuel station managers and the management of Nigerian National Petroleum Corporation (NNPC). These include Abuja Municipal Area Council (AMAC) with the population of 1,737,458 people, BwariArea Council, with the population of 572,150 people and Gwagwalada AreaCouncilwith the population of 107,432. (World fact book, 2017).In view of the study, the NNPC corporate headquarters which constitutes 15,000in Abuja is part of the population of the study.(Okarah, 2014).

Making a total population of 2,432,040.

3.4 Sampling and Sample Size

A sample is a subset of the population which is being investigated or studied with the aim of generalizing the result on the entire population. Kothari (1979) defines ‘’sample’’ as that part of the universe which is selected for the purpose of investigation. In other words ‘’sample’’ refers to the unit selected for research. The ‘’sample size’’ has to do with the magnitude of such a proportion of the population of the universe of interest. The method or process of selecting the sample from a given population is called ‘’sampling technique’’.

The sample size adopted for this study is theKrejcie and Morgan (1970) method of determining sample size for research activities. In Krejcie and Morgan (1970) method, no calculation is required as such we used table 1 in the appendix 5.According to the table, a population which is equal to or greater than 1,000,000 the required sample size is 384. Therefore based on the total population of 2,432,040, the sample size would be 384. In order to capture the respondents and provide for error that may occur by the respondents, additional 20% was added to the sample size as suggested by Israel (2013).Hence the sample size for this study is 461 respondents.These figures were purposively and proportionately distributed among the three Local Government

Areas and the regulatory body chosen for this study is Nigeria National Petroleum Corporation (NNPC).

Table 3.1 Population and Sample Size of Respondents

Study Area	Population	NO. Of Sampled Respondents	Percentage
AMAC	1,737,458	318	69%
Bwari	572,150	105	22.7%
Gwagwalada	107,432	20	4.3%
NNPC STAFF	15,000	18	4%
Total	2,432,040	461	100%

Table 3.1 shows the population and sample size of the respondents. The total population of the study is 2,432,040. Using the Krejcie and Morgan sample size table (1970) and 20% addition for error, the total sample size is 461 respondents. Distributing the proportionately AMAC sample respondent was 318 with 69%, Bwari area council sample respondent size was 105 with 22.7%, Gwagwalada area council sample size was 20 with 4.3%. NNPC staff sample was 18 respondents at 4% distribution rate, purposive sample was used.

3.5 Sampling Technique

Probability and non-probability sampling technique is used. Specifically questionnaire respondents were drawn using random sampling while the interviewee was through purposive

sampling technique. The sample for the study was stratified into three strata, the consumers which the populace in Abuja; the marketer's is the fuel station managers and the regulatory body NNPC.The choice of purposive sampling was to assist in generating of qualitative information from the relevant stakeholders while stratified random sampling facilitated the analysis and comparison of responses from the diverse strata, it ensured equal opportunity for respondents to be selected.

3.6 Sources of Data

This work used both primary and secondary sources of data collection in order to gather the information required for adequate analysis.This is necessary on the basis of its validity and reliability as the data obtained from the secondary data was an added advantage to the one from the field.

3.6.1 Primary Sources of Data

The primary data was generated through the use of questionnaire, interviews and observation of activities, opinion and effect of deregulation on the population. The questionnaire is a set of questions relating to the aims and objectives of the study to which the respondents were required to answer. There were two sets of questionnaires for the consumer in the selected area council and the management (NNPC). Each questionnaire was divided into two sections (A and B). Section 'A' consists of questions relating to the respondents personal data such as: Gender, Age, and Educational Qualification. Section 'B' the questionnaireconsists of questions relating to the hypotheses. The structured questions were closed ended Likert scale of strongly agreed, agreed, undecided, disagreed and strongly disagreed.The choice of this is on the bases that the five-point

Likert scale of measurement question format assisted us to determine how strongly respondent agree or disagree on a particular statement on the subject matter under study.

3.6.2 Administration of instrument

Table 3.2 the Distribution of Questionnaire Respondents

Study Area	**No. of respondents**	**Percentage**
AMAC	318	69%
BWARI	105	22.7%
Gwagwalada	20	4.3%
NNPC staff	18	4%
Total	461	100%

Table 3.2 shows the distribution of questionnaire respondents. 318 respondents were administered questionnaire in AMAC to represent 69%, 105 respondents in Bwari area council, were administered questionnaire to represent 22.7%, 20 respondent were administered questionnaire in gwagwalada area council to represent 4.3% and 18 NNPC staff respondent were administered questionnaire to represent 4%. Making a total of 461 questionnaire respondent. The respondents consist of motorists, commercial drivers, small and medium scale enterprises that are consumes of Premium Motor Sprit, car owners and consumers of fuel product in their household. They were located in their office, home, market and shop.

Interview wasused to support the research questionnaire. Nigeria National Petroleum Corporation Staff were interviewed because they are part of the regulatory board of the petroleum industry in Nigeria. The staffs were randomlyselected however each grade level(GL 08-11, GL (12-14), GL (15-17)) were be duly represented. The filling station managers who are the marketers of Premium Motor Spirit were interviewed through structured question in each of the area Council sampled.

Table 3.3 Distribution of Interview Respondent

Study Area	No of Respondent
NNPC Staff	4
2 Fuel Station Manager in AMAC	2
2 Fuel Station Manager in Bwari	2
2 Fuel Station Manager in Gwagwalada	2
Total	10

Table 3.3 the total respondents of NNPC that were interviewed for this study are 4 NNPC staff which represent 0.87% of the sampled population. Two (2) filling stations managers were selected from each area councils. Two (2) fuel station managers in AMAC, Bwari and Gwagwalada were interviewed. A total of ten (10) respondent were interviewed which forms a total of 2.16 % of the sampled population.

3.6.3 Secondary Sources of Data

The secondary source of data for this study included official publications of NNPC, publication of Petroleum Products Pricing Regulatory Agency (PPRA), Monthly records from the refineries to the Abuja deport. List of registered filling station in the study area, weekly and monthly allocation to the fuel station, the station retail and sales price and the amount that goes to subsidy, others include relevant articles, journals, newspaper, published and unpublished thesis, textbook published.

3.6.4 Observation

Systematic observation was carried out to compliment other source of data that was collected. Observation was based on the following:-

The availability and supply of petroleum product in the fuel station.

The pump price at the fuel station and its uniformity in the three area council.

The distribution of the petroleum product if all part of selected sampled area in FCT has access to it.

The consumption pattern of petroleum product by people in the community is there a positive or negative impact with the implementation of deregulation policy.

The motor park and motor cyclist park will also be observed in respect to the transport fare fixed and its relation to pump price of petroleum product.

3.7 Method of Data Analysis and Presentation

Ihemeje (1998) defined "data analysis as a representation of data values in an appropriate form to make for easy understanding and comparison''. This technique entails a careful analysis of the data to provide insight into the research problems and objectives by using simple tables and percentages.

Descriptive and inferential statistical tools were used in analysing the data for the study. The descriptive tools include the use of frequency counts, simple percentage in analysis and interpreting data collected. However, for the purpose of testing the hypotheses, Pearson chi-square was used as a technique of analysis with the aid of SPSS (Statistical Package for Social Science). All tests will be at 5% (0.05) level of significance. Meanwhile, data generated through interview, observation of activities and the secondary sources was analysed using content analysis and is presented in tabular form using simple percentage.

CHAPTER FOUR

AN OVERVIEW OF THE ACTIVITIES OF PETROLEUM INDUSTRY IN NIGERIA

4.1 Introduction

This chapter overviewed the relevant provisions and activities of the Nigerian Petroleum industry. Specifically, the chapter discussed the history of the petroleum industry in Nigeria, the origin of deregulation policy in Nigeria and the activities of the downstream petroleum sector in Nigeria.

