AN EXAMINATION OF THE LEGAL FRAMEWORK FOR THE MARKETING OF PETROLEUM PRODUCTS IN THE DOWNSTREAM SECTOR OF THE OIL AND GAS INDUSTRY IN NIGERIA

BY

Okechukwu ILOBA-ANINYE
PhD/LAW/OO228/2006-07

DEPARTMENT OF COMMERCIAL LAW,
FACULTY OF LAW,
AHMADU BELLO UNIVERSITY, ZARIA

OCTOBER, 2015

AN EXAMINATION OF THE LEGAL FRAMEWORK FOR THE MARKETING OF PETROLEUM PRODUCTS IN THE DOWNSTREAM SECTOR OF THE OIL AND GAS INDUSTRY IN NIGERIA

BY

Okechukwu ILOBA-ANINYE
PhD/LAW/OO228/2006-07

A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY (PhD) DEGREE IN LAW

DEPARTMENT OF COMMERCIAL LAW,
FACULTY OF LAW,
AHMADU BELLO UNIVERSITY, ZARIA

OCTOBER, 2015

DECLARATION

I declare that the work in this dissertation entitled "AN EXAMINATION OF THE LEGAL FRAMEWORK FOR THE MARKETING OF PETROLEUM PRODUCTS IN THE DOWNSTREAM SECTOR OF THE OIL AND GAS INDUSTRY IN NIGERIA" has been carried out by me in the Department of Commercial Law, Faculty of Law, Ahmadu Bello University, Zaria. The information derived from literature have been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at this or any other Institution.

Okechukwu ILOBA-ANINYE **SIGNATURE** **DATE**

CERTIFICATION

This dissertation entitled "AN EXAMINATION OF THE LEGAL FRAMEWORK FOR THE MARKETING OF PETROLEUM PRODUCTS IN THE DOWNSTREAM SECTOR OF THE OIL AND GAS INDUSTRY IN NIGERIA" by **Okechukwu ILOBA-ANINYE** meets the regulations governing the award of the degree of Doctor of Philosophy (Ph.D) of Ahmadu Bello University, Zaria, Nigeria and it is approved for its contribution to knowledge and literary presentation.

_____ _____

Prof. I.J.G. Irokhalibe **Date**
Chairman, Supervisory Committee

_____ _____

Dr. A.A. Akume **Date**
Member, Supervisory Committee

_____ _____

Dr. A.K. Usman **Date**
Member, Supervisory Committee

_____ _____

Dr. A.R. Agom **Date**
Head, Department of Commercial Law

_____ _____

Prof. Kabir Bala **Date**
Dean, School of Postgraduate Studies

DEDICATION

This dissertation is dedicated to my wife, Barrister (Mrs) Jane Bemigho Iloba-Aninye; my daughter, Kelechi Eleanor Iloba-Aninye; and my son, Oyinye Williams Iloba-Aninye.

ACKNOWLEDGEMENTS

My profound gratitude goes to Jehovah, the Almighty God; the giver of life, the one to whom there is no impossibility, the one who spared my life and made this work a reality inspite of the daunting challenges. To Him be all the Glory.

I am grateful to the team of supervisors that painstakingly steered me through this academic labyrinth. Foremost amongst them, is an unassuming academic repository – Professor I. J. G. Irokhalibe - who enriched this dissertation with his scholarly suggestions. Thank you Professor. To Dr. A. A. Akume, I owe so many thanks for his academic mentoring and advice while this work lasted. Thank you so much Sir for being there for me during my hours of need. To Dr. A. K. Usman, I say "thank you" for your advice and companionship throughout the period of this dissertation. May God bless you all.

I must acknowledge my wife, Keke for her perseverance, advice, physical contribution and patience during this most trying period. I owe so much to you. I also acknowledge my daughter, Kelechi and my son, Williams for their patience and understanding.

My sincere thanks go to my colleagues in Commercial Law Department. Thank you all for being a wonderful team. My appreciation goes to my spiritual companion, Prophet Moses Emujeghwro who supported me with prayers and encouraged me with the word of God. May God bless you sir. To my former students, Barrister Sa'id Balogun Adegbenga and Nasiru Arisekola Suleiman, I acknowledge you for being there during the most difficult times of my life. May the blessings of the Almighty God be upon you. To all men of good will, I say peace profound.

TABLE OF CASES

A-G Federation v. A-G Abia & 36 ors (2006)1 SCNJ 1	43
Bamidele Aturu v. Ministry of Petroleum Resources FHC/ABJ/CS/591/2009	272
Barnard v. Monongahel Natural Gas Co. (1907) 216 Pa. 362	49
Chief Joseph Abraham & Anor v. Ishau Amusa Olorunfunmi & Ors (1999) NWLR (pt. 165) 53	35
Frystak v. Cabot Oil and Gas Corporation (2008) No 3:08-CV-667	48
Rylands v. Fletcher (1968) LR 3 H.L 330	95
South Atlantic Petroleum Limited v. Minister of Petroleum Resources (2006) 10 CLRN 122	41
United States v. Louisiana (1960) 363 U.S. 1	45
Victor Elem v. Shell-BP Suit No. PHC 101/76 P.H H/C 1979	95
Westmoreland & Cambria Natural Gas Co. v. De Witt (1889) 130 Pa. 235	46

TABLE OF STATUTES

Associated Gas Re-Injection Act, Cap A25, LFN, 2004	15, 72 178
Deep Offshore and Inland Basin Production Sharing Contract Act , Cap D3, LFN, 2004	52, 241
Downstream Gas Act, 2003	4, 15
Hydrocarbon Oil Refineries Act, Cap H7, LFN, 2004	15, 79
Mineral Oils Act 1914	1, 4, 25, 26, 28, 273
Minimum Wage Act	250
Nigerian National Petroleum Corporation Act, 1977	3, 31, 99, 124
Oil in Navigable Waters Act, Cap O6, LFN, 2004	38
Oil Pipelines Act, Cap O7, LFN, 2004	28, 76, 87, 88, 89, 90, 91, 93, 94, 115, 124, 183 195, 202, 275
Oil Terminal Dues Act 1969 , Cap T16, LFN, 2004	38
Petroleum Act, Cap P10, Vol. 13 LFN, 2004	3, 4, 5, 6, 7, 8, 9, 12, 16, 26, 29, 30, 31, 38, 45, 46, 47, 48, 54, 55, 56, 58 65, 66, 67, 69, 71, 73, 81, 82, 86, 87, 88, 98, 99, 104, 140, 157, 161, 166, 172, 217, 243, 246, 249
Petroleum Equalization Fund Act, Cap P11, Vol. 13 LFN, 2004	8, 12, 24, 65, 73, 74, 75, 100
Petroleum Production and Distribution (Anti-Sabotage) Act Cap. P12, Vol. 13 LFN, 2004	13, 66, 94, 95, 97
Petroleum Products Pricing Regulation Agency (Establishment) Act,	7, 13

Cap P43, Vol. 14 LFN, 2004

Petroleum Profit Tax Act 1958, now Cap P13 1959 LFN 2004	2, 17, 25, 46, 48, 217
Price Control Act, Cap P28, LFN, 2004	243, 244
Special Tribunal (Miscellaneous Offences) Decree N20 1984	66, 107
Special Tribunal (Miscellaneous Offences) Decree N21 1984	109
The Constitution of the Federal Republic of Nigeria 1999 as amended	6, 104, 243, 244
Trade Dispute (Essential Services) Decree, 1996	108

SUBSIDIARY LEGISLATION

Directorate of Petroleum Resources Regulations	65
Mineral Oils (Safety) Regulations, 1952	29
Petroleum (Drilling and Production) Regulations	30
Petroleum Refining Regulations	9, 12, 81, 82, 161
Petroleum Regulations, 2004	12, 88

LIST OF ABBREVIATIONS

AF OR AK	-	AVIATION FUEL/JET A1
AGO	-	AUTOMOTIVE GAS OIL OR DIESEL
AP	-	AFRICAN PETROLEUM
BCF	-	BILLION CUBIC FEET
BP	-	BRITISH PETROLEUM
BPD	-	BARRELS PER DAY
CFAO	-	CAMPAGNIE FRANCAISE DE L'AFRIQUE OCCIDENTALE
CNG	-	COMPRESSED NATURAL GAS
DPK	-	DUAL PURPOSE KEROSENE
DPR	-	DEPARTMENT OF PETROLEUM RESOURCES
ECOWAS	-	ECONOMIC COMMUNITY OF WEST AFRICAN STATES
EEZ	-	EXCLUSIVE ECONOMIC ZONE
FCT	-	FEDERAL CAPITAL TERRITORY
FDI	-	FOREIGN DIRECT INVESTMENT
FPSO	-	FLOATING PRODUCTION STORAGE AND OFFLOADING
GA RES	-	GENERAL ASSEMBLY RESOLUTION

GDP	-	GROSS DOMESTIC PRODUCT
GOCON	-	GULF OIL COMPANY (NIGERIA) LIMITED
HPFO	-	HIGH PROFILE FUEL OIL
HSE	-	HEALTH SAFETY AND ENVIRONMENTAL
IMF	-	INTERNATIONAL MONETARY FUND
IOCs	-	INTERNATIONAL OIL COMPANIES
IPMAN	-	INDEPENDENT PETROLEUM MARKETERS ASSOCIATION OF NIGERIA
IPMCL	-	IPMAN PETROLEUM MARKETING COMPANY LIMITED
IPP	-	INDEPENDENT POWER PROJECT
ITFs	-	INTERNATIONAL TRADED FUELS
JVC	-	JOINT VENTURE CONTRACT
JVs	-	JOINT VENTURES
KRPC	-	KADUNA REFINING AND PETROCHEMICAL COMPANY
LHG	-	LIQUEFIED HYDROCARBON GAS
LNG	-	LIQUEFIED NATURAL GAS
LPFO	-	LOW PROFILE FUEL OIL

LPG	-	LIQUEFIED PETROLEUM GAS
MEND	-	MOVEMENT FOR THE EMANCIPATION OF THE NIGER DELTA
MNOC	-	MULTINATIONAL OIL COMPANY
MOMAN	-	MAJOR OIL MARKETERS ASSOCIATION OF NIGERIA
MPR	-	MINISTRY OF PETROLEUM RESOURCES
MW	-	MEGA WATTS
NAPIMS	-	NATIONAL PETROLEUM INVESTMENTS MANAGEMENT SERVICES
NDR	-	NATIONAL DATA REPOSITORY
NDVF	-	NIGER DELTA VOLUNTEER FORCE
NESREA	-	NIGERIAN ENVIRONMENTAL STANDARDS AND REGULATIONS ENFORCEMENT AGENCY
NGC	-	NIGERIAN GAS COMPANY
NIEO	-	NEW INTERNATIONAL ECONOMIC ORDER
NIPCO	-	NIGERIAN INDEPENDENT PETROLEUM COMPANY
NLNG	-	NIGERIAN LIQUEFIED NATURAL GAS
NNOC	-	NIGERIAN NATIONAL OIL CORPORATION
NNPC	-	NIGERIAN NATIONAL PETROLEUM CORPORATION

NPMS	-	NATIONAL PRODUCTION MONITORING SYSTEM
NSE	-	NIGERIAN STOCK EXCHANGE
OEL	-	OIL EXPLORATION LICENCE
OML	-	OIL MINING LEASE
OPEC	-	ORGANIZATION OF PETROLEUM EXPORTING COUNTRIES
OPLs	-	OIL PROSPECTING LICENCES
PA	-	PETROLEUM ACT
PEF	-	PETROLEUM EQUALIZATION FUND
PHRC	-	PORT HARCOURT REFINING COMPANY
PIB	-	PETROLEUM INDUSTRY BILL
PLC	-	PRIVATE/PUBLIC LIMITED COMPANY
PMS	-	PREMIUM MOTOR SPIRIT
PPMC	-	PIPELINES AND PRODUCT MARKETING COMPANY
PPPRA	-	PETROLEUM PRODUCTS PRICING REGULATORY AGENCY
PPT	-	PETROLEUM PROFIT TAX
PSA	-	PRODUCTION SHARING AGREEMENT
PSC	-	PURE SERVICE CONTRACT

PSCs	-	PRODUCTION SHARING CONTRACTS
PSF	-	PETROLEUM SUPPORT FUND
RSC	-	RISK SERVICE CONTRACT
SC	-	SERVICE CONTRACT
TAA	-	TECHNICAL ASSISTANCE AGREEMENT
TAM	-	TURN AROUND MAINTENANCE
TCF	-	TRILLION CUBIC FEET
UN	-	UNITED NATIONS
UNOCAL	-	UNION OIL COMPANY OF CALIFORNIA
WAPCO	-	WEST AFRICAN PIPELINES COMPANY
WRPC	-	WARRI REFINING AND PETROCHEMICAL COMPANY

ABSTRACT

Hitherto, to many, the concept of oil and gas was limited to the search for, work and win crude oil. So, for many decades, nations only concerned themselves with upstream petroleum activities. The availability of crude oil determines the extent of relevance a nation commanded at the global scene. This fact is amplified by the role Nigeria played in the struggle to rid Africa of colonial vestiges. The marketing of petroleum products (downstream sector activities) is therefore brought to the fore of the national petroleum industry. The issues of oil and gas in Nigeria are very topical and sensitive. The products of oil and gas are present in every home in Nigeria. Arising from this, the government became very much involved in the supply and distribution of its product. Various laws, including the Petroleum Equalization Fund (Act) Instituted as a result of the problems associated with the petroleum distribution, were put in place to govern the petroleum industry. However, there appear to be inconsistencies between these laws and what actually obtains. This research principally adopted a doctrinal research methodology which relied on existing statutes, subsidiary legislation and literature on petroleum products marketing. It analyzed the issues and drew inferences which culminated in the findings. This dissertation found that the legal framework for the regulation of the downstream sector of the petroleum industry is not robust and comprehensive; that there is conflict of functions between the Petroleum Minister and the Petroleum Products Pricing and Regulatory Agency. This is with respect to the fixing of the prices petroleum products. This conflicting function does not make for improvement of effective pricing of petroleum products as it does not allow market forces to determine the price; that the functions of government regulatory agencies such as the Nigerian National Petroleum Corporation (NNPC), the Department of Petroleum Resources (DPR), the Petroleum Products Marketing Company (PPMC) and the Petroleum Products Pricing and Regulatory Agency (PPPRA) are overlapping and therefore work at cross purposes; that the Petroleum Equalization Fund put in place for the sole purpose of unifying the pump prices of petroleum products across the country is ineffective, fraught with corruption and has resulted in waste of financial resources; and that government involvement in downstream activities makes law enforcement weak and ineffective. This research therefore recommended a restructuring and reforming of the legal framework and regulatory bodies for the Nigerian Petroleum Industry through the passage of the Petroleum Industry Bill (PIB); existing laws should be reviewed for effective regulation with the roles of government agencies clearly defined; that the Petroleum Equalization Fund be repealed; and that government should exit participating in the downstream sector (through the Nigerian National Petroleum Corporation) and only be a regulator.

TABLE OF CONTENTS

Title Page i

Declaration ii

Certification iii

Dedication v

Acknowledgements iv

Table of Cases. xv

Table of Statutes xii

Subsidiary Legislations xiv

List of Abbreviations xvi

Abstract vi

Table of Contents vii

CHAPTER ONE: GENERAL INTRODUCTION

1.1 Background of the Study. 1

1.2 Statement of Problems 11

1.3 Aim and Objectives 12

1.4 Scope and limitations of Research 14

1.5 Research Methodology 16

1.6 Literature Review 17

1.7 Justification/Significance of Research 21

1.8 Organizational Layout 21

CHAPTER TWO: CONCEPTUAL CLARIFICATION OF KEY TERMS AND HISTORICAL DEVELOPMENT

2.1 Introduction 24

2.2 Definition of Key Terms 26

2.3 The Development of Oil and Gas Industry in Nigeria . . . 29

2.4 Ownership Theories of Oil and Gas 34

2.5 Concessionary Arrangements 51

2.5.1 The Traditional Concession 53

2.5.2 The Modern Concession 54

2.6 Petroleum Contracts 55

2.6.1 Licences 56

2.6.2 Lease 56

2.7 Statutory Contracts 57

2.8 Non-Statutory Contracts 62

2.9 Obligations Under Petroleum Contracts 65

2.9.1 Obligations Arising After Termination/Surrender 68

2.10 Natural Gas and Its Utilization 69

CHAPTER THREE: THE LEGAL FRAMEWORK FOR PETROLEUM PRODUCTS MARKETING

3.1 Introduction 77

3.2 The Petroleum Act 80

3.3 The Petroleum Equalization Fund Act 88

3.4 The Oil Pipelines Act 91

3.5 Petroleum Refining Regulations 98

3.5.1 Application for Licence to Construct a Refinery 99

3.6 Rules and Regulations of the Department of Petroleum Resources (DPR) in Petroleum Marketing 102

3.6.1 Procedure and Conditions For Granting Approval for the Construction of a Petrol Station 103

3.6.2 Department of Petroleum Resources Guidelines on Importation of Petroleum Products into Nigeria 105

3.6.3 Guidelines for Granting Approval for the Operation of a Petrol Filling Station . 108

3.7 Special Tribunal (Miscellaneous Offences) Decree No. 21 1984 (Amended By Decree No. 20 1994) 110

3.8 The Petroleum Production and Distribution (Anti-Sabotage) Act . . 112

3.9 Conclusion 116

CHAPTER FOUR: OIL MARKETERS AND THEIR OPERATIONS

4.1 Introduction 119

4.2 The Nigerian National Petroleum Corporation (NNPC) . . . 122

4.3 The Pipelines and Product Marketing Company (PPMC) . . . 134

4.4 MRS Oil Nigeria Plc (Formerly Texaco Nigeria Plc) . . . 140

4.5 Mobil Oil Nigeria 146

4.6 Conoil Plc (Formerly National Oil and Chemicals Marketing Company Plc). 148

4.7 Oando Nigeria Plc 151

4.8 Forte Oil Plc (Formerly African Petroleum) 155

4.9 Total Nigeria Plc (Formerly Total Finaelf) 157

4.10 The Independent Petroleum Marketers Association of Nigeria (IPMAN). . 160

4.11 The Department Of Petroleum Resources 162

4.12 Concluding Critique 167

CHAPTER FIVE: DOWNSTREAM OIL AND GAS ACTIVITIES

5.1 Introduction 178

5.2 Downstream Operation and Licences 181

5.2.a Oil Refinery Licence 185

5.2.b Oil Pipeline Licence 186

5.3 Petroleum Refineries and Petroleum Products Infrastructure in Nigeria. . 186

5.3.1 Natural Gas 191

5.4 Refineries 193

5.5 Petroleum Depot/Tank Farm/Oil Terminal 195

5.6 Transportation of Crude Oil and Its By-Products 196

5.6.1 Pipelines 197

5.6.1.a Types of Pipelines in the Oil and Gas Industry in Nigeria . . 198

5.6.1.b Pipeline Vandalism 205

5.6.1.c Effects of Vandalization 206

5.6.2 Other Modes of Transportation 210

5.6.2.a Oil Marine Tankers and Barges 210

5.6.2.b Motor Vehicle Trucks 212

5.6.2.c Rail Tank Car 213

5.6.3 Ancillary Aid to Products Transport 213

5.7 Supply of Petroleum Products 214

5.8 Role of Government in Downstream Activity 219

CHAPTER SIX: INVESTMENT, PRICING AND TAXATION IN THE DOWNSTREAM SECTOR

6.1 Introduction 224

6.2 Financing Investments in the Downstream Sector 226

6.3 Legal/Economic Barriers To Entry Into Petroleum Marketing . . 231

6.4 Petroleum Products Taxation 241

6.5 Government Policy on Petroleum Product Pricing 245

6.5.1 Supply and Pricing of Petroleum Products Under a Deregulation Regime . 257

6.5.2 The Concept of Deregulation 262

6.6 The Uniform Products Pricing 266

6.7 Conclusion 272

CHAPTER SEVEN: SUMMARY, FINDINGS AND RECOMMENDATIONS

7.1 Summary 275

7.2 Findings 283

7.3 Recommendations 286

BIBLIOGRAPHY 288

APPENDIX A. 295

APPENDIX B 296

APPENDIX C 297

APPENDIX D 298

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Background of the Study

Oil and Gas activities date back to the colonial era[1] in respect of Lagos colony. However, an examination of Nigerian statutes will reveal that the major constituents of the laws which appertain to exploration and exploitation of petroleum are traceable to the Mineral Oils Act of 1914 - the year that the Southern and Northern Protectorates were amalgamated. During the currency of this 1914 Act, grants were given to search for, work and win mineral oils[2]. This aspect of the law[3] did not develop in any great measure until the later part of 1950 to 1960 decade when the active search for oil in the country was stepped up.

The exploration and production activities (hereinafter referred to as 'upstream operations') dominated the petroleum landscape with a reasonable percentage of what was produced being carried away through export by the international oil companies as dictated then by the traditional concessions. These concessions granted by the colonial masters to the colonial oil companies did not seek to enrich Nigeria from the sale of the produced petroleum as, upon production, the petroleum belonged to the International Oil Companies (IOCs). It was

[1] Etikerentse, G. (2004) *Nigerian Petroleum Law* 2nd Edition, Dredew Publishers, Lagos, Nigeria. p.8.
[2] Section 2, Mineral Oils Act 1914: In 1938, based on this Act, Shell Petroleum was given concession in respect of the mainland Nigeria.
[3] In respect of production of Petroleum.

theirs to do with as they deemed fit, only paying pittance to the host countries.[4]

With an increasing proven reserves and earning capabilities in respect of foreign exchange, successive governments of the Nigerian Federation concentrated on legislation and policies that added fillip to upstream operations. Little wonder therefore that there has been a dearth of legislation as regards the refining, transportation (of both crude and finished products), distribution and marketing of the petroleum products. These activities put together are contextually referred to as "downs tream operations"[5] of the oil and gas industry.

In the earliest decade after Nigeria's independence (1960-1970), there was no statute in place that gave directives in the marketing of petroleum products except that the government, through the national oil company then, the Nigerian National Oil Corporation (NNOC) began to forage into the petroleum operation which, according to the Petroleum Profit Tax Act[6] 1958 is defined as drilling and extracting activities. The NNOC was primarily charged with regulatory and supervisory roles until 1977 when it was replaced by the Nigerian National Petroleum Corporation (NNPC). The role of the newly created

[4] Omorogbe Y. (2003) *Oil and Gas Law in Nigeria*. 1st Ediiton, Malthouse Press Ltd Lagos, p. 33.
[5] NNPC in-house Publication, (2006) *Deregulation of the downstream sector of the Nigerian Petroleum Industry - Information for all Stakeholders*, p. 1.
[6] 25th Item in Section 2, Cap 151, L.F.N 1958 and this was repealed by the1969 Petroleum Fuel (control) Act No 51.

NNPC was enlarged to accommodate engaging in petroleum operations (upstream activities) as well as refining, supplying, distributing and marketing (Downstream) activities.

With particular reference to the downstream activities, the Nigerian National Petroleum Corporation Act, 1977[7] charges NNPC with the duty of refining, treating, processing and generally engaging in the handling of petroleum for the manufacture and production of petroleum products and its derivatives. The act also authorizes the NNPC to purchase and market petroleum, its products and bye-products[8]. This is the basis today upon which the NNPC imports finished petroleum products in augmentation of the shortfall in capacity production being experienced by local refineries. Therefore, the downstream activities were strictly carried out by the government through the NNPC yet, the determination of the prices at which the refined products were to be sold was decided by the Petroleum Minister[9]. In doing this, the Minister can have recourse to relevant information from sources that possess such information. The Petroleum Minister, by virtue of the powers conferred on him, can make regulations prescribing the prices of refined products[10]. These provisions are in direct conflict with the functions of the Petroleum Products Pricing Regulatory Agency (PPPRA), thus

[7] Section 5(1)(b and c) Cap N123, Vol. 12, L.F.N 2004.
[8] Ibid
[9] Section 6, Petroleum Act, Cap. P10, Vol. 13, L.F.N 2004
[10] Section 9(1)(d)(iii)Petroleum Act, Cap.P10, Vol. 13, L.F.N 2004

creating an uncertain state of affairs in this regard.

Until recently, the marketing (comprising its components of refining, distribution, supply and pricing) was done by the government. This state of affairs was dictated and encouraged by the fact that in 1971 Nigeria joined the Organization of Petroleum Exporting Countries (OPEC) which driving objective principle is that the control and regulation of the production and sale of petroleum products be done by the national oil companies so that their citizens can derive maximum benefits from this God-given resource.