4.2 Brief Historical Background of the Nigerian Petroleum Industry in Nigeria.

The petroleum industry in Nigeria started in 1956 with her first discovery of oil, in Oloibiri Niger Delta part of the nation. This discovery was carried out by Shell-BP, Nigeria joined the list of oil producing countries in 1958 when her first oil field yielded an amount of 5,100 barrels per day (Onwe, 2012). In 1970, Nigeria yielded immediate wealth from her oil production. The nation became a member of Organization of Petroleum Exporting Countries (OPEC) in 1971 and instituted her national oil company in 1977 the Nigerian National Petroleum Company, a government controlled company which is a main player in both the upstream and downstream sectors (Onwe, 2012). Nigeria has a sum of 159 oil fields and 1481 wells that are functioning according to the Ministry of Petroleum Resources (Abisoye, 2013). The region which is productive when it comes to crude oil is the Niger Delta basin which is situated in the Niger Delta region of the nation. The region controls about 78 oil fields of the 159 oil fields found in the country (Adelabu, 2012). Nigeria proven reserves according to Energy Information

Administration (EIA, 2016) is between 16 and 22 billion barrels while some other sources believe it is about 35.3 billion barrels. Nigeria was ranked 1st by far Africa's biggest producer of oil with over 2.5 million barrels produced every day not only is the country Africa's largest producer but it is the fifth highest exporter of oil in the world. (Africa Ranker, 2016).

The petroleum industry is divided into two players, the public and private players. The public players are the governmental agencies such as the Nigerian National Petroleum Corporation (NNPC) and her subsidiaries, Department of Petroleum Resources (DPR), the Petroleum Products Pricing Regulatory Authority (PPPRA) among others. The private players comprise the indigenous companies and the foreign companies. The local companies involved in the oil industry are referred to as the Independent Marketers. In 1978, the idea of independent petroleum product marketing was initiated with the aim of allowing local independent marketers into the petroleum industry. There are three major sectors in the oil and gas industry: Upstream, Midstream and Downstream. Upstream sub-sector deals with oil exploration and development as well as gas exploration and development. Midstream sub-sector operations are often included in the downstream category and considered to be a part of the downstream sector. This sector deals with oil transportation and Gas transmission, gas processing, LNG/CNG/GTL, derivative Processing/Production, Oil Refining. The downstream sub-sector commonly refers to the refining of petroleum crude oil and the processing and purifying of raw natural gas, as well as the marketing and distribution of products derived from crude oil and natural gas. The downstream sector reaches consumers through products such as gasoline or petrol, kerosene, jet fuel, diesel oil, heating oil, fuel oils, lubricants, waxes, asphalt, natural gas, and liquefied petroleum gas (LPG) as well as hundreds of petrochemicals. (Petroleum Industry Bill 2015).

4.3 Origin of Deregulation policy in Nigeria

Deregulation of the downstream sector in Nigeria originated in 1986 when General Ibrahim Babangida introduced Structural Adjustment Program me (SAP) with the aim of resolving the acute problem of smuggling and scarcity of petroleum products. As a result of this effort succeeding governments have adopted some regulatory measures aimed at boosting the supply and distribution of petroleum products. The deregulation of the downstream sector, as initiated by the Obasanjo Administration in 2003, involved not just the removal of government control on petroleum product prices but also the removal of restrictions on the establishment and operations including refining, jetties and depots, while allowing private sector players to be engaged in the importation and exportation of petroleum products and allowing market forces to prevail (Okafor, 2004).Generally, the federal government has been in the process of total reforms of the Nigerian petroleum industry since 2000. The first terms of reference for the reforms in the sector was to formulate reform proposals to create conditions for the sustainable development of oil and gas sector. The outcome of years of deliberation is the oil and Gas Sector Reform implementation Committee under the National Council on Privatization Incorporating proposed oil and Gas policy. This proposed policy was aimed at establishing the institutions of the industry and completely restructuring it so as to make it more efficient and investors-friendly.

It could observed be that even before the initiation of the policy there has been work on reformatting the gas sector mainly by the Bureau of Public Enterprises (BPE) and Nigerian National Petroleum Corporation (NNPC) in the areas of the downstream natural gas. In addition, in June 2004, the BPE advertised a request for expressions of interest for legal and regulatory review of advisory services for the downstream petroleum sector. In the year 2003, the Oil and Gas sector Reforms Implementation Committee proposed the repeal of all existing oil and gas laws in the country and a Draft Petroleum Industry Bill (Ariyoosu, 2007). Even though the

downstream sector has been deregulated, the government still has control and management of the sector. By virtue of section 44 (3) of the 1999 Constitution, the entire property and control of the natural gas is vested in the government of the federation. This is a clear indication that the control and management of the downstream sector including the distribution, refining and pricing are still in the hands of the government. Thus, in the area of refining, the Minister of Petroleum Resources prescribes the terms and conditions for the grant of license to construct and operate a refinery. In the area of pricing, the Petroleum Products Pricing and Regulatory Agency, an agency of the federal government, determines the pricing policy. The agency also regulates the supply and distribution of petroleum products. All this go a way to show that there cannot be complete deregulation of the sector. Hence, government policy is one of the barriers confronting full deregulation in the country (Ariyoosu, 2007).

As part of the government's effort to determine the pricing policy of petroleum products and regulate their supply and distribution; in its bid to deregulate the downstream sector, the federal government on 14th August 2000, set up a committee on the review of petroleum products supply and distribution to consider the problems of the downstream sector. In its reports submitted to the government in October 2000, the committee discovered low returns on capital investment and malpractices which in turn hamper an efficient supply and distribution system. The committee advised government to deregulate and liberalize the import of petroleum products by other parties and that price should be based on import parity to enhance and encourage participation of players other than the Nigerian National Petroleum Corporation. (NNPC) (PPPRA, 2011). It also recommended the establishment of a Petroleum Product Pricing and Regulatory Agency (PPPRA) with sufficient autonomy to superintend the liberalisation of the downstream sector. In 2003, the National Assembly passed the Act establishing the (PPPRA) and empowers it to determine the

pricing policy of petroleum products, regulate the supply and distribution of such products and to moderate price volatility while ensuring reasonable returns to operators.

4.4 The Downstream Sector of the Nigerian Petroleum Industry.

This sector of the Nigerian petroleum industry is responsible for activities relating to the refining, distribution and marketing of petroleum products and derivatives all over the country.

The first refinery in the country was constructed at Alesa-Eleme in Port-Harcourt, which commenced operations in November 1965 with first production amounting to a capacity of 38,000 barrel per day. This however, improved and moved up to about 60,000 barrels per day in the 1970s (Roberts and Amana 2011). This refinery was initially a Shell-BP joint venture but by December 1978 government acquired all its shares. The demand for petrol was on the increase and the refinery could not meet demand, this led to building of another refinery in Warri which is called Warri refinery in 1978. The first production capacity was 100,000 barrels per day (Roberts and Amana 2011). Due to small output of the Warri refinery, another refinery was constructed in 1980 which was called the Kaduna Refinery with an initial capacity of 110,000 barrels per day. However, this refinery (Kaduna Refinery) encountered regular shut down and fire incident which affected some parts of the refinery. Another refinery was built in Port-Harcourt in 1989, with a production ability of about 150,000 barrels per day. This refinery was considerably effective and advanced than the other refineries built before. However, the refineries were not utilized to the expected capacity therefore resulting in an average production capacity of about 240,000 barrels

per day for local consumption (Oduah 2006).

Mankabady (1990) suggested that, the effectiveness and competitiveness of the refineries depends on factors such as location, transport cost, manpower cost, investment, grant, tax and environmental restrictions. This infrastructure is owned by the government consisting of the refineries, 22 storage deposits with 2.66billion litre, 500km of pipelines, four jetties, two import terminals, 32 mega stations and 12 floating stations. These infrastructures need adequate funding to improve and operate at justifiable levels (Roberts and Amana 2011). In 1978, the Pipeline and Products Marketing Company (PPMC) took over the dispersal of petroleum products to all areas of the country. This distribution is achieved through a remarkable network of pipeline and depots connecting the four refineries to PPMC (Roberts and Amana 2011).