The government policy on the downstream sector (deregulation) has made it imperative that guiding rules under which petroleum would be refined, distributed or transported, supplied and retailed to the consuming public be put in place. This has seen the enacting of relevant Acts [11]and subsidiary regulations[12].

The legal history of petroleum products pricing is traceable to the Mineral Oils Act, 1914 (though now repealed) which provision is replicated in the Petroleum Act, 1969. Specifically, the Petroleum Act provides: "The Minister may by order published in the federal gazette, fix the prices at which petroleum products or any particular class or classes thereof may be sold in Nigeria or in any particular part or parts

[11] Petroleum Act, 1969 as amended: Petroleum Products Pricing Regulatory Agency (PPPRA) Act; and the Downstream Gas Act, 2003

[12] Petroleum Regulations made pursuant to the Petroleum Act.

thereof"[13]. An analysis of this provision will leave no one in doubt in respect of whom and by what means the prices of petroleum products are to be fixed and published for the consumption of the public. It is also clear that the price to be fixed by the Minister is with respect to refined and finished products and not the price of crude oil. In conferring this power, the Petroleum Act envisages that the fixing of petroleum products prices would be quite serious and, therefore, to lighten this burden, makes it legally mandatory for any person appearing to the Minister to have or to be likely to have information which is relevant to the fixing of any petroleum product prices to supply such information.[14] Also realizing that the Petroleum Minister is subject to human limitation, the Petroleum Act, granted the Minister legislative power, as it were, to make rules and regulations that would enhance his performance and subsequent realization of the intendment of the Petroleum Act. Thus, by section 9(1)(d)(iii)[15]the Minister is authorized to make regulations for the prices of refined products. So it was that before 1973, the petroleum product marketers only had to be informed by the Minister (in most cases through the petroleum ministry) of prices at which the petroleum products were to be sold. Even during the dark era of military dictatorship in Nigeria, this legislative function of the Petroleum Minister was performed as demanded by law.

[13] Section 6(1), Petroleum Act, Cap P10, Vol. 13, L.F.N 2004
[14] Ibid
[15] Petroleum Act, Cap P10, Vol. 13, L.F.N 2004.

Surprisingly, there exists a law[16] enacted by the National Assembly which deals with petroleum products pricing in Nigeria. This curious piece of legislation has, in section 1,[17]created an agency known as the Petroleum Products Pricing Regulatory Agency, which is autonomous, only answerable to the President and Commander-in-Chief[18] of the armed forces and shall not be subject to the direction, control or supervision of any other authority[19]in the land. From the foregoing, it is an attractive conclusion to say that either the post of the Petroleum Minister has been dispensed with or that a parallel or even superior agency has been brought into existence for the purposes of determining the prices of petroleum products for sale throughout the federation of Nigeria. Much as this appears plausible, it leaves a legal lacuna. Or, how else can one interpret a situation where a principal Act[20]in respect of petroleum has provided that the Minister of Petroleum shall determine the price of petroleum products and without abrogating or repealing the provision in the principal Act, the National Assembly goes on to create an agency saddling it with the same functions which the principal Act has bestowed on the Minister? Agreed that the post of the Minister is at the discretion of the President, yet where the President does not appoint a Minister for an existing ministry, he

[16]Petroleum Products Pricing Regulatory Agency (Establishment) Act 2003
[17] Ibid
[18] Section 1(3), PPPRA
[19] Ibid
[20] Petroleum Act, Cap P10, Vol. 13, L.F.N 2004.

thereby holds himself out as acting in dual capacity, that is, as a Minister of Petroleum and President of the federation. The office of Ministers is for the President to create in obedience to section 147 of the Constitution of the Federal Republic of Nigeria, 1999. Where the President does not or fails to appoint a Petroleum Minister, he can, by acting in dual capacity and in obedience to sections 6 and 9(1) (d)(iii) of the Petroleum Act fix the prices at which petroleum products shall be sold throughout the federation. Or in the alternative donate this power to a body constituted by him rather than an outright enactment of a statutory body. In this entire situation should the National Assembly not have repealed sections 6 of the Petroleum Act, 1969 before proceeding to enact the Petroleum Products Pricing Regulatory Agency (Establishment) Act, 2003? In any government where there is a Petroleum Minister who invokes the powers given to him by sections 6 and 9(1)(d)(iii) of the Petroleum Act to fix the petroleum products prices where would the Petroleum Products Pricing Regulatory Agency's (PPPRA's) functions be located? This is a thematic issue!

The anomaly created by the above probable events is to have an uncertain state of the petroleum products marketing law whereby the single duty of determining petroleum products prices is shared by two statutorily-created bodies. This may likely lead to a stalemate and confusion whenever these two bodies fix petroleum products prices

independent of each other for the Acts (PA and PPPRA) did not instruct the bodies to collaborate in their duties or functions. A legal quagmire would be created if the Petroleum Minister, pursuant to section 6 subsection 2 of the Petroleum Act requests for information from the PPPRA which information is relevant to the fixing of petroleum products prices by the Minister. Where this happens, the subsection makes it mandatory that any person (including corporate body) so requested by the Petroleum Minister shall be legally bound to use his best endeavours to supply the information accordingly. What may likely agitate a discerning mind is that as between the two (the Minister and PPPRA) which one's price will take precedence over the other? Is it the PPPRA as it is created by the Parliament through an Act or the Petroleum Minister whose position was also created by the constitution? The National Assembly, by creating the PPPRA without first abrogating section 6 of the Petroleum Act has given birth to a legislative monster that will pose a difficult knot for the Judiciary to untie.

This uncertain state of affairs will definitely create a difficulty in interpreting the provisions of section 2[21] which provides for the reimbursement of oil marketing companies for any loss sustained by them solely and exclusively as a result of the sale by them of petroleum products at uniform prices throughout Nigeria being prices fixed by the

[21] Petroleum Equalization Fund Act, Cap 356, L.F.N 1990

Minister pursuant to section 6(1) of the Petroleum Act. Applying the literary rule of interpretation, one cannot but reach an inevitable conclusion that were loses to be sustained as a result of the sale of petroleum products at uniform prices throughout Nigeria, being a price fixed by the Petroleum Products Pricing Regulatory Agency, the oil marketing companies would be excluded from the benefits of the fund. This is an absurd provision! Chronologically, the Petroleum Act predates the Petroleum Equalization Fund Act which in turn came into existence before the Petroleum Products Pricing Regulatory Agency Act. If this is true, the law makers ought to be seised of this fact and proceed to abrogate or repeal old and obsolete laws before enacting a new law that will be in conflict with existing ones.

The federal government policy of deregulation is in contradistinction with the regulatory provisions in the existing laws in respect of price determination. If the word "deregulation" is defined to mean the act or process of removing restrictions and regulations[22] or reduction of government regulation of business to permit freer markets and encourage competition[23], then how does the policy salute or is indicative or supportive of the regulatory provisions[24] in the downstream (refining, distribution supply and marketing) activities?

[22] Merriam-Webster Collegiate Dictionary USA 10th Edition, 2000, p. 311
[23] Black's Law Dictionary, 6th Edition pg 443
[24] Petroleum Act: PPPRA: Petroleum Regulations: Petroleum Refining Regulations.

The Petroleum Refining Regulations did not in any provision make arrangements as to the determination of the price or prices at which petroleum products may be sold in Nigeria or any part thereof. This omission is founded on the presumption that pursuant to section 6 of the Petroleum Act, the Minister, relying specifically on sub-section 2 of the said section 6 and having obtained the required information that will be necessary and expedient in forming opinion as to the prices, will fix the prices such that reasonable profit margin for the investor ought to be taken care of.

The Petroleum Act makes the Petroleum Minister the 'alter ego' of the Nigerian Oil and Gas sector. This is so because, no petroleum business can anyone engage in without the prior consent of and permission by the Petroleum Minister.[25] Thus it is a curious provision that for a grant of licence over a "marginal field" which is derived from an unexplored part of land over which a prior and proper lease or licence had been granted, the President and Commander-In-Chief is given the power instead of the Minister. The above constitute the background upon which this topic is chosen for this research as what has been discussed herein is just an insight to the state of the laws governing downstream activities in the Nigerian Oil and Gas Industry.

[25] The Petroleum Minister can revoke a lease or license if the lease or licence is in breach of good oil field practices.

1.2 Statement of the Problems

The thrust of this research is in the identification, examination and analysis of legislation (primary and subsidiary) that relate to the downstream activities which comprise refining of crude oil, transportation (supply and distribution) and marketing (storage and retailing) of petroleum products. The issues for consideration involve the laws on price fixing which at present are conflicting. There is no effective legal mechanism for correcting offenders and no robust and comprehensive legal framework for the regulation of the petroleum industry with particular attention on the downstream sector. There are conflicts of functions between the Petroleum Minister and the Petroleum Products Pricing and Regulatory Agency. The functions of government regulatory agencies are not clearly defined and therefore work at cross purposes e.g. the Department of Petroleum Resources (DPR), the Petroleum Products Marketing Company (PPMC) and the Petroleum Products Pricing and Regulatory Agency (PPPRA). The Petroleum Equalization Fund put in place for the sole purpose of unifying the pump prices of petroleum products nationwide is ineffective, and has resulted in waste of financial resources, and the government involvement in the downstream sector makes law enforcement weak and ineffective.

As a result of the sensitive nature of petroleum product, being a commodity that touches the life of every citizen in the country and having so wide an importance, the major and independent marketers as well as the government were secretive in providing relevant information on issues such as factors that determine the pump price of petroleum products. Researches on issues as sensitive as this always face the problem of documents being styled "secret", "sensitive" and "restricted".

1.3 Aim and Objectives

This research acknowledges the all-pervasive importance of petroleum and its derivatives. Therefore, governments the world over, excepting the United States of America, have intervention and supervisory provisions in their statute books. Not being conscious of what happens in the oil and gas sector of any nation's economy by the government, leaves its citizens to the grip of absolute market forces which in most developing countries, such as Nigeria, are not informed by economic rules[26]. A capitalist in any market-driven economy is obsessed with the desire to maximize returns on investment without due considerations[27] as to the consequences on the poor masses in so far as profits keep climbing.

[26] Bhagavan M. R. (1999) *Petroleum Marketing in Africa - Issues in Pricing, Taxation and Investment*, 2nd Edition, Zed Books Ltd, London p. 11.
[27] Ibid

Traditionally, the petroleum sector (downstream) is one of the areas in which governments have and are intervening heavily in the developing world. This is so because governments are keen to guarantee security of supply. Public investments are made in developing the petroleum marketing and retailing infrastructure. Governments are heavily involved in refining, storage and distribution while the private sector dominates retailing. This was what informed the government's determination of the price at which the refined products should be sold.

Furthermore, of this research therefore is to bring to the consciousness of the government in particular and the public in general the inconsistencies between what is in the statute books and what obtains in reality so as to stimulate a national discourse and consciousness leading to consolidation and total review of the legal framework for petroleum products marketing in Nigeria. The term 'consolidation' here has the contextual meaning of not just locating the laws in one statute form or book but that the duplicity, conflicts and uncertain state of the law be properly addressed.

A further objective is also to draw the attention of the national legislature to the fact that the legislative methods adopted in enacting laws without first constituting a committee to holistically review past

and existing laws with a view to eliminating conflicts and repetitions contained therein is highly defective and faulty. This has left the nation with laws which are in conflict with one another and repetitive. The adoption of the recommendation that will be made at the end of this research will undoubtedly eliminate this unacceptable trend.

Finally, it is the objective of this research work to stimulate a national discourse that will throw up issues in respect of product supply and distribution. This will provide the industry with suggested solutions to the unending product scarcity and price fluctuations.

1.4 Scope and Limitations of the Research

This research presents an analysis and examination of the laws (legal framework) governing activities in the downstream sub-sector of the oil and gas industry in Nigeria. These downstream activities include refining of crude oil into derivates and by-products, transportation and distribution, supply and retailing of the petroleum products. In doing this, the following relevant statutes were discussed.

a) The Petroleum Act, Cap P10, Vol. 13, LFN 2004

b) The Petroleum Regulations, 2004

c) Petroleum Refining Regulations, 2004

d) Petroleum Equalization fund Act, Cap 356, LFN 2004

e) Petroleum Production and Distribution (Anti-Sabotage) Act, 1975

f) Petroleum Products and Pricing Regulatory Agency Act, 2003

g) Hydrocarbon Oil Refineries Act, Cap H7, LFN 2004

h) Associated Gas Re-injection Act, Cap A25, LFN 2004

i) Various Amendments to the above Acts.