CHAPTER FIVE

DATA PRESENTATION AND ANALYSIS OF RESULTS

5.1 Introduction

This chapter presents and analyses the data from primary sources. This includes questionnaire and interview guide. The questionnaire administered to the consumers of Premium Motor Spirit (PMS) and it's followed by the questionnaire for the managers of the productsandNigeria National Petroleum Corporation (NNPC) staff. The responses were presented in frequency tables and percentages. They were also measured on the five Likert Scale. The responses of the interviewees complemented the responses from the questionnaires. From the responses, the three hypotheses stated in chapter one were tested using Chi-square distribution in order to draw inferences and establish relationship between the independent and dependent variables. The chapter concludes with the presentation of the major findings of the study.

5.2 Administration of Questionnaire

A total sum of four hundred and twelve (461) questionnaires were distributed to the respondents.

The number of questionnaire administered was proportionally distributed based on the number of individual in the population sample as indicated in table 3.1and 3.2 in chapter three. Out of these total, 412 were filled and returned. This represents 89.4% of the total number of questionnaires administered.

5.3 Descriptive Survey of Consumers of Premium Motor Spirit (PMS):

On Effectiveness of Deregulation on the Downstream Sub-Sector of the Nigeria Petroleum Industry.

Hypothesis 1

Our first hypothesis states thus:

$H0_1$: There is no significant relationship between deregulation of the downstream petroleum sub-sector and the supply and distribution of petroleum products in Nigeria.

Table 5.1: Supply and Distribution of Petroleum Product

S/N	Items	SA (%)	A (%)	UD (%)	D (%)	SD (%)
1	The supply and distribution of fuel product by NNPC and oil marketers have helped reduce scarcity of the product.	17.5	30.9	2.9	22.2	26.5
2	The sale of petroleum product by Black Marketers has reduced.	15.3	18.5	9.8	29.5	26.9
3	NNPC have been able to set rules to	10.5	18.2	5.8	35.6	29.8

	control the rate of contaminated Premium Motor Sprit (PMS) in the country.					
4	The amount of PMS supplied to independent oil marketers has been sufficient for their consumers.	19.3	32.4	8.7	20	19.6
5	Thorough monitoring of independent marketers' activities by NNPC in the downstream sector would improve the outcome of the deregulation policy.	24.4	32.7	4.4	18.2	20.4
6	The stability in fuel price and distribution in NNPC fuel station been attained in other station.	27.6	31.3	4.4	16	20.7
7	Deregulation has helped addressed the shortage of fuel.	10.2	20	13.1	26.2	30.2
8	The filling station outlet in Abuja and its environment has increased in number over the years.	36.4	15.6	6.5	26.9	14.2
9	Deregulation has made dormant and previously vacated filling stations to be operational.	8.0	21.5	1.5	31.6	37.1

Source: Field Survey, 2018(SPSS 20)

Table 5.1 captures the responses on supply and distribution of petroleum product. It revealed that the supply and distribution of fuel product by NNPC and oil marketers have not entirely helped reduce scarcity of the product. This was captured by 26.5 percent (majority) of respondents which adduced to that fact. In addition, the sale of petroleum product by Black Marketers has not in any-way reduced as captured by majority (of about 29.5 percent) of the respondents who responded to the matter. It was further seen that NNPC has not been able to set rules to control the rate of contaminated Premium Motor Sprit (PMS) in the country. This was found by majority of the respondents 29.8 percent who strongly supported the claim. However most of the respondents (32.4 percent) strongly agreed that the amount of PMS supplied to independent oil marketers has been sufficient for their consumers; while 32.7 percent of the respondents strongly supported that thorough monitoring of independent marketers' activities by NNPC in the downstream sector would improve the outcome of the deregulation policy. More so, majority of about 31.3 percent are of the view that the stability in fuel price and distribution in NNPC fuel station been attained in other station. Regardless of all of these, it was found that 30.2 percent of the respondents strongly disagreed that deregulation has helped addressed the shortage of fuel; while 36.4percent are of the view that the filling station outlets in Abuja and its environment have obviously increased in number over the years. In spite of this, deregulation has not in away made dormant and previously vacated filling stations to be operational as captured by majority of the respondents (37.1 percent) which strongly disagreed to that.

Findings from the study revealed that there is no significant relationshipbetween deregulation of the downstream petroleum sub-sector and the supply and distribution of petroleum products in Nigeria.It revealed that the supply and distribution of fuel product by NNPC and oil marketers

have not entirely helped reduce scarcity of the product. This was captured by majority of respondents which adduced to that fact. Based on this fact, most the respondents are of the opinion that thorough monitoring of independent marketers' activities by NNPC in the downstream sector would improve the outcome of the deregulation policy.

Hypothesis 2

Our second hypothesis states thus:

There is no significant relationship between deregulation of the downstream petroleum sub-sector and the instability in the pump price of the product.

Table 5.2: Pump Price of the Product

S/N	Items	SA (%)	A (%)	UD (%)	D (%)	SD (%)
1	NNPC inability to attain a stable price for its products has not been a major challenge in the implementation of the deregulation policy.	10.5	17.5	2.9	34.2	34.9
2	NNPC inability to attain a stable price for its products led to increase in price of petroleum products	33.5	23.6	7.6	21.8	13.5
3	Stable price of petroleum products would be achieved by provision of more refineries	18.5	30.5	9.8	20.4	20.7
4	NNPC has been able to control the illegal	24.7	15.3	16.4	26.2	17.5

	tempering of fuel pump at the fuel station					
5	The fuel stations in the Abuja and its environment have been able to attain a uniform fuel price.	7.1	11.4	4.3	37.1	40.0
6	When there is incidence of fuel scarcity the price of fuel still remains the same in the filling station in Abuja.	14.0	36.0	2.0	44.0	4.0
7	The role NNPC in ensuring stable price in fuel station has been successful.	8.6	21.4	5.7	42.9	21.4

Source: Field Survey, 2018(SPSS 20)

From Table 5.2, where pump price of the product is being examined, it was discovered that NNPC inability to attain a stable price for its products has been a major challenge in the implementation of the deregulation policy. This was shown by majority (34.9 percent) of the entire respondents; NNPC inability to attain a stable price for its products has often led to increase in price of petroleum products as indicated by 33.5 percent of the entire respondents. 30.5 percent of the respondents support the claim that stable price of petroleum products would be achieved by provision of more refineries; and this is due to the fact that NNPC has not been able to control the illegal tempering of fuel pump price at the fuel stations as captured by 26.2 percent of the respondents. Majority of the respondents (36 percent) further agreed that the fuel stations in the Abuja and its environment have been able to attain a uniform fuel price. Lastly, the analysis showed that the role NNPC in ensuring stable price in fuel station has not been entirely successful as shown by 42.9 per cent (majority) of the respondents.

From the analysis there is no significant relationshipbetween deregulation of the downstream petroleum sub-sector and the instability in the pump price of the product.NNPC inability to attain

a stable price for its products has been a major challenge in the implementation of the deregulation policy.

The price changes significantly cause fluctuation to supply and distribution of petroleum products, the price increases of PMS significantly would lead to increase in cost of distribution of other commodities including agricultural products.

Hypothesis 3

Our third hypothesis states thus:

$H0_3$: The deregulation of the downstream petroleum sub-sector has not significantly been able to improve the availability of petroleum product.