The examination and analysis of these and other laws, inclusive of government policies as different from the laws, elaborate on the issuance of rights (licences) to engage in downstream activities, the effect of such rights against the underlying principle of deregulation, how prices are fixed and the reason why inspite of government efforts and polices there is still hiccups in supply, distribution and marketing of petroleum products.

The scope further covers the operators in the downstream sectors, including the government marketer, Nigerian National Petroleum Corporation (NNPC) as represented by the Petroleum Products Marketing Company (PPMC). The various refineries were examined with a view to locating their roles in the realization of product availability and the bridging of petroleum products.

In the realization of this research, effort were made towards visiting some operators in the downstream sub-sector with a view to

obtaining hard facts concerning their activities. This involved additional expenses by virtue of transportation to various establishments both private and public. Also a thorough research involves the acquisition of research aiding devices such as CD-ROMs, cameras, videomatic tutor machines and computers. These required huge sums of money to acquire, hire and use.

The entire aspects of petroleum refining, distribution and supply as well as marketing (Pricing and delivery) received adequate attention.

1.5 Research Methodology

The principal research method adopted is the doctrinal method. This method essentially involved reliance on libraries for consultation of books, journals and relevant publications. This approach also used the primary as well as secondary sources of data and/or information.

Articles in daily and periodic newspapers were other relevant sources of data. Radio and television talk-shows and academic discussions on these matters also provided relevant insights. Judgments of courts in cases that appertain to Oil and Gas downstream activities did constitute sources of information for this research.

1.6 Literature Review

There are substantial works published in respect of exploration,

production and exploitation of petroleum which involve petroleum contracts, licences, leases and sale or export of crude oil. Amongst authorities and experts (whose works were consulted) in this regard are:-

Etikerentse's work,[28] "Nigerian Petroleum Law" is relevant to the study. This work discusses the historical perspective of petroleum activities before, during and after the colonial era. The main thrust of the publication is petroleum contracts with particular reference to exploration and production dwelling mostly on the operator at work; fiscal issues concerning incentives under Memorandum of Understanding and the Petroleum Profit Tax Act, 1959. Joint Venture arrangements, Production Sharing Contracts, Pure Service Contracts, Technical Assistance Agreement and Risk Service Contract were holistically discussed in the book which 1st edition was published in 1984 by Macmillan Publishers. It provided a guide to frontline lectures and acted as a precursor to Oil and Gas research. The latest edition has stretched the discussion to include emergent areas such as marginal fields and local content policy of the federal government. This literature falls short of being relevant in the area of this research, in that, issues relating to downstream sub-sector of the Oil and Gas Industry are not considered. This work is greatly useful for studying what the law is

[28] (2004) *Nigerian Petroleum Law*. 2nd edition, Dredew Publishers, Lagos.

concerning the searching, working, wining and carrying away of crude oil.

Omorogbe[29] examines the Oil and Gas Industry relative to Exploration and Production (E&P) Contracts. This work is detailed in this regard as fundamental issues preparatory to the signing of the contract are discussed. The contracts, Production Sharing Contract (PSC), Joint Ventures (JVs), Risk Service Contracts (RSCs) are discussed with emphasis being laid on the contract terms and clauses. The author postulates that to a reasonable extent, government polices determine the formulation of a mutually beneficial contract, particularly in Organization of Petroleum Exporting Countries (OPEC), where member countries leverage on the economic emancipation provisions of the United Nations Conventions on permanent sovereignty over natural resources.[30] The author further measures the company objectives of the International Oil Companies (lOCs) against the country objectives vis-a-vis the role of national oil companies.

In a journal article by the same author, titled "Fundamental Issues Relating to the Development of Marginal Fields in Nigeria"[31] she examines the concept of marginal field production. In doing this, issues such as merits and demerits of marginal fields, contractual devices for

[29] (1997) *The Oil and Gas Industry: Exploration and Production Contracts.* 1st edition Malthouse Publishing London.
[30] United Nations General Assembly Resolution 1803; General Assembly Resolution 3201; G.A Res 3281
[31] Modern Practice Journal of Finance and Investment law, Vol. 3, N04 1999 p. 737

marginal field acquisition and development were elucidated upon. This article and the preceding book contribute only to the extent of providing foundation (information) for this research.

Oche, P.N.[32] in looking at the upstream petroleum contracts, the author dwells extensively on the issuance of licences and leases including their duties, rights, obligations and restrictions. As most authors did, the writer examined the various petroleum contract types without alluding to issues relating to downstream operations as by the title such issues were excluded. Laws in respect of natural gas were also reviewed by the author. This work will be of no practical value to this dissertation.

Olisa[33] discusses the entire Nigerian Laws governing exploration and production. The author lays great emphasis on the role of state participation through national oil companies such as the Nigerian National Petroleum Corporation (NNPC) in the case of Nigeria. Negotiating of the contract types and issues determining the outcome of the negotiation were given prominent place in this work. The relevant terms in these contracts were analyzed but these will be of no serious assistance in respect of this research. Particularly of interest to

[32] (2004) *Petroleum Law in Nigeria: Arrangement for Upstream Operations.* 2nd Edition, Heirs Great Commission, Jos.
[33] (1987) *Nigeria Petroleum Law and Practice*. 1st Edition, Fountain Books Limited, Ibadan.

this research is the aspect of this work that relates to the role of the Ministry Of Petroleum Resources as this is the statutory body charged with the role of issuing permits, licences, authorization and approvals as required under all Oil and Gas Laws in Nigeria including plants like refineries, petrochemicals and liquefied natural gas plants, and for marketing petroleum products. The author emphasizes the Department Of Petroleum Resources which is the technical, supervisory and enforcement arm of the ministry.

5. Bhagavan, M.R[34]:- This book deals with petroleum marketing in Africa but with particular reference to Kenya and Ethiopia. The author examines issues relating to the law governing the marketing of petroleum products in these countries but with heavy bias on the marketing, investment and taxation. Much as this work will be amply useful in the comparative analysis of the laws governing petroleum products marketing in Nigeria and other African countries, it will be limited to role of governments in petroleum products marketing.

1.7 Justification/Significance of Research

Available literature in this aspect of oil and gas law (mid and downstream operations) dealt with upstream operations comprising exploration and production. With the consciousness of this imaginary

[34] (1999) *Petroleum Marketing in Africa: Issues in Pricing, Taxation and Investment.* 2nd Edition, Zed Books Ltd, London.

river consisting of three streams, that is, upstream, midstream and downstream, it is academically rational for literature on both mid and downstream to be preponderant too.

Secondly, this research is justifiable on the grounds also that the regulatory laws in respect of petroleum refining, distributing, supplying, pricing and retailing are distorted and compounded by the fact that the deregulation policies of government are not in tandem with supervisory and regulatory provisions in the statute books.

The product of this research will benefit the government of Nigeria as an exposition of the reasons for licensees' inability or failure to actualize the licences for the building of private refineries.

1.8 Organizational Layout

The entire dissertation is divided into seven (7) chapters and written in a style which allows for issues discussed in a preceding chapter to dovetail into the next thus enhancing reader friendliness and ease of comprehension.

Chapter one is a general introductory chapter which introduces the reader to the basic concept contained in the dissertation and acquaints him with the method of the research and technique of writing. The chapter discusses the background statement, scope as well as

objectives of this dissertation. The justification and significance of the research are contained in chapter one.

Chapter two introduces the reader to the antecedents in the oil and gas sector and discusses the granting of rights of exploration and production by the owner of petroleum in situ. The various petroleum contract types are discussed with a view to preparing the reader towards understanding ownership rights, obligations and restrictions of grantees, the consequences of these grants vis-a-vis ownership rights of produced oil and gas.

Chapter three extensively examines the laws governing downstream activities in Nigeria. These activities are really provided for by various Acts and Regulations. They are treated on the basis of Acts in respect of refining, transportation, storage, distribution, and sales. The chapter also looks at the attempt by government at standardizing issues by virtue of the Petroleum Equalization Fund Act.

The fourth chapter is the fulcrum of this dissertation as it introduces issues that deal with what happens to the crude oil which is meant for local consumption. The need for, and of government intervention in the provision of finished products is discussed with a view to highlighting the effect of such intervention in the light of deregulation.

Chapter five considers the fixing and determination of petroleum prices.

The role of government in ensuring security of supply by being, hitherto, the only organ involved in refining, storage, transportation and supply. The chapter also examines the refineries, their operational capacities and deficiencies, the issue of subsidy and grant of licence upon payment of fees as government also raises revenue from such levies.

Chapter six essentially deals with investment and government policies in this regard. Financing of Oil and Gas activities in the downstream sector is highlighted bringing out the legal and economic barriers. It goes further to discuss taxation in relation to petroleum revenue. The chapter equally discusses the structure of taxes under the Petroleum Profit Tax Act as well as the rationale of government intervention in the fixing of petroleum product prices.

Chapter seven is the final chapter. It summarizes issues as canvassed in the preceding chapters and attempts some recommendations in respect of perceived lapses either in the law or in policy and practice by the authorities. This chapter ends with concluding remarks.

CHAPTER TWO

CONCEPTUAL CLARIFICATION OF KEY TERMS AND HISTORICAL DEVELOPMENT

2.1 Introduction

Petroleum is defined in section 15(1) of the Petroleum Act, Cap P10 Vol. 13, Laws of the Federation of Nigeria 2004 as "…Mineral Oil (or any related hydrocarbon or natural gas as it exists in its natural state in strata, and does not include coal or bituminous shale or other stratified deposits from which oil can be extracted by destructive distillation)". It is deducible from the above statutory definition that petroleum is a compound that is essentially made up of hydrogen and carbon – a combination of which is commonly referred to as hydro-carbon. It can exist in gaseous form (known as crude oil) or as solids (known as coal, shale, tar sands or bitumen). The most commonly used is the crude oil which is a type of hydro-carbon.

The oil industry occupies a prime position in the economy of several nations. This is because of its importance to the world economy and its physical state. As a result of this uniqueness, it has attracted to itself certain features which are rarely found in other sectors of any nation's economy. This physical state has fundamentally affected the evolution of the industry.

The development of the oil and gas industry in Nigeria is traceable to the Mineral Oils Act 1914[1] which was enacted to regulate the right to search for, win and work mineral oil.

Because of the importance of oil to the world economy, its ownership has been influenced considerably by activities on the world scene, that is international law especially that relating to the exploration of the natural resources beneath the high seas. This ultimately gave birth to the concessionary era where several contractual arrangements which entailed the grant of exclusive rights to explore, produce, market and transport the won petroleum and its products were made.

A concomitant of the Federal Government ownership of mineral oils in situ is the power to make grants for the exploration and production of petroleum. Chapter one of this dissertation addressed the evolution of petroleum contracts so far made in Nigeria. Also addressed are the discretional awards of Oil Prospecting Licences (OPLs) and the farm-out of marginal fields to indigenous businessmen. The different contracts as well as the rights conferred there-under are highlighted. Furthermore, a short but necessary discourse is undertaken on natural gas and its utilization.

[1] Grants to explore for petroleum were given earlier under the provisions of Order 19 of 1909 laws of southern Nigeria.

2.2 Definition of Key Terms

It is imperative to define some key terms that are (used in the context of the framework) in this dissertation. The definitions that may be required for other terms contained in the dissertation will be given as they fall due within the relevant chapters. It is to be noted that the interpretation of the key terms, be it wider or restrictive as may be given here, are by no means exhaustive but are submitted for the purpose of giving them contextual meaning.

Examination

Literarily, the Webster's Dictionary[2] defines this word to mean the act of examining; inspection; inquiry; investigation. This word, a noun, is a derivative of the word examine which itself is a verb and has the meaning given to it by the same dictionary to inspect or scrutinize carefully; to inquire into or investigate.

In the legal context, Black's Law Dictionary[3] defines it as an investigation search; inspection; interrogation. The research will adopt, for the purposes of this dissertation, 'examination' in the context of to inquire into and/or scrutinize carefully. This will require an inquiry into or a scrutiny of the laws in respect of downstream operations.