Table 5. 3: Availability of Petroleum Product

S/N	Items	SA (%)	A (%)	UD (%)	D (%)	SD (%)
1	NNPC inability to attain a stable price for its products led to product unavailability	30.0	32.9	12.9	15.7	8.6
2	Smuggling of petroleum products in the downstream sector have been addressed by the deregulation policy.	2.9	18.6	17.1	25.7	35.7
3	The high cost of turnaround maintenance of	20.0	11.4	1.4	34.3	32.9

	the nation's refineries have been addressed by the deregulation policy					
4	The filling stations in Abuja are constantly in supply of fuel product.	10.0	8.6	4.3	42.9	34.3
5	The incidence of filling station not been in operation for a period of time because there is no fuel product has reduced.	26.5	2.2	2.2	2.2	66.9
6	The quantity of fuel intended to be purchased by the Independent Oil Marketers have always been available for supply.	16.8	5.4	5.4	59.1	13.4

Source: Field Survey, 2018(SPSS 20)

From Table 5.3 (which shows the responses on availability of petroleum product), it can be observed that 32.9 percent of the respondents agreed that NNPC inability to attain a stable price for its products led to product unavailability; and this is in direct connection with smuggling of petroleum products where it was found that smuggling of petroleum products in the downstream sector has been not been addressed by the deregulation policy that the country claimed to have implemented as shown by 35.7 percent response rate. 34.3 percent of the respondents further rejected the statement that the high cost of turnaround maintenance of the nation's refineries has been addressed by the deregulation policy. In addition, 42.9 percent disagreed that the filling stations in Abuja are constantly in supply of fuel product, which entirely means that there is still shortage of fuel supply that has constantly not matched the rising demands. Furthermore, 66.9 percent strongly disagreed that the incidence of filling station not been in operation for a period of time because there is no fuel product has reduced; while 59.1 percent disagreed that independent oil marketers have always been available for supply. Above all, the deregulation of the

downstream petroleum sub-sector was found to have not significantly been able to improve the availability of petroleum product.Smuggling of petroleum products in the downstream sector have not been addressed by the deregulation policy.

5.4 Descriptive Survey ofNigeria National Petroleum Corporation (NNPC) Staff:

To get a fair outlook on the effectiveness of deregulation on the downstream sub-sector of the Nigeria petroleum industry. The researcher also administered questionnaire to the managers of Premium Motor Spirit (PMS) Nigeria National Petroleum Corporation staff.The staff were selected at random however each grade level (GL 08-11), GL (12-14), GL (15-17)) were duly represented.

Table 5.4: Supply and Distribution of Petroleum Product

S/N		SA	A	UD	D	SD
1	The supply and distribution of fuel product by NNPC and oil marketers have helped reduce scarcity of the product.	48.11	23.11	5.19	11.38	12.19
2	The sale of petroleum product by Black Marketers has reduced.	9.63	25.13	23.53	17.65	23.97
3	NNPC have been able to set rules to control the rate of contaminated Premium Motor Sprit (PMS) in the country.	19.55	30.73	24.58	12.85	11.40
4	The amount of PMS supplied to independent oil marketers has been sufficient for their consumers.	24.06	25.62	16.04	16.04	17.65
5	Thorough monitoring of independent marketers' activities by NNPC in the downstream sector would improve the	11.36	18.75	24.43	17.05	25.69

	outcome of the deregulation policy.					
6	The stability in fuel price and distribution in NNPC fuel station been attained in other station.	30.25	18.52	19.58	20.11	13.76
7	Deregulation has helped addressed the shortage of fuel.	11.96	10.87	21.74	21.74	33.91
8	The filling station outlet in Abuja and its environment has increased in number over the years.	14.43	18.56	14.95	21.65	32.50
9	Deregulation has made dormant and previously vacated filling stations to be operational.	16.15	12.50	23.96	18.75	31.97

Source: Field Survey, 2018(SPSS 20)

Table 5.4 captures the responses on the supply and distribution of petroleum products among the NNPC staff. It could be observed that 48.11 percent(vast majority of the respondents) strongly agreed that the supply and distribution of fuel by NNPC and oil marketers has helped to reduce the scarcity of the product, and in addition; 25.13 per cent of the respondents feel that the sale of the commodity at black rates has been curtailed. On the other hand, 30.73 percent of NNPC staff agreed that NNPC has been able to lay down rules in other to regulate in the country the rate of contaminated premium motor spirit (PMS); while that was on - going, about 25.62 percent agreed that the amount of PMS supplied to independent oil marketers has been able to reach various consumers thorough monitoring of independent marketers activities carried out by a staff.On the issue of monitoring of independent marketers' activities by NNPC to ensure the success of the downstream sector of the deregulation policy, 25.69 percent (majority) completely disagreed

thatthe monitoring is not necessary, that it will counter spirit of deregulation, which is to allow market forces to determine price. NNPC in the downstream sector would improve the outcome of the deregulation policy. It was also observedthat due to the stability of fuel price and distribution 30.25 of the population strongly agreed that NNPC fuel stations has been attained in various other stations as well. 33.91 percent also strongly disagreed that the deregulation has helped in any way to reduce the shortage of fuel.

From the interview conducted the responses on the effect of deregulation on supply and distribution was fair. Most of the interviewees were of the opinion that deregulation has helped in opening Nigeria's economy to both private and foreign investors. The turnout of investors has boasted the supply rate of petroleum product. This might not have been possible if left for the government alone. Concerning the aspect of the rate of fuel station been out of existence due to their inability to met with the set standard for operation or due to competition. Majority The NNPC disagreed that filling stations in Abuja has gained higher grounds and increased in number over the last years.

The fuel stations managers stated their dissatisfaction on the insufficient supply of petroleum product by marketers. Especially at the time of scarcity some marketers also create artificial scarcity. The staff of NNPC and fuel managers are both of the same opinion that amongst the masses, marketers and private investors. The marketers benefit more from deregulation; their reason basically was the fact that they control the market. Been that Premium Motor Spirit (PMS) it's a necessity the masses will have no option than topurchase it and at most reduce the price they consume.

Hypothesis 2

Our second hypothesis states thus:

There is no significant relationship between deregulation of the downstream petroleum sub-sector and the instability in the pump price of the product.

Table 5.5: Pump Price of the Product

S/N		SA	A	UD	D	SD
1	NNPC inability to attain a stable price for its products has not been a major challenge in the implementation of the deregulation policy.	17.58	23.63	21.98	19.23	20.00
2	NNPC inability to attain a stable price for its products led to increase in price of petroleum products	34.97	12.57	19.13	17.49	11.21

3	Stable price of petroleum products would be achieved by provision of more refineries	22.22	35.58	18.02	17.44	6.28
4	NNPC has been able to control the illegal tempering of fuel pump at the fuel station	25.86	13.59	24.46	25.00	14.13
5	The fuel stations in the Abuja and its environment have been able to attain a uniform fuel price.	32.60	12.71	18.78	14.36	17.39
6	When there is incidence of fuel scarcity the price of fuel still remains the same in the filling station in Abuja.	31.11	25.56	10.00	14.44	20.69
7	The role NNPC in ensuring stable price in fuel station has been successful.	31.30	17.68	18.90	21.34	12.80

Source: Field Survey, 2018(SPSS 20)

Table 5.5 captures the responses of NNPC staff on the pump price of the petroleum product. 23.63 percent of the NNPC staff are of the view that NNPC inability to attain a stable price for its products has not been a major challenge in the implementation of the deregulation policy; 34.97 percent strongly agreed that NNPC inability to attain a stable price has led to the increase in price of petroleum products; while 35.58 percent agreed that the stable price of petroleum products would be achieved by provision of more refineries. It was also observed by majority of the NNPC staff that NNPC has been able to control the illegal tempering of fuel pump prices at its stations. This was captured by 25.86 percent who strongly agreed to that. 32.60 percent strongly agreed

that the fuel stations in Abuja and its environs are able to attain a uniform price.

Responses from the interviewees showed that there has been stability in price in all NNPC fuel station in Abuja. The claim was at a rate of 90% been constant and in line with the federal government approved pump price per time. However they were of the view that the effort of other fuel station in Abuja and its environs would need close supervision and monitoring. The interviewees from Fuel station believed that the government still increases price of petroleum product due to none fluctuations in crude oil price. On the other hand the Staff of NNPCStaff believed that the constant price has been due to high cost of importation of refined PMS that our refineries cannot totally cover. When asked if rehabilitating the refineries is part of the strategy of deregulation, majority gave a positive response. The pump price tampering has been frowned at as the fuel station managers stated that it is against their ethics to tamper with their pump. NNPC in this regard claim that various rules and guidelines are set by the regulatory bodies to guide and sanction defaulters which included manipulation of pump price.

Table5.6: Availability of Petroleum Product

S/N		SA	A	UD	D	SD
1	NNPC inability to attain a stable price for its products led to product unavailability	16.13	9.68	15.59	15.05	44.54
2	Smuggling of petroleum products in the downstream sector have been	13.56	12.99	24.86	20.90	29.09

	addressed by the deregulation policy.					
3	The high cost of turnaround maintenance of the nation's refineries have been addressed by the deregulation policy	12.77	12.23	25.53	22.87	25.62
4	The filling stations in Abuja are constantly in supply of fuel product.	24.85	20.71	17.75	10.65	28.57
5	The incidence of filling station not been in operation for a period of time because there is no fuel product has reduced.	17.20	12.37	20.97	12.90	32.77
6	The quantity of fuel intended to be purchased by the Independent Oil Marketers have always been available for supply.	10.56	35.34	21.67	23.33	7.78

Source: Field Survey, 2018(SPSS 20)

From Table 5.6 based on the respondents opinion sampled, 44.54 percentage (majority) of the staff strongly disagree that NNPC inability to attain a stable price for its products led to product unavailability; 29.09 percent of the staff completely disagree that smuggling of petroleum product in downstream sector which has been addressed by the deregulation policy; From the foregoing it can be observed that the issues of turnaround maintenance have divided opinionwhile 25.53 percent are undecided, 25. 62 percent of staff strongly disagrees about the high cost of turnaround maintenance of the nation's refineries, and whether it has been addressed by the deregulation policy. In addition, other staff observed, of 24.85 percent stronglyagreed that filling stations in Abuja are constantly in supply of fuel product. 32.77 percent (majority) completely

disagree that the incidence of filling stations not being in operation for a period of time because of the lack of fuel product which has reduced; 35.34 percent agreed and 7.78 strongly disagree that quantity of fuel intended to be purchased by the Independent Oil Marketers has always been available for supply.

Drawing from the interview availability of product it's one of the most stressed part on the lapses of deregulation. Where consumer are ready to buy but product is either scare or unavailable .The independent oil marketers are faced with dealing cases of adulterated product and black marketers . NNPC staffs believe that strong policy and government action should be taken into consideration handle the lapses. According to the Fuel Managers Abuja and its environs still enjoys a large degree of availability of PMS compared to other state.

5.5 Responses from Interview

Interview was used to support the research questionnaire. The Nigeria National Petroleum Corporation Staff were interviewed because they are part of the regulatory board of the petroleum industry in Nigeria. The staff were randomly selected however each grade level GL (08-11), GL(12-14), GL(15-17)) were duly represented. The filling station managers who are the marketers of Premium Motor Spirit were interviewed through structured question in each of the area Council sampled AMAC, Bwari and Gwagwalada. NNPC staff sample was 18 respondents at 4% distribution rate; purposive sample was used.

The interview question was asked in other to get a better understanding of the hypothesis and also to further strengthen our findings given a broad viewof the consumers and regulators.

From the interview conducted the reason behind government plan to deregulate the downstream petroleum sector was asked and the response wasbasically to improve supply of petroleum

product, its distribution and control it price mechanism so that it can be affordable for the common man. However, most respondent felt that the downstream sector has been over burden with responsibility and expectation by the masses because this sector in countries like Brazil, Arabia, Kuwait, Qatar, Malaysia have been responsible for the socio-economic advancement of their countries. This they felt can be achieved but not with the present status of the sector a lot of restructuring needs to be done to achieve this in the country.

Many of the consumers believed that deregulation is a policy made to favor the government however those interviewed were of the opinion thattotal deregulation of the downstream sector is what the country need so that only those who have the resources would be involved in the importation and fixing of price. The same way the telecommunication sector has improved and given way for healthy competition. Each network strives to be better and the tariff prices drastically reduced.

It will be a wise thing to fully deregulate the downstream sub sector because; it will give way for new investors and the rise of cottage refineries. In the long run these refineries would merge to improve their capacity and the story of importation of refined product would be history.

The effect of deregulation of the downstream sub-sector according to the interviewees was that NNPC had a mandate to work immensely on boasting the National Oil Reserve base from 36.22 billion barrels to 40 billion barrels with a daily production of 4.5 million barrels by the year 2010. The result of this desire is far from visible because eight years down the line the country is yet to achieve half that expected optimum. Factors responsible for this failure have been the vicious cycles of vandalism, massive crude oil theft and the inability of the ruling class to set policy and

carefully approve bills that will help boost this sector.

The responses from those interviewed revealed that the high rate of petroleum scarcity is gradually becoming a thing of the past especially in this part of the country(Abuja) however the fuel stations managers felt a lot of work needs to still be done. Especially the fact that Nigeria has been a serial importer of petroleum product and continuous funding of dollar account of other countries. It becomes seemly impossible to met up 100% with the demand of the ever growing population.

NNPC staff defends government decision on the constant increase in price of Premium Motor Spirit; the interviewees explained that due to high cost of importation of refined petroleum productsthe Nigeria refineries cannot conveniently met the daily demand of the product. As long as the dollar rate keeps increasing the price of this imported necessity is bound to follow suit.

Based on the interview the consequences of increase in price of petroleum on the public could be clearly seen on January 2015 where the effect of the increase affected all other sector of the economy from cost of transportation to cost of feeding. The cost of living in turn became very high people have to work extra in other to make earns met. On the other hand increase in fuel price result to unhealthy competition as the case of black marketers increase and adulterated product sales more because people are tempted to buy fuel at the price they knew it to be not minding the source. Oil marketers that have the product in sufficient quantity use the opportunity of price increase to hoard fuel at the end of the day artificial scarcity is created and price increase.

From the interview conducted the staff explained the reason why supply has hardly been able to met demand was due to the increasing demand petroleum product the way out would have been increase in production. However the non functional refineries have limited the supply of the

product NNPC would have planned to produces but the corporation is left with no other choice than to import what the available fund can buy.

The burning question over the years has been who benefit more from the deregulation of the downstream sector based on the responsethe major categories here are the masses, the marketers and the private investors. The marketers happen to be the major beneficiary of deregulation.Those interviewed attested to the fact that Majority of Nigeria's don't benefit from the current partial deregulation. Those majorly against total deregulation are the key players in the sector, because they fear the amount of profit they will benefit from the sector would reduce against what the masses stand to benefit in the long run.

From the interview we draw that the major challenge confronting the industry is policy uncertainty, poor funding (indebtedness to marketers with regards to subsidy payment). Policy uncertainty for instances the Petroleum Industry Bill (PIB) raised by President Yardua Administration has not been passed. The day the bill was raised during President Goodluck Administration over 60% of the senate members were not in attendance this bill failed to the passed again. However if this bill is put strategically in place foreign investors would flood into the sector and the refineries would be set running again. This and many other good ideas are just hanged in the thin air and we keep waiting to see better result. In other to get good result conscious effort need to be taken by the government.The restructuring of the oil and gas sector is the game changer, for instance the 1968 Petroleum Act is what the industry that has expanded beyond it frontier is still using. These governing laws cannot sustain the growing demand of the sector. Putting an end to subsidy to give room for a new structure and embracing full deregulation and a well structured regulatory body is the way forward.