---

[2] *Webster's Encyclopedic Unabridged Dictionary of the English Language, 1994, Graymercy Books, New Jersy, U.S.A.. p. 496*
[3] *6th Edition, 1990, West Group p. 557*

Legal

Black's Law Dictionary[4] defines legal as conforming to the law; according to law; required or permitted by law; good and effectual in law, Lawful… created by law…

The implication of this is that the word legal is interchangeable with 'lawful'. However, the Webster's Dictionary[5] gives it a more acceptable definition that meets the context in which the word is used in this dissertation. It says permitted by law; Lawful; of or pertaining to law; authorized by law; recognized by law.

This is defined[6] as work done in, on, or with a frame. Frame itself is defined[7] as form, constitution, or structure in general; system, order. This research will adopt this as a working definition with a view to considering the legal form, construction, structure, of order of laws in respect of downstream activities.

Downstream

Literarily downstream is defined[8] as "with or is the direction of the current of a stream". This definition runs counter to the word as used in the Oil and Gas Industry in Nigeria. The word 'downstream' in the

[4] *Ibid*
[5] *Webster's Encyclopedia op.cit*
[6] *Ibid*
[7] *Ibid*
[8] *Ibid*

context of Oil and gas, represents the end activities of petroleum operations these activities donate refining, transportation, storage, supply and selling to consumers. These activities are hereby given a one-word umbrella definition "marketing". The "end activities" refers to an imaginary stream of activities divided into two, viz.

1. Upstream which involves Exploration and Production (E&P)
2. Downstream as indicated above

Marketing

In this context connotes the downstream activities such as refining, transportation, storage, supply and selling of petroleum products.

Petroleum Product:

In this context, means petroleum bye-products realized upon refining. These petroleum products include;

- Premium Motor Spirits (PMS)
- Dual Purpose Kerosene (DPK)
- Automotive Gas Oil (AGO or Diesel)
- Low Profile Fuel Oil (LPFO)
- Aviation Fuel (AF or AK) Jet A1

- High Profile Fuel Oil (HPFO)
- Paraffin Wax
- Lubricant for example grease, engine oil, base oil
- Bitumen/Asphalt

2.3 The Development of Oil and Gas Industry in Nigeria

Shortly after the 1914 amalgamation of the northern and southern protectorates, the first legal framework on petroleum (oil) activities was enacted. This was the Mineral Oils Act 1914. This Act was enacted to regulate the right to search for, work and win mineral oils. This aspect of law did not develop in any great measure until the later part of 1950-1960 decade when the active search for oil was stepped up[9]. One other reason for its slow growth was the cessation of the pioneering work which began in 1908 by the then German firm known as the Nigerian Bitumen Company on the outbreak of the First World War. With Nigeria then under the territorial control of the United Kingdom, and Germany losing the war, the Nigerian Bitumen Company's activities which had not recorded any commercial discovery were not resumed at the end of the war. Instead, a consortium of Royal Dutch and Shell (Dutch and English interests) known as Shell D'Arcy Company emerged and began oil exploration operations in 1937 from

[9] Etikerentse, G. (2004) *Nigerian Petroleum Law*. Dredrew Publishers, Lagos. p.9.

its base in Owerri, the present state capital of Imo State[10]. Shell D'Arcy's operations similarly experienced an interruption of six years because of the Second World War and it was not until 1946 that the company resumed active operations. By that date (1946), it had been joined by British Petroleum (BP), the British state-owned oil company thus establishing Shell-BP, as it was commonly known before the nationalization of BP's shares in 1976[11].

Shell-BP commenced exploration activities in 1946 and proceeded with drilling its first well in 1951 at a location near Ihuo village, some sixteen kilometers north-east of Owerri. From there, its operations were moved to drilling its Akata 1 well. At this stage, Shell-BP enjoyed a great measure of governmental protection of the oil industry in Nigeria and therefore, the early development and growth of the Nigerian petroleum industry were understandably linked with Shell-BP's operations and advancement.

With the company's increased activities, there came as to be expected, some form of government control and regulation to ensure compliance with safe and good oil-field practice, acceptable by international standards. Accordingly, a set of regulations known as the Mineral Oils (safety) Regulations 1952 were issued with an effective

[10] Ibid, p. 6

[11] B.P's shares in the company were nationalized by the Nigerian government in 1979. Acquisition of assets of B.P. Company Act. Cap3. LFN 1990

date of 31 January 1952. These regulations have since been updated and are currently as amended known as Mineral Oils Safety Regulations – a subsidiary legislation under the Petroleum Act Cap P_{10} Laws of the Federation of Nigeria 2004.

The first commercial discovery of oil was made in early 1956 in a location near Oloibiri village in Bayelsa State with production starting at 5,100 barrels per day in 1958. Since pipelines were one of the cheapest means of transporting crude along distances up to the point of export, the Oil Pipelines Act of 1956 (now Cap O7, Vol.13, LFN 2004) was passed with provisions designed to meet the requirements of this development.

Towards the end of the 1950-60 and before Nigeria gained independence from Britain, there was a repeal of the law which disqualified non-British companies from grants of exploration licences. This made available for grant in addition to other areas, 50% of Shell's entire concessions at the time, which it relinquished in1958. Thus some international companies which were mainly of American nationality became involved in the search for oil in Nigeria[12].

Resulting from the increase in the number of oil companies in Nigeria, coupled with the experience gained by Nigeria from the

[12] Examples of such companies include Mobil Oil, Texaco, Sunray Tenneco, occidental as well as satrap

conditions that existed between the Nigerian affiliates of the multinationals in the Middle East and their host Arab oil producing countries, a change in Nigeria's existing petroleum legislation was indicated. Thus, it was clear that the frail structures of the Mineral Oils Act, 1914 (and its amendments) could no longer sustain the modern pressure and trends in the industry. So, in 1969 the first major attempt at producing a detailed and comprehensive law for the grant of rights to search for, work and win oil in Nigeria and the conditions connected therewith was made through the promulgation of the Petroleum Act by the Federal Military Government[13]. The Petroleum (Drilling and Production) Regulations were prescribed at the time as a subsidiary legislation of the Petroleum Act under legal notice No. 69 of 1969[14]. The 1969 Act introduced many major changes to the 1914 Act as a result of which the latter was wholly repealed. All the oil companies granted oil prospecting and oil mining concessions were subject to its provisions. The law as amended is now known as the Petroleum Act, Cap P10, Vol. 13, LFN 2004.

This state of affairs in which the multi-national companies dominated the petroleum sector of the Nigerian economy continued until after independence when Nigeria, like other former colonial

[13] One of its objectives was to end the inequities contained in the concessions which virtually gave the entire ownership of extractable petroleum to the concessionaires.
[14] Also section 4(2) of the interpretation Act Cap 192 LFN 1990

territories, discovered that its economic lifeline was inextricably tied to the apron strings of its colonial master, Britain and the other developed countries of the northern hemisphere. Specifically, Nigeria realized that her newly won independence did not herald a significant change in her economic wellbeing and so, a change in the status quo in which the transnational petroleum companies virtually owned and controlled extracted petroleum was imperative. Thus government's greater involvement and participation in the operations of the transnational petroleum companies which were located in the country became inevitable.

The concerned government agency began as an offshoot of a one-man unit in the Mines Division of The Ministry of Lagos Affairs[15]. The unit was upgraded to a division in 1963 due to increased activities in the oil industry. This division was later upgraded to the status of a Department of Petroleum Resources (DPR) in 1970. In 1975, the Department of Petroleum Resources was again upgraded and it became known as the Ministry of Petroleum Resources. The function of the Ministry of Petroleum Resources until 1975 was mainly the enforcement of regulations relating to the operations of the oil companies in order to ensure their compliance with good oil-field practice.

[15] Lagos was administered originally as a colony distinct from the protectorate of Nigeria and prior to its being upgraded to a State in 1967; there existed a Federal Ministry of Lagos Affairs.

Nigeria became a member of the Organization of Petroleum Exporting Countries (OPEC) in 1971 and for the implementation of OPEC's decisions, a government agency was necessary. Thus by April 1971, the Nigerian National Oil Corporation (NNOC) was established by Act No.18, which conferred it with powers to participate in all phases of the petroleum industry[16].

Because of the dichotomy created by the separate existence of the Nigerian National Oil Corporation and the Federal Ministry of Petroleum Resources and their independent operations, it was then thought that higher standards of the policies set by government in the industry would be better achieved if just a single concern was put in charge of this sector of the economy. So by Act No. 33 of 1977 [17] the NNOC which was the operative arm was merged with the former Federal Ministry of Petroleum Resources which was the regulatory arm to form the Nigerian National Petroleum Corporation (NNPC). At the same time, their former functions were fused in the new corporation which is a juristic person that can sue and be sued in its name.

2.4 Ownership Theories of Oil and Gas

"Owner" is defined in the 8th edition of the Oxford English Dictionary as "A person who owns something".

[16] Sections 2 and 3 (1) (c) and (d) of the NNOC Act of 1971 (repealed) and sections 4 and 5 of the Nigerian National Petroleum Corporation Act.
[17] Now Cap. 320

Generally, an owner is regarded as a person who has or owns something and can do as he sees or deems fit with that something. Ownership consists of the right to use and enjoy, the right to alienate, the right to reversion, the right to possession and the right to destroy the thing owned.

Ownership can therefore be defined holistically as the legal right over any property which right is inclusive of the ability to treat the property in any manner the owner deems fit including sale or alienation of the property. It is the collection of rights allowing one to use and enjoy property, including the right to convey to others[18]. It implies the right to possess a thing regardless of any actual or constructive control. Ownership rights vary. They are general, permanent, and inheritable[19].

In **Chief Joseph Abraham & Anor v. Ishau Amusa Olorunfunmi & Ors[20]** the Court of Appeal per Niki Tobi J.C.A. (as he then was) commented on the scope of the rights entailed by the collection in ownership when he said:

"...Generally speaking, ownership connotes the totality of or the rights of the owner over and above every other person on a thing..."

The court then went further to dwell on the benefits of ownership

[18] Garner, A.G. (ed) (2004) Blacks Law Dictionary (9th ed) St Paul's Publishers, Minnesota, p.1131
[19] Ibid.
[20] (1999) NWLR (pt. 165) 53.

when it said:

> The owner of the property is not subject to the right of another person. Because he is the owner, he has the full and final right of alienation or disposition of the property and he can exercise the right without seeking the consent of another party because as a matter of law and fact there is no other party's right over the property that is higher than his.

The connotative character of the term ownership is acknowledged by Dias, who denoted same by stating that ownership consists of an innumerable number of claims, liberties, powers and immunities with regard to the thing owned[21]. He further stated that "it is misleading to talk as if ownership means only the claims etc. It would be truer to say that a person is entitled to these claims by virtue of the right of ownership[22]".

The court's pronouncement as made out above shows, in a nutshell, what ownership is and spells out the rights and powers it vests or confers and that beyond the owner of a property there is no other. His interest in the property is final and supreme. These are the criteria by which ownership may be identified.

Ownership does not exist in half measures that is, it cannot be alienated in half measures except in the context of sale of goods under

[21] Dias, R.W.M, (1985) *Jurisprudence.* Butterworths, London. p. 292.
[22] Ibid

"special property" which is exemplified in leases and mortgages[23].

The right of ownership encompasses the right to destroy or extinguish the thing owned. This definition, attractive and elucidating as it is, did not consider ownership of land which cannot be extinguished by the death of the owner. Thus, ownership of land, if not alienated, resides permanently with a family.

A further stretching of the definition of ownership will evidence the fact that ownership is absolute or restricted. Absolute ownership involves the right of free *as well as exclusive enjoyment, including the right of using, altering, disposing of* or destroying the thing owned. Absolute ownership is of indeterminable duration[24]. Under the oil and gas law in Nigeria, ownership is absolute. Absolute ownership of land is not obtainable for the fact that all lands belong to the crown, community[25] or government. Restricted ownership is where it is limited to some extent, for example, tenancy or charged with the payment of a sum of money or subject to an easement[26].

In most definitions of ownership, land is distinguished from other types of property ownership. This is so because under Common Law,

[23] Special property clause highlights instances where a person may have possession of a property but does not have legal title.
[24] Osborne's Concise Law Dictionary (9th edition), Sweet & Maxwell, London (2001).
[25] As in Britain and Nigeria.
[26] Op cit, Osborne's Dictionary.

land is inclusive of *quicquid plantatur solo solo cedit*[27]. By implication, therefore, in a capitalist economy, where individuals own land, the mineral resources located therein belong to the landowners, be it oil or gas.