5. 5 Hypothesis Testing

The three null hypotheses formulated in this study were tested using Pearson-chi square statistics. It is commonly used for testing statistically significant relationship between variables hence, the justification for its application in testing the stated null hypotheses. Pearson Chi-Square is given by the formula: $X^2 = \frac{\sum(fo - fe)^2}{fe}$

Where;

Fe = frequency of Expected value

FO = frequency of Observed value

Decision Rule: The Probability Value (PV) was used to determine the level of significance the relationship. If the PV is < 0.05, it implies that the regression in question is statistically significant at 5% level; otherwise, it is not significant at that level.

5.6 Hypothesis One:

H01: There is no significant relationship between deregulation of the downstream petroleum sub-sector and the supply and distribution of petroleum products in Nigeria.

Table 5.6: Chi-Square Results for deregulation of the downstream petroleum sub-sector and the supply and distribution of petroleum products in Nigeria

Pearson Chi-Square Tests			
	Value	DF	Probability Value (PV)
Pearson Chi-Square value	1.024[a]	8	0.412
Likelihood Ratio	1.011	8	0.182
Linear-by-Linear Association	1.909	1	0.127
N of Valid Cases	412		
a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .19.			

Source:Author's Computation, 2018(SPSS 20)

In the chi-square result presented in Table 5.5.1, the Pearson Chi-Square value was found to be 1.024, with an associated Probability Value of 0.412. The Probability Value of 0.412 is greater than the alpha value of 0.05 (under 5% confidence level); thus, the study accepts the first null hypothesis and conclude that there is no significant relationship between deregulation of the downstream petroleum sub-sector and the supply and distribution of petroleum products in Nigeria

5.7 Hypothesis Two:

H02: There is no significant relationship between deregulation of the downstream petroleum sub-sector and the instability in the pump price of the product.

Table 5.8: Chi-square Results on deregulation of the downstream petroleum sub-sector and the instability in the pump price of the product

Pearson Chi-Square Tests			
	Value	DF	Probability Value (PV)
Pearson Chi-Square value	2.114[a]	6	0.1254
Likelihood Ratio	2.465	6	0.1121
Linear-by-Linear Association	2.166	1	0.2411
N of Valid Cases	412		
a. 7 cells (18.7%) have expected count less than 5. The minimum expected count is 0.42.			

Source:Author's Computation, 2018(SPSS 20)

More so, from the chi-square result presented above Table 5.5.2, the Pearson Chi-Square value was found to be 1.114, with an associated probability level of 0.1254. Since the probability value of 0.1254 is greater than the alpha value of 0.05, the study also accepts the second null hypothesis and concludes that there is no significant relationship between deregulation of the downstream petroleum sub-sector and the instability in the pump price of the product.

5. 9 Hypothesis Three:

H03: The deregulation of the downstream petroleum sub-sector has not significantly been able to improve the availability of petroleum product.

Table 5.9: Chi-Square Results on deregulation of the downstream petroleum sub-sector and the availability of petroleum product.

Pearson Chi-Square Tests			
	Value	DF	Probability Value (PV)
Pearson Chi-Square value	2.221[a]	5	0.2352
Likelihood Ratio	2.216	5	0.2124
Linear-by-Linear Association	2.129	1	0.2131
N of Valid Cases	412		
a. 6 cells (61.4%) have expected count less than 5. The minimum expected count is 0.21.			

Source:Author's Computation, 2018(*SPSS 20)*

Lastly, from Table 5.9, the Pearson Chi-Square value was found to be 2.221, with an associated Probability Value of 0.2352. The Probability Value of 0.2352 is greater than the alpha value of 0.05 (under 5% significant level); the study further accepts the third null hypothesis and conclude also that the deregulation of the downstream petroleum sub-sector has not significantly been able to improve the availability of petroleum product.

5.10 Discussion of findings

Responses were drawn from both the masses who are also the consumers and Nigeria National Petroleum Corporation who are the regulatory. A cross look at their responses one would observe

that they both said similar opinion in some of the questions raised while on some other their opinion was a two sided coin.

Deregulation of the Downstream Petroleum Sub-Sector and the Supply and Distribution of Petroleum Products in Nigeria.

Findings from the study revealed that there is no significant relationshipbetween deregulation of the downstream petroleum sub-sector and the supply and distribution of petroleum products in Nigeria.It revealed that the supply and distribution of fuel product by NNPC and oil marketers have not entirely helped reduce scarcity of the product. This was captured by majority of respondents which adduced to that fact. Based on this fact, most the respondents are of the opinion that thorough monitoring of independent marketers' activities by NNPC in the downstream sector would improve the outcome of the deregulation policy. NNPC staff believed that deregulation has helped reducedscarcity of product. However the consumers are of the view that it has no significance, theyconsider that there is still a lot of job to be doneand the government is up to the task if willing. On their view on the activities of Black marketers both the consumers and regulatory bodies agreed to the fact that deregulation has not cub the issues as a lot of people still buy premium motor spirit from fuel station and resell at higher price. The fuel stations managers stated their dissatisfaction on the insufficient supply of petroleum product by marketers. Especially at the time of scarcity some marketers also create artificial scarcity. The staff of NNPC and fuel managers are both of the same opinion that amongst the masses, marketers and private investors. The marketers benefit more from deregulation; their reason basically was the fact that they control the market. Been that Premium Motor Spirit (PMS) it's a necessity the masses will have no option than to purchase.Supply not meeting up with demand it's not new both the masses and government comes underpressure during fuel scarcity. However in the last past

years the occurrence of fuel scarcity has reduced. The last time national scarcity was recorded was November through December 2017.

The findings here are in-line with Ogunbodede and Olurankinse (2010), Anyadike (2013) who found in significant relationshipbetween deregulation of the downstream petroleum sub-sector and the instability in the pump price of the product.

Deregulation of the Downstream Petroleum Sub-Sector and the Instability in the Pump Price of the Product

It was discovered from the empirical analysis thatthere is no significant relationshipbetween deregulation of the downstream petroleum sub-sector and the instability in the pump price of the product. Base on the responses concerning the instability inpetroleum price ofbeen a major challenge in deregulation majority of NNPC staff strongly disagreed to the fact that their inability to control the price it's a major challenge in the policy. On the side of the consumers they believed that it's a major challenge. Few of the consumers where asked the reason for this responses and see the capacity of the government to be able to influence price of the product. Their defence was based on past government administration of government and the role of petroleum subsidy. The opinion of the masses and NNPC was asked concerning the fact that stable price would be achieved with availability of more refineries. Majority of the consumerAgreed and NNPC staff strongly agreed to this fact. On the perspective of illegal pump tempering majority of the consumers disagree that NNPC has remedy the situation. The consumers were of the opinion that certain fuel stations are trusted over others. On matters such as this NNPC staff recommended that growing incidence like this should be reported. The view of the consumers and regulatory bodies on uniformity of pump price in Abuja was same as majority of the respondents agreed to that fact. Credit was given to Abuja as compared to other state

uniformity in pump price in fuel station is rated high.

Downstream Petroleum Sub-Sector has not Significantly been able to Improve the Availability of Petroleum Product

Above all, the deregulation of the downstream petroleum sub-sector was found to have not significantly been able to improve the availability of petroleum product.Drawing from the interview availability of product is one of the most stressed parts on the lapses of deregulation. The cost of high turn around maintenance been addressed by deregulationwas strongly disagree. The staff of NNPC attested to the fact that more work need to be done to get better result. Where consumer are ready to buy but product is either scare or unavailable .The independent oil marketers are faced with dealing with cases of adulterated product and black marketers . NNPC staffs believe that strong policy and government action should be taken into consideration tohandle the lapses. According to the Fuel Managers Abuja and its environs still enjoys a large degree of availability of PMS compared to other state. This findings is consistent with the studies of Democratic Socialist Movement (2009) and Olawaiye (2013) etc.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This concluding chapter of the dissertation presented the summary of the study and conclusions reached on the bases of the hypotheses tested. Recommendations were also made on the bases of the findings in chapter five

6.2 Summary

The strategic nature of the petroleum sector cannot be overemphasized, this sector has been a major Back bone to the economy development of Nigeria. It hasbeen estimated that demand and consumption of petroleum grows at 12.8% annually and yet the petroleum still remains expensive and unreachable as aresult of exportation of raw crude and importation of finished products. The government made the first move at full deregulation of the downstream sectorin 2003. Partial deregulation has however been in place some years before 2003. In orderto speed up the full deregulation policy, the Federal Government inaugurated a SpecialTask Force with responsibility to produce a harmonized version of the Bill, was presented to the legislature for passage.

This study was thus carried out to evaluate the effectiveness of deregulation on the downstream sub-sector of the Nigeria petroleum industry. The study started by looking at chapter one, which is the introduction where the background to the study, statement of the problem, objectives of the study, research questions, research hypothesis, significance of the study, scope and limitations of the study were examined. In the chapter two, various literatures were reviewed amongst which are the theoretical frame work of the study, concepts and empirical literatures were discussed.

Chapter three was concerned with research methodology. It contained the research design, population and sample techniques, method of data collection, procedure for data analysis, justification of methods, and research instruments were all discussed; while in chapter four, is centered on the relevant provisions and activities of the Nigerian Petroleum industry. Specifically, the chapter discussed the history of the petroleum industry in Nigeria, the origin of deregulation policy in Nigeria and the activities of the downstream petroleum sector in Nigeria. In chapter five, the data collected through structured questionnaires were analyzed; while the data was analyzed using chi-square method. The results were then analyzed, interpreted and discussed.

5.3 Summaryof Findings

For Nigeria to realize its potential and reap the benefits of the deregulation policy there is the need to tailor the formulation and implementation of reforms in manner that will take cognizance of the socio-economic challenges facing Nigerians. This would prevent the wide resentment from majority of Nigerians especially as it involves the removal of fuel subsidy, one of the requirements of the deregulation policy.

1. The empirical analysis showed that there is no significant relationshipbetween deregulation of the downstream petroleum sub-sector and the supply and distribution of petroleum products in Nigeria. It was further discovered from the empirical analysis thatthere is no significant relationshipbetween deregulation of the downstream petroleum sub-sector and the instability in the pump price of the product.

2. Majority of the respondents however stated that stable price of petroleum products would be achieved by provision of more refineries, especially when enabling environments are created for foreign investors in the oil sector From the interview we could see thatthe NNPC staff on the average believed that the government still increases price of petroleum product due to high cost of importation of refined petroleum products that our refineries cannot conveniently cover.

3. Lastly, the deregulation of the downstream petroleum sub-sector was found to have not significantly improving the availability of petroleum product.The quantity of fuel intended to be purchased by the Independent Oil Marketers are not always available for supply.

Deregulation of the downstream sector must be effective and consistently pursued for maximum result to be achieved for the benefit of the nation. While that is being pursued, adequate infrastructure, especially refineries should be put in place. The four refineries already established should be maintained and made to operate at full capacity. In addition, each geopolitical zone should have an additional refinery for easy supplies across the country to boost the refinery, distribution and marketing capacity of the country.

6.4 Conclusion

In conclusion, it could be seen from the discussion so far that it is clear that the current state of the downstream Sector is judged as inefficient in-service delivery and ineffective at promoting national developmental objectives.

Deregulation is a germane economic policy for sustainable democratic transformation of Nigeria, provided social vices like unethical marketing practices of middlemen in the purchase, and

distribution of the petroleum products are removed. The corrupt practices of both officials of NNPC and government must be avoided while the proceeds from the downstream should be used to provide social infrastructure, which will also accelerate self-employment, job creation and efficient mass transportation. With deregulation, which has been a conduit pipe and source of fraud in Nigeria, will be a forgotten issue.

Furthermore, competition which is an important component of deregulation policy and will hopefully in the near future greatly influence the price of premium motor spirit positively. Private sector and foreign investor'sparticipation in building new refineries will be encouraged, thereby increasing refining capacities in Nigeria. We cannot continue to import petrol, when we have the capacity to produce what we can consume aswell as for exportation. In other words, Nigeria has the entire wherewithal, not only to be self-reliant but even enough to export refined products.

More soavailability of product in the right quantity and quality has been a major bone of contention because the consumers are directly affected. The independent oil marketer as well as the government effort really comes into play to ensure that the consumers get the quantity of PMS they need at every point in time. The fuel station managers should be given proper licensees to enable them source for unadulterated product to sell to the masses.

6.5 Contribution to Knowledge

This study used Abuja-FCT as a case study to give a better platform for analysis on the policy. This work used supply, distribution, availability as well as pump prices as the dependent variable. This has helped bridge the gap of other studies were just one variable was used. This study went further to get the managers responses, the consumers and the distributors' responses concerning the deregulation of the downstream sub-sector of the Nigeria petroleum industry. Our findings shows that the consumers and NNPC agreed on some questions through incidences like would stable price be achieved with availability of more refineries. Majority of the consumer agreed and NNPC staff strongly agreed to this fact.

However in some cases the consumers and the regulatory bodies NNPC disagree, majority of the NNPC staff believed that deregulation has helped reduced scarcity of product. However the consumers are of the view it has not helped they consider that there is still a lot of job to be done .and the government is up to the task if will. The distributors of PMS were also interviewed the fuel stations managers stated their dissatisfaction on the insufficient supply of petroleum product by marketers. Especially at the time of scarcity some marketers also create artificial scarcity. The staff of NNPC and fuel managers are both of the same opinion that amongst the masses, marketers and private investors. The marketers benefit more from deregulation; their reason basically was the fact that they control the market.

These among other findings this study has helped drawn views that were been analyzewhich built up our recommendation and gave room for further study.

6.6 Recommendations

Premium Motor Spirit (PMS) is presently the mainstay of the Nigerian economy, and how oil related policies are carried by stakeholders in the sector will have great impact on the Nigerian economic stability. Therefore, Nigeria must insist on the maximization of national interest, most importantly for the economic benefit, as well as for the empowerment of the Nigerian consumers of petroleum and petrochemical products.

Taking into consideration the whole gamut of the research study, the following recommendations suffices:

i. Government should create an enabling environment to engender private investors for the purpose of improving the local refining capacity to meet the ever-increasing local demand of petroleum products and indeed for exportation purpose. This sector should be made as attractive as possible so thatforeign investors can invest and help rebuild our refineries. This refineries should be built in strategic geographically location this would go long way to improve the supply and distribution of petroleum product in the country. The availabilityof open general licenses will also improve competition and would result in a reduction in the cost of petroleum products, competition in the sector will lead to orderly growth and efficiency in the sector.

ii. The government should open the market in other increase competition so that the prices of fuel can be reduced over time. Nevertheless, there should be adherence to approved official pump prices ceiling by petroleum products marketers, while the competitive prices observed in some locations is a welcome development, which should be sustained for greater efficiency in the Nigerian oil and gas industry.

iii. Strong policy action should be taken by the government to handle the pitfalls in deregulation. Restructuring of the sector needs to take place to ensure that more independent oil marketers and foreign investors come in to participate more efficiently and effectively. This is because the government cannot achieve this alone at least not with our current state of economy.

6.7 Further Study

i) Further research is suggested on the impact of deregulation on the consumer socio economic development.

ii) Assessment of partial deregulation in relation to availability of petroleum product to consumers.

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APPENDIX 'A'

Department of Local Government
and
Development Studies,

Faculty of Administration,

Ahmadu Bello University, Zaria.