Under Oil and Gas Law, ownership is absolute. For this reason, nations enact laws which bestow on them absolute ownership of minerals found within their geographic expression.

Undoubtedly, crude oil and natural gas are natural resources which occurrences are natural phenomena. Intrinsically, natural resources are stores of value. Since the value has been discovered by mankind, it is impracticable to conceive of any instance in which the existence of any man may be devoid of the phenomenon of ownership.

Invariably, the vesting of ownership of petroleum in its natural state in strata is determined by a number of factors, chief of which is the political system in place at the time of the determination. In a dictatorship, the will of the dictator prevails. In a democratic system, the matter is a question of numbers. One of such circumstances is the parliamentary strength of the ruling party and discipline. The intervention of other factors and circumstances cannot be ruled out.

Prior to the New International Economic Order (NIEO), most third

[27] Which means he who owns land, owns what is in it deep down the earth and he also owns what is on top of the earth space up to the sky and beyond.

world countries including Nigeria were caught in a web whereby the investment for the exploration of natural resources were totally in the hands of transnational corporations from the industrialized and technologically advanced countries of Europe and North America. At this stage, the natural resources in situ belonged to host countries but, upon extraction, the crude oil thus extracted belonged entirely to the corporations and their home governments. The only benefit accruable to the host nation was the mere collection of taxes, royalties and lease rentals which amounted to pittance compared to the crude oil taken away by the transnational companies. This regime remained in place until the third world countries began to demand a change in the status quo. As a result of these demands and pressures, in December 1962, the United Nations, at its General Assembly, passed a resolution on permanent sovereignty over natural resources known as GA Res 1803. This resolution, while rejecting the old order which gave the ownership of natural resources in developing countries to the investor international corporation, totally conferred on the host country sovereign rights to the permanent ownership of such resources. This concept of permanent sovereignty over natural resources has been given greater fillip since 1962 by various resolutions of the United Nations. Thus in 1974, there was a UN declaration on the establishment of a New International Economic Order known as GA Res 3201 of 1974. Paragraph 4(e)

specifically states:

> We the members of United Nations … declare (e) full permanent sovereignty of every state over its natural resources and all economic activities. In order to safeguard these resources, each state is entitled to exercise effective control on them and their exploitation with means suitable to its own situation, including rights to nationalization or transfer of ownership to its nationals, this right being an expression of the full permanent sovereign of the state…

This provision has the support of Article 2 of the UN Charter on Economic Rights and Duties of States of 12th December 1974. This Article 2 gives power to the host countries to regulate foreign investment and to nationalize alien property on payment of adequate compensation. The interplay of these resolutions and declaration has shifted the base of ownership in oil and gas from transnational corporations to host countries together with the power of nationalization.

From the above, three variants of ownership of oil and gas are discernible:

a) Ownership under the Dominial Law System

b) Permanent sovereignty of natural resources

c) Ownership under the United States Law

Ownership under the Dominial Law System provides for the vesting of ownership rights in a sovereign. This is the most prevalent system of ownership of minerals. Practically, every country except the United States of America retains sovereign rights over all mineral deposits. In most cases, these rights are enshrined in the constitution. In monarchical systems where sovereignty rests with the king, ownership of oil is vested in him as obtainable in Arab countries such as Saudi Arabia, Kuwait and these monarchs hold it in trust for their subjects.

The Permanent Sovereignty Over Natural Resources theory which obtains in Nigeria and Angola is one that totally confers on the host country sovereign rights to the permanent ownership of petroleum resources found within its geographical location. The theory traces its origin to the various United Nations Resolutions which had helped some countries which hitherto had no ownership theories to lay legal claims to deposits within their geographical continental shelf, territorial zones and exclusive economic zone areas. In Nigeria for instance, the entire ownership of oil and gas (mineral resources found within its territory) is vested in the state (Federal Government)[28] as established in the case of **South Atlantic Petroleum Limited v.**

[28] Section 44 (3), also section 1(2) of the Petroleum Act cap. P10 LFN 2004

Minister of Petroleum Resources[29]. In this case, the plaintiff was granted an oil bloc OPL 246. A half of the OPL area of 1000 square miles was later converted to an OML 130. The government attempted to auction the other half of OPL 246. The contention of the plaintiff was that it was entitled to hold the unexhausted period of the lease while the defendant contended that the remaining portion was deemed relinquished and thus reversionary right was in the federal government as the grantor. In this action, the plaintiff sought orders of injunctions and declarations. In his judgement delivered on l4/10/06, the learned trial judge, Mustapha J. (as he then was) held, inter alia, that "there is nothing unlawful in the government policy that the residue of OPL 246 is automatically relinquished and reverted to the federal government on the grant of an Oil Mining Lease No. 130 to the applicant". On appeal, the case was struck out on the ground that the issues raised had become academic.

Academically, and in the humble opinion of this writer, a licence and a lease, in the contemplation of the Act are different authorizations guided by different provisions of the Petroleum Act[30]. The moment a licence is converted to a lease, the terms, duration as well as financial obligations change. The duration of oil rights in licences are issues of

[29] (2006) 10 CLRN 122.
[30] Cap P10, LFN 2004.

discretionary powers of the Minister of Petroleum[31] and the discretion of the Minister whether or not to grant an additional OML cannot be challenged in court.

Surely, the international law position is that every nation has the sovereign control of its mineral resources. This practice is based on the Latin maxim: *quicquic plantatur solo solo cedit*. This means he who owns land, owns what is in it deep down the earth and he also owns what is on top of the earth space up to the sky and beyond for example, mountains, forests, rivers, grasses, stones and minerals. It is because of this principle there have been agitations that the Niger-Delta people of Nigeria should have ownership of mineral oil in their land and is the basis upon which the Niger Delta region of Nigeria gave birth to the issue of resource control[32] which culminated in the case of **A-G Federation v. A-G Abia & 36 ors**[33].

However, the maxim has been qualified by the Constitution of the Federal Republic of Nigeria, in Section 44(3) which provides that:

> *Notwithstanding the foregoing provisions of this section, the entire property in and control of all minerals, mineral oils and natural gas in, under or upon any land in Nigeria or in, under or upon the territorial waters and the Exclusive Economic Zone of Nigeria shall vest in the Government of the Federation and shall be managed in such*

[31] Where the President appoints one otherwise the President so acts as was the case during Obasanjo's regime.
[32] A-G Federation v. A-G Abia & 36 ors (2006)1 SCNJ 1.
[33] Ibid

manner as may be prescribed by the National Assembly.[34]

In this exclusion of the application of the Common Law rule, the constitution is re-emphasized by some other Acts of the National Assembly for example, the Minerals and Mining Act[35], Water Resources Act[36], National Inland and Waterways Authority Act[37] and the Exclusive Economic Zone Act[38]. In all these Acts, and particularly the Petroleum Act[39] the ownership of mineral deposits is exclusively owned by the Nigerian State.

Ownership under the United States Law is a bit more complex and in contradistinction with that of Nigeria. This is because of the fact that the United States practices proper or 'true' federalism in which states control all activities except foreign policies, military and monetary.[40]

Since the inception of the petroleum industry in the United States, there has been private ownership[41]. This right of private ownership of mineral resources has been canvassed by Jan G. Laitos, a Professor of Law in the University Of Denver College Of Law who said:

[34] Cap C23, LFN 2004.
[35] Cap M12, LFN 2004.
[36] Cap W2, LFN 2004.
[37] Cap N47, LFN 2004
[38] Cap E17, LFN 2004.
[39] Cap P10, LFN 2004.
[40] United States v. Loisiana (1960) USSC 28
[41] Westmoreland & Cambria Natural Gas Co. v. De Witt. 130 Pa. 235 (1889)

> "The private property interest is what is owned by the would-be developer and user of the resources. In the United States, mineral, energy, and water resources may be privately owned".

In many parts of the United States where oil is found, there has been freedom of exploitation. This is so because of the rule that applies in some of the states that the owner of the land in which petroleum is found may lay claim to it to some extent.[42] Ownership is vested in individuals upon whose land the products are discovered. This means individuals own oil wells. However, where these individuals explore and exploit these deposits, taxes and royalties are paid to the government of the state where the reservoirs exist.

Some level of authority is exercised by individual coastal states where mineral oil is found. Under this situation the federal government of the U.S. and the coastal states jointly own and/or exploit the oil. Thus, in the case of **United States v. Louisiana**[43], the plaintiff sought an action for declaration against the states of Louisiana, Texas, Mississippi, Alabama and Florida, seeking a declaration that it was entitled to exclusive possession of, and full dominion and power over the lands, minerals and other natural resources underlying the waters of the Gulf of Mexico more than three geographical miles seaward from

[42] Ibid
[43] 363 U.S. 1(1960)

the coast of each state and extending to the edge of the Continental Shelf. It also asked that the states be enjoined from interfering with the rights of the United States in that area and that they be required to account for all sums of money derived by them therefrom since June 5, 1950. The Supreme Court held that coastal states have joint ownership of oil and gas with the federal government. Thus, ownership of oil and gas is determined not by the United States but by the individual states[44]. This is why there are various ownership theories/practices of oil and gas.

In certain jurisdictions, ownership of oil in situ is not recognized unless and until the oil has been produced and reduced to possession. This is referred to as the **Qualified Ownership Theory**. Under this theory, the land owner or lessee, whilst not having full property rights in situ to the resources, does have a recognized right to acquire such absolute title by reducing the hydrocarbons into possession. This theory which obtains in California and Indiana is also known as the **Capture Rule** which rule is founded upon the belief that as migratory properties, ownership of oil and gas can only crystallize if and when oil is captured and brought into possession. In the 17th century case of **Westmoreland & Cambria Natural Gas Co. v. De Witt[45]**, where landowner John Brown executed an oil and gas lease, the lease was

[44] Ibid
[45] 130 Pa. 235 (1889)

eventually assigned to Westmoreland Natural Gas Company which drilled a well and shut it in by closing the valves at the surface and holding the gas in reserve. Brown was unhappy with this arrangement and sought to top-lease the land to a second company. Westmoreland therefore filed a suit to prevent the second company from drilling a well. The court, in affirming the existence of a law of capture, held that gas, like wild animals but unlike other minerals, have the tendency and the power to escape even against the will of the owner and to continue to be his property only while within the area subject to his control, but when they migrate to other areas or fall under the control of other persons, that title to the previous owner disappears. Therefore possession of the land does not necessarily involve possession of the gas. If someone drilling on his own land reaches the common deposit and obtains through those wells the hydrocarbon (gas) of neighbouring areas, the ownership of that oil and gas passes to whoever produced it.

The rule of capture is one of the fundamental concepts in oil and gas law and a generally recognized definition was provided by Robert E. Hardwicke[46] thus:

> *The owner of a tract of land acquires title to oil and gas which he produces from wells drilled thereon, though it may be proved that part of such oil migrated from adjoining lands.*

[46] The Rule of Capture and its Implications as applied to Oil and Gas, 13 TEX. L. REV. 393 (1935)

This law of capture is common law from England adopted by a number of United States of America jurisdictions that established a rule of non-liability and ownership of captured natural resources including groundwater, oil, gas and game animals. The general rule is that the first person to capture such a resource owns that resource. For example, a land owner who extracts or 'captures' groundwater, oil or gas from a well that straddles several lands acquires absolute ownership of the substance even if it is drained from beneath another's land. The land owner that captures the substance owes no duty of care to other landowners.

However, this rule of capture has the likelihood of setting two neighbour land owners against each other. Thus, where a neighbour refuses to grant well rights to an oil company, the oil company may seek grant from a neighbouring land owner to enable the company drain the oil and reduce it to possession by drilling. This was the situation in the case of **Frystak v. Cabot Oil and Gas Corporation,**[47] where the Defendant represented to the Plaintiff that if he failed to sign a lease, the Defendant would negotiate a lease with the Plaintiff's neighbor and capture the gas under the Plaintiff's land through the rule of capture, leaving the Plaintiff without a lease, or gas in his land. It is

[47] No 3:08-CV-667, (2008)

submitted that the rule of capture, as obtained in the U.S.A, is in furtherance of putting ownership cases to an end without acrimony between contenders.