QUESTIONNAIRE

Introduction

The researcher is a postgraduate student of the Department of Local Government and Development Studies, Ahmadu Bello University Zaria. I am currently carrying out a research on the topic **''The Evaluation of the Effectiveness of Deregulation of the Downstream Sub-sector of the Nigeria Petroleum Industry''.** Note that deregulation in this study refers tothe participation of independent petroleum marketers in the distribution, supply pricing as well as ensuring the availability of petroleum product alongside the government. There are over 300 petroleum products, however for the purpose of this study the premium motor spirit will be looked at also known as petrol or fuel.

The research forms an essential part of my work towards the award of Master Degree in Policy and Development Studies (M.sc). Information given will be solely used for the purpose of this research and will be treated as confidential. Please tick appropriately the options in the Questionnaire.

Thanks for the anticipated cooperation.

Yours Faithfully

QUESTIONNAIRE FOR CONSUMERS OF PREMIUM MOTOR SPRIRT (PMS), FUEL IN ABUJA.

SECTION A

PERSONAL DATA of RESPONDENTS

Please you are required to kindly tick (√)

1) Age ;

   a) 18 -35 b) 36-45 c) 46-55 d)56 and above

2) Marital Status;

   a) Single b) Married c) Widow/ Widower d) Divorce

3) Sex;

   a) Male b)Female

4) Highest Educational Qualification;

a) OND/NCE b) HND/B.sc c) PGD/M.scd) PHD

5) Occupation;

   a) Civil Servant b) Business c) Artisan d) others specify

   …..……

SECTION B: Strongly Agreed (SA), Agreed (A), Undecided (UD), Disagreed (D), Strongly Disagreed (SD).
Supply and Distribution of Petroleum Product:

S/N		SA	A	UD	D	SD
1.	The supply and distribution of fuel product by the government and oil marketers have helped reduce scarcity of the product.					
2.	The sale of petroleum product by Black Marketers has reduced.					
3.	The incidence of contaminated fuel product has reduced over time.					
4.	The government and independent petroleum marketers in the participation of in supply and distribution of the fuel have improved its availability.					
5.	The long queue at the fuel station has reduced with the help of deregulation.					
6.	You prefer to buy fuel at the current price(145) than join long queue at a lesser price.					
7.	There have been reductions in shortage of fuel in the filling station.					
8.	The filling station outlet in Abuja and its environment has increased over the years.					
9.	Deregulation has made dormant and previously vacated filling stations to be operational.					

PUMP PRICE OF THE PRODUCT:

S/N		SA	A	UD	D	SD
1.	The fuel price in filling station is fair and affordable.					
2.	The constant increase in the price of fuel has reduced its scarcity.					
3.	Subsidizing of fuel has made significant reduction in the price sold at the fuel station.					
4.	The current price of fuel has ensured its availability in the fuel station.					
5.	The constant increase in the price of fuel has equally meant increase in transport fare as well as goods and service.					
6.	The fuel stations in the Abuja and its environment have been able to attain a uniform fuel price.					
7.	The illegal adjusting of pump machine at filling station has reduced.					
8.	The quality of service at the fuel station has improved, no extra cost charge when purchasing fuel product for generator and other use.					
9.	When there is incidence of fuel scarcity the price of fuel still remains the same in the filling station in Abuja.					

Availability of Petroleum Product:

1.	Fuel product has been always available at the filling station.					
2.	The unstable price of fuel has affected the availability of product in fuel station.					
3.	The purchase of fuel from the filling station has been ease and stress less.					
4.	The filling stations in Abuja are constantly in supply of fuel product.					
5.	The incidence of filling station not been in operation for a period of time because there is no fuel product has reduced.					
6.	The quantity of fuel (litres) intended to purchase have always been available at the fuel station					

QUESTIONNAIRE FOR Nigeria National Petroleum Corporation (NNPC) STAFF
SECTION A

PERSONAL DATA of RESPONDENTS

Please you are required to kindly tick (√)

1)Age ;

a) 18 -35 b) 36-45 c) 46-55 d)56 and above

2) Marital Status;

b) Single b) Married c) Widow/ Widower d) Divorce

3) Sex;
b) Male b)Female

4) Educational Profile ;

b) OND/NCE b) HND/B.sc c) PGD/M.scd) PHD

SECTION B: Strongly Agreed (SA), Agreed (A), Undecided (UD), Disagreed (D), Strongly Disagreed (SD).
Supply and Distribution of Petroleum Product:

S/N		SA	A	UD	D	SD
1.	The supply and distribution of fuel product by NNPC and oil marketers have helped reduce scarcity of the product.					
2.	The sale of petroleum product by Black Marketers has reduced.					
3.	NNPC have been able to set rules to control the rate of contaminated Premium Motor Sprit (PMS) in the country.					
4.	The amount of PMS supplied to independent oil marketers has been sufficient for their consumers.					
5.	Thorough monitoring of independent marketers activities byNNPC in the downstream sector would improve the outcome of thederegulation policy.					
6.	The stability in fuel price and distribution in NNPC fuel station been attained in other station.					
7.	Deregulation has helped addressed the shortage of fuel.					
8.	The filling station outlet in Abuja and its environment has increased in number over the years.					
9.	Deregulation has made dormant and previously vacated filling stations to be operational.					

PUMP PRICE OF THE PRODUCT:

S/N		SA	A	UD	D	SD
1.	NNPC inability to attain a stable price for its products has not beena major challenge in the implementation of the deregulation policy.					
2.	NNPC inability to attain a stable price for its products led to increase in price of petroleum products					
3.	Stable price of petroleum products would be achieved by provision of more refineries					
4.	NNPC has been able to control the illegal tempering of fuel pump at the fuel station					
5.	The fuel stations in the Abuja and its environment have been able to attain a uniform fuel price.					
6.	When there is incidence of fuel scarcity the price of fuel still remains the same in the filling station in Abuja.					
7.	The role NNPC in ensuring stable price in fuel station has been successful.					

Availability of Petroleum Product:

S/N		SA	A	UD	D	SD
1.	NNPC inability to attain a stable price for its products led toproduct unavailability					
2.	Smuggling of petroleum products in the downstream sectorhave been addressed by the deregulation policy.					
3.	The high cost of turnaround maintenance of the nation'srefineries have been addressed by the deregulation policy					
4.	The filling stations in Abuja are constantly in supply of fuel product.					
5.	The incidence of filling station not been in operation for a period of time because there is no fuel product has reduced.					
6.	The quantity of fuel intended to be purchased by the Independent Oil Marketers have always been available for supply.					

APPENDIX 'B'

INTERVIEW GUIDE FOR STAFF OF NNPC

1. What is meant by the deregulation of the downstream petroleum sector?
2. What is the rationale behind the government's plan to deregulate the downstream petroleum sector?
3. There are strong arguments for and against deregulation of the downstream oil sector. Why did the government by the argument?
4. What is the effect of deregulation on :-

   a) Supply of petroleum Productb) Distribution of Petroleum Product

   c) Pricingd) Availability and Scarcitye) Adulteration

   5. What is the relationship between NNPC and Independent Oil Marketers in terms of
      a) Policy b) Supply and Distribution C) Pricing and Sales.
6. Subsidizing of Petrol , why is the government still bent on increasing the price of petroleum product and what consequences will that be for
   a) NNPC b) Independent Oil Marketers c) The Public
7. The supply of petroleum product has hardly been able to meet the demand. Why is that so?
8. One of the rationales for deregulation has been to ensure availability of petroleum product. Has it been a success?
9. Is rehabilitating the refineries part of the strategy for deregulating the downstream petroleum sector?
10. Who benefits from government's deregulation?
11. What do you think are the challenges confronting the nation's oil and gas industry? How do you think the rot in industry can be addressed?

APPENDIC ' C'

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*