Absolute Ownership Theory, popularly referred to in the oil industry as the 'Texas theory' on account of its origin, exists in the states of Texas, Pennsylvania and Arkansas. Under this variant of ownership, the land owner is regarded as having legal title in severalty to oil and gas beneath his land. He is not a co-owner when the reservoir cuts across lands owned by different persons. However, the limitation to the absoluteness is when the owner loses title if the oil migrates to an adjacent land. Thus, in **Barnard v. Monongahel Natural Gas Co.**[48], the court refused to restrain drilling by an adjacent land owner alleged to be drilling from a reservoir under the plaintiff's land, holding that the plaintiff's remedy was self help by drilling his own well.

Ownership of oil and gas in its state in strata is totally different from the ownership of captured oil and gas. In this state, the market principle or definition of ownership comes into play. Thus, once the crude oil or gas is captured and reduced to physical possession, then ownership can only be transferred upon proper legal system of sale either in a market overt or special or specific markets. Thus

[48] 216 Pa. 362, (1907)

categorically, petroleum in its natural state in strata cannot be a sale of a specific article.

The rule of capture, and/or ownership-in-place, though qualified by capture rule, if allowed its full run, will lead to a dangerous preponderance of oil and gas wells as a result of the fact that every landowner and/or oil seeker will drill as many wells as possible. This undesirable state of affairs will have negative effect on the environment as well as the quantity and quality of captured oil and gas. The rate of dissipation and waste may increase while reserves may dwindle. It was in a bid to stem and checkmate this that the Conservation Act was passed by the US Government which has been domesticated by individual states. The State of Pennsylvania has passed this law which in now known as Pennsylvania Oil and Gas Conservation Law[49].

Principally, this law prohibits the waste of oil and gas which waste includes physical waste as well as drilling more wells than are necessary. It authorizes the Department of Environmental Protection to issue spacing orders which determine where wells can be drilled. This means that when multiple landowners own interests in a drilling unit, the landowners will share in the royalties from the oil or gas well in proportion to their ownership of the land contained within the drilling unit regardless of whose land the well is drilled upon. The law also

[49] 58 PA STATE 401-419

prohibits over productivity through unitization. Sometimes, several oil wells are owned by different people, each well producing oil and gas from a common reservoir. To minimize the production of the reservoir, the different wells may be operated jointly, as one unit. These and other requirements as provided by the Conservation Laws are geared towards achieving orderliness within the oil and gas industry thus preventing clashes amongst landowners.

These variants of ownership as discussed above, are borne out of the nature and relevance of oil and gas as an important source of energy which moves the economic engine of any nation. The political ideology adopted by a nation at any given time, to a reasonable extent, plays a role in the ownership theory adopted by one nation.

2.5 Concessionary Arrangements

Modern forms of petroleum contracts as known today started with the traditional concession system. The word concession has no clear legal connotation in many legal systems. In some countries, the term is referred to as administrative contracts[50] and in others, such as the common law jurisdictions, a concession may take the form of a grant, a licence or a lease or even sometimes all three. As a result, in the mineral resources industry today, concession is an all-embracing

[50] In France, concession agreements are classified as administrative contract

term covering any agreement between the government and an investor for exploration and production of mineral resources.

A number of scholars have attempted to define concession in the traditional sense. According to Williams and Meyers, a concession is:

> An agreement usually from a host government permitting a foreign petroleum company to prospect for and produce oil in the area subject to the agreement. The terms ordinarily include a time limitation and a provision for royalty to be paid to the government.[51]

Consequently, it may be discerned that the concessionary agreement was a relatively simple document, the main provisions of which were an outright grant of the rights to exploit and market minerals recovered within the area of concession by a sovereign in return for which the concessionaire provided the necessary capital and know-how, and bore the risk of exploration.

Crude oil in situ has little significance. Its value can only be realized when it is explored and exploited. Value is also added when the crude oil is further refined into various products. In order to extract and refine crude oil, specialist technologies and technical know-how are employed. In earlier times, (18^{th} & 19^{th} centuries) owners of crude oil in situ did not have the requisite manpower, knowledge and technology to

[51] Williams H.R & Meyer C.J. (1960) *Oil and Gas Terms.* Mathew Sender & Co. p. 180.

extract and refine it. As a result, agreements were entered into between the owners and expert companies with a view to extracting and refining the crude oil. Where this happened, the ownership interest was distinguished from the profit interest of the extracting companies.

Under the concessionary agreement, there were two basic types:-

(a) Traditional concessions and (b) Modern concessions

2.5.1 The Traditional Concession is the earliest type of petroleum contract between government and oil companies (as in Nigeria) or between private owners and the oil companies (as in America). It is an agreement whereby the oil companies received the exclusive right to explore for petroleum, and when petroleum was discovered, to produce market and transport the oil and gas. In return, the company paid specific costs and taxes. The traditional concession is associated with certain characteristics.

First, the area conceded was often very large and in some cases, it covered the entire national territory of a state. For example, in Nigeria, the Shell concession granted in 1938 was in respect of the entire mainland of Nigeria. Secondly, the duration of the concession was for very long periods between 40 and 75 years and the concessions were for all types of petroleum. Thirdly, the taxes or royalties paid were highly inadequate compared to the fact that the concessionaires were

the real owners of the won petroleum. These characteristics were clearly inequitable and lopsided in favour of the oil companies. Therefore, such arrangements were unable to survive decolonization and the subsequent New International Economic Order.

2.5.2 The Modern Concession has the same definition with the traditional except that it has been codified with different names such as licence or lease. The essential difference between the two is that the oil companies now own the petroleum only upon its being extracted. The duration is shorter and the taxes and royalties are higher. Furthermore, modern concession admits of joint venture or participation by host countries through the National Oil Corporations such as the Nigerian National Petroleum Corporation (NNPC). The area is now greatly reduced as the host nation first delineates the area into blocks before granting licences and leases to cover each block.

Each block has a standard measurement and, embedded in the modern concession is the obligation and right to relinquish and surrender respectively. There is also the power of revocation which was not there in the traditional concession. The concession (licence or lease) is given only in respect of one mineral resource either crude oil or gas.

In Nigeria, Oil Mining Leases are by definition concessions and are found in existence as one of the constituent agreements underlying

the joint venture. At the present state, there is no grant of licence or lease without government participation. Under the modern concession, various contracts are entered into by the Federal Government and oil companies.

2.6 Petroleum Contracts

Under the Nigerian Oil and Gas regime, petroleum arrangement or contract is classified under two broad categories.

(a) Statutory Contracts

These are petroleum arrangements created by statute.

Section 18 of the Deep Offshore and Inland Basin Production Sharing Contracts Act No. 9 of 1999 created the Production Sharing Contract (PSC).

(b) Non-Statutory Contracts

Risk Service Contract (RSC);

Pure Service Contract (PSC);

Technical Assistance Agreement (TAA).

These non-statutory arrangements exist to complement the statutorily- created petroleum contracts. These pertain to the rights

granted to the oil companies to enter the land of host countries or owners and search for oil, by ways approved by the host countries or owners of crude oil in situ. It is where these acts are successful that the nature of petroleum contract agreement is determined and becomes operative. These rights are known as licences and leases[52].

2.6.1 Licences

A licence is a recoverable permission to commit or not to commit some act that would otherwise be unlawful. Especially, the Black's Law Dictionary describes it as an agreement that makes it lawful for the licensee to enter the licensor's land to do some act that would otherwise be illegal[53]. In general, a licence connotes a permission given by a competent authority to do an act, which, without such permission would be an illegal act or amount to a trespass[54].

Licence, therefore, presupposes the existence of treasure and of person(s) desirous of exploiting the treasure, but cannot validly do so on account of lack of capacity[55] which lack of capacity is made right by a person who is empowered or has power to do so.

Legal capacity is thus thereby bestowed upon the licensee to conduct the relevant activity to the extent permitted. An applicant for

[52] Oche, P.N. (2004) *Petroleum Law in Nigeria: Arrangements for Upstream Operations.* Heirs Great Commission Jos. p.42
[53] (8th ed) at p. 567
[54] Garner, B.A, op cit at p. 931
[55] Oche, P.N. op cit p. 60

licence is almost in all cases required to accompany his application with a variety of items and information relating to the applicant. A licensor's decision to grant the licence or otherwise is principally based on whether or not by his assessments of the application, he is satisfied that the applicant deserves the licence.

Under section 2(1) of the Petroleum Act, Cap $P_{10,}$ LFN 2004, oil exploration and oil prospecting may be conducted under the authority of licences. This is as against the subjection of winning and working of petroleum to the authority of an oil mining lease[56]. The rationale for this conclusion cannot be farfetched. Oil exploration and oil prospecting licences are preliminaries in the process of petroleum operations and are short-lived. They should be conducted under a licence while the winning and working of petroleum which require longer period should be conducted under an Oil Mining Lease[57].

Section 2(1)(a) of the Petroleum Act empowers the Minister to grant an Oil Exploration Licence which authorizes the licensee to explore for petroleum. This does not confer a right to a grant of either an Oil Prospecting Licence or an Oil Mining Lease. It however entitles the licensee to the non-exclusive right to carry out geological and geophysical search for petroleum within the area of the grant. The size

[56] Ibid. p. 65
[57] Ibid.

of the area applied for must be compact and may not exceed 5,000 square metres including aerial surveys but excluding drilling below 91.44 metres. The duration of an Oil Exploration Licence is for one year only. Any discovery of hydrocarbon or other minerals by the licensee must be reported to the Head of the Petroleum Inspectorate of the Nigerian National Petroleum Corporation (NNPC) and this may be accompanied by an application for either an Oil Prospecting Licence (OPL) or Oil Mining Lease (OML) in respect of the same area or areas[58]. Whenever the Oil Exploration Licence (OEL) expires, an oil company can apply to the Minister to convert it to an oil prospecting licence or oil mining lease for areas it finds to be promising[59]. In Nigeria, the legal rules governing the effectiveness of an oil exploration licence are found in the First Schedule to the Petroleum Act, Cap $P_{10,}$ Vol. 13, LFN 2004. The grant of an oil exploration licence in respect of any area does not preclude the grant of another oil exploration licence or oil prospecting licence or an oil mining lease over the same area or any part of it[60]. This in essence means that an oil exploration licence does not confer an exclusive right over the area of the licence.

Section 2(1)(b) of the Petroleum Act, $CAP_{10,}$ Vol. 13, LFN 2004 allows for the grant of this instrument which authorizes the

[58] First Schedule to the Petroleum Act Cap P_{10} LFN 2004
[59] Ibid
[60] Oche, P.N op cit. p. 61

grantee\licensee to undertake prospecting for petroleum. Petroleum prospecting in essence is the search for commercially valuable accumulations of petroleum. In Nigeria, an oil prospecting licence vests in the licensee the exclusive right to explore and prospect for petroleum within the area covered by the licence. By the licence, the grantee\licensee is empowered to carry away and dispose of petroleum won during prospecting operations subject to the fulfillment of obligations imposed upon him by or under the Petroleum Act or Petroleum Profit Tax Act or any other law imposing taxation in respect of petroleum.

The question of duration of an oil prospecting licence is one over which the Minister has discretion to determine. However, in the exercise of that discretion, the Minister is required to ensure that the duration does not exceed five years including any period of renewal[61].

2.6.2 Lease

Specifically, section 2(1)(c) of the Petroleum Act creates the Oil Mining Lease. Juridically, a lease denotes an agreement which gives rise to the relationship of landlord and tenant or lessor and lessee in respect of real or personal property respectively. Hence, as compared to a licence, a lease is of a more formal nature and rights conferred there

[61] Paragraph 57 of First Schedule to the Petroleum Act Cap P10, Vol. 13,LFN 2004

under are greater and more enduring[62]. Unlike a normal lease, an oil mining lease granted under the Petroleum Act even though designated a "Lease" does not grant to the lessee a leasehold estate. That means it is in the nature of a mineral lease which permits the lessee the use of the land to explore and dispose of any petroleum discovered within the leased area for a definite time upon the payment of royalty, amongst other considerations and does not involve an estate in land per se.

The Petroleum Act also requires applicants for an Oil Mining Lease (OML) to file applications with the Minister of Petroleum[63]. The grant which is made only where oil has been discovered in commercial quantities[64], evidences

> …the exclusive right within the leased area to conduct exploration and prospecting operations and to win, get, work, store, carry away, transport, export or otherwise treat petroleum discovered in or under the leased area[65].

Holders of the Oil Mining Lease are also obliged, as soon as production work commences, to payment of rents, royalties as well as taxation in accordance with the Petroleum Profit Tax Act. The area involved in the grant of an Oil Mining Lease (OML) must not exceed

[62] Etikerentse, G. op cit. p.27.
[63] Applicant for an OML fills form A and pays a fee of $500, 000 (five hundred thousand dollars) as provided for in the Petroleum Drilling and Production (Amendment) regulation 2000
[64] This is defined in paragraph 9 of the First Schedule of the Petroleum Act to mean 10,000 barrels per day.
[65] Ibid.

1205 sq. km. The maximum duration of an OML is 20 years but this may be renewed upon approval of the Minister.

2.7 Statutory Contracts

Statutory contracts under Oil and Gas law are the specie of petroleum contract which are related to or created by statutes. Statute in this context may be the Petroleum Act or the several subsidiary legislations which embody such contracts. Owing to the Nigerian National Petroleum Corporation (NNPC) participation in the working interests of the operations of the original oil mining leaseholders, a joint venture relationship was developed between the Nigerian National Petroleum Corporation (NNPC) and the leaseholders which still act as the operators of the concessions on behalf of the parties. This type of arrangement is commonly referred to as the traditional joint venture arrangement. There however exist other types of contractual arrangements for petroleum exploration and production which, though similarly involving NNPC participation in some forms, yet do not result in the grant by the Minister of Oil Exploration Licences, Oil Prospecting licences or Oil Mining Leases directly to the non-NNPC party. Such contractual arrangement include Production Sharing Contracts (PSCs) and Service Agreements or Contracts (SC). These later types were introduced at a much later stage in the development of Nigeria's

petroleum industry, as was also the case in countries like Ecuador, Egypt and Indonesia.

Production Sharing Contract as defined by Williams and Meyers is:

> A contract for the development of mineral resources under which the contractor's costs are recoverable each year out of the production but there is a maximum amount of the production which can be applied to this cost recovery in any year. This share of oil produced is referred to as cost oil. The balance of the oil is regarded as profit oil and is divided in the net profit royalty…after the contractor has recovered his investment, the amount of cost oil will drop to cover operation expense only and the profit oil increases by a corresponding amount.[66]

Under this agreement, the oil company acts as a contractor and risk bearing investor but the ultimate responsibility for control and management of the enterprise, in principle at least, is in the hands of the host country's national oil company[67]. The contractor is engaged in oil exploration and production on the understanding that it has no title to the oil deposit, and continuation of the contract depends upon oil being discovered in commercial quantities; otherwise the contractor bears all the risks. But if oil is discovered in commercial quantity, the contractor recoups investment and cost of operations out of the crude

[66] Williams H.R and Mayers, C.J. (1966) *Oil and Gas Law.* New York Mathew Bender, p. 686
[67] Maxwell, G. (1999) *Petroleum Development Contracts with the Multinationals* Edlinform Services, Maiduguri.

oil. After deducting royalty and tax oil, profits are then shared on a pro-rata basis between the two parties.

One other distinguishing feature of the contract is that the government receives revenue from the beginning of production through its share of the profit oil. Furthermore, ownership of any petroleum discovered remains vested in the state or national oil company and the contractor does not acquire title to its share of the oil until it reaches the point of export[68]. The production sharing arrangement typically frees the host country from contributing to the direct costs of operations. The merits in such agreement is that it reduces the incidence of tax evasion by oil companies through manipulation of prices since each party receives its entitlement in oil rather than in cash thereby reducing conflicts. Similarly, it frees the host country from directly bearing the cost of the initial operations since all are borne by the contractor oil company thereby allowing the country's resources to be channeled into other pressing sectors.

Production Sharing Contract (PSC) in Nigeria, as in most developing petroleum exporting countries, the Production Sharing Contract (PSC) is essentially a form of commercial transaction for the development of petroleum resources of the state which, as a sovereign owner of vital depletable resources, seeks to exercise its sovereign

[68] Ibid.

rights in the development of the resources by foreign enterprises. The legal basis for the contract in Nigeria is the **Deep Offshore & Inland Basin Production Sharing Contract Act No. 9 of 1999** (Cap D_3, LFN 2004). Section 18 of this Act defines the contract as:

> Any agreement or arrangement between the corporation or the holder and any other petroleum exploration and production company or companies for the purpose of exploration and production of oil in the deep offshore and inland basins.

The crude oil proceeds arising from the contract are allocated in the following priorities:

i. Royalty oil is allocated to the Nigerian National Petroleum Corporation (NNPC) or the holder of the licence (OPL/OML) in such quantum as shall generate an amount of proceeds equal to the actual royalty payable annually in accordance with the terms of the contract.

ii. Cost oil is the quantum of available crude oil allocated to the contractor to enable him generate an amount of proceeds for the recovery of operating costs in the licence.

iii. Tax oil is the portion allocated to the Nigerian National Petroleum Corporation (NNPC) in such quantum as would

generate the amount of tax liability payment during each month.

iv. Profit oil or production split is the balance of available crude oil after deducting cost oil, tax oil and royalty oil. It is allocated to each party in accordance with the terms of the production sharing contract (PSC).

2.8 Non-Statutory Contracts

Risk Service Contract is another highly significant addition of non-statutory contract to new forms of petroleum agreements. This form of petroleum contract is also called operation or work contract. It is an agreement for the operation of a specific aspect of petroleum exploitation. The state oil corporation holds title to the exploitation rights and concession. No right in any petroleum discovered accrues to the oil company which does however undertake exploration development and production at its own risk. Under such agreement, the oil producing nation hires the services of the oil company with the latter assuming the legal status of a contractor. The contractor is obliged to carry out the exploration, development and production operations and the host government may take over and control production operations from the date of commencement of production.

Ideally, the Risk Service Contract (RSC) is based on the premise

that an oil producing country needs three essential services from an oil company – technical, financial and commercial. In other words, it needs oil technology and technical expertise for the development and production of its petroleum resources.

The main characteristic of the Risk Service Contract which distinguishes it from the concession system, joint venture and production sharing contract (PSC) is that the oil company provides technical services and risk capital for petroleum operations in return for remuneration in cash or in kind.

Pure Service Contract is a specie of non-statutory petroleum contracts where the owner of the crude oil in situ mostly host countries like Nigeria contract out the job of exploration and production to an expert company for an agreed sum. All risks are borne by the state as reimbursements are made in addition to payment for the services. Thus, the company (contractor) does not come under the company engaged in petroleum operations as defined by the Petroleum Tax Act. Under this arrangement, the company has the first option to buy "back" the crude oil produced from the contract area based on a Parallel Purchase Contract.

Technical Assistance Agreement is another type of non-statutory petroleum contract which is similar to the pure service

contract except that the company is only engaged in the provision of technical assistance, without any interest in the produced oil, for which an agreed sum is payable. The host country is exclusively responsible for financing the operations as well as management and logistics. The host country owns the oil produced, equipment used and facilities relating to the operation. However, the much desired transfer of technology is likely to be realized under this contract type.

Where the government acquires participating interest in any of the contracts types particularly under the production sharing contract, pursuant to the Petroleum Act, what results is joint venture. Under the joint venture agreement, the relationship between the oil company having the concession or contract with the government is defined by the Oil Mining Lease (OML) or Oil Prospecting Licence (OPL) and two other important agreements - the Participating and the Operating Agreements.

The Participating Agreement is the document which creates and allots respective rights and obligations to the joint venture partners. There are no general standards as each right and obligations created under the agreement are product of negotiation between the parties.

The Operating Agreement is sequel to the participating agreement and spells out the legal relationship between the parties. It

lays down the rules and procedures for the joint development of the area concerned and the fact that the property is jointly owned.

2.9 Obligations under Petroleum Contracts

Whoever creates rights and powers in any given circumstances intends the realization of set goals. The likelihood of the realization is enhanced when the authorization of any person to enjoy the rights and powers are accompanied with an enforceable requirement to act in prescribed manners or to take or not to take certain actions or steps. A requirement in this sense may be termed an obligation.

An obligation may be perceived as a measure that is carefully elicited, structured and positioned in such a manner as to check the activities and behaviour of any person who has been authorized to enjoy rights and powers designated to yield given goals. Considered from this perspective, an obligation could be seen as light that beams in the direction of a goal. Therefore, the Petroleum Act, Cap $P_{10,}$ Vol. 13, LFN 2004 which creates rights and powers intends the realization of certain goals which realizations are accompanied with certain requirements that can be termed obligations.

Obligations relating to exploration and drilling are prescribed by Regulation 30 of the Drilling and Production Regulations made under section 9 of the Petroleum Act, Cap P10 LFN 2004. In the realm of

exploration, Regulation 30(a) makes the area affected by the instrument be explored to determine its petroleum producing prospects; that it be adequately explored; that geological, geophysical and other acceptable methods of examination be used in the exploration; and that regard be given to the reasonable wishes of the Minister as the exploration is undertaken. The obligation symbolizes the residual powers of the Minister in general relating to the entire operations under every licence or lease.

Because petroleum is obtained from beneath the surface of the earth through wells drilled thereon, it thus implies that well drilling is a sine qua non in petroleum operations. The consequence of this is the proliferation of oil wells. Thus Regulation 33[69] provides a solution via a principal rule that every well shall be identified by a unique designation. It is the duty of the licensee or lessee to designate the identity. Similarly, Regulation 31 requires the commencement of drilling operation in the relevant area within eighteen months of the date of the grant of licence. It places a further requirement of drilling to an extent as to penetrate the relevant area. It also requires a licensee to drill an average of one well each year commencing from the second year of the licence being granted.

In the field of petroleum operations, drilling involves elaborate

[69] Drilling and Production Regulations under section 9 of the Petroleum Act Cap P10 LFN 2004.

planning and programming. Although the licensee or lessee is an expert in this area, the programme he prepares is required to be approved or disapproved by the Director of Petroleum Resources. An obligation is imposed on the licensee to notify the Director of Petroleum Resources and the Ports Authority in writing, of the proposed site of any borehole or well as soon as any such site has been decided.

Regulation 25 obligates the licensee or lessee to adopt all practicable precautions to prevent the pollution of the environment. One of the precautions it enjoins is the provision of up-to-date equipment. The regulation is focused on the prevention of the pollution of inland waters, rivers, water courses and territorial waters. Regulation 36(d) of the same regulation obligates the licensee or lessee to take all practicable steps to prevent the escape of petroleum into any water.

Prevention and control of pollution are the principal objectives perceived from the above legislative drive. A great deal of the legislative measures for dealing with pollution arising from the operations of a licensee/lessee is devoted to the pollution of the marine environment.

The good oilfield operations obligation is imposed by Regulation 36. It requires the licensee or lessee to take all steps practicable to control the flow of petroleum discovered, prevent escape of petroleum discovered and prevent damage to petroleum bearing strata. These

may be perceived as methods and practices regarded as good oilfield practice. Controlling the flow of petroleum produced would result in the realization of the optimum value for the resources and lead to environmental pollution prevention.

A licensee or lessee who conducts his operations in a manner which satisfies these requirements discharges the obligation as required by law and good oilfield practice.

Environmental pollution and degradation arising from petroleum operations are minimized when the operations are conducted in such a manner as to cause as little damage as possible to the surface of the licensed or leased area and to the trees, crops and buildings.

2.9.1 Obligations Arising After Termination/Surrender

The holder of an Oil Prospecting Licence or an Oil Mining Lease may at any time, terminate his licence or lease by giving to the Minister not less than three months' notice in writing to that effect. This is the provision of paragraphs 17(1) and 18(1) of the First Schedule to the Petroleum Act. Furthermore, Regulation 45(4) provides that where a licence or lease is surrendered as regards part of a relevant area, it shall be deemed, for the purposes of the regulation, to have been terminated as regards that part of the relevant area. The licensee or lessee is under obligation to deliver up all productive boreholes and

wells to the Minister within two months of the termination of his licence or lease. It is mandatory for him to ensure that the wells are in good order - good condition and fit for further working.

A licensee or lessee who terminates his licence or lease is under additional obligation to fill up or fence out all holes other than boreholes and wells excavations made by him in the area to which the licence/lease relates. It is incumbent on him to take reasonable steps to restore the surface area and all buildings and structures thereon which were damaged in the course of his operations. These are to be restored as far as possible to their original conditions.

Another obligation of a licensee or lessee who terminates his licence or lease is that which requires him to remove all buildings, installations works and chattels erected or brought by him upon the relevant area. This is however subject to a proviso that the Minister has right to take any of the above on the payment of a price bearing a reasonable relationship to the written down value of any such items.

2.10 Natural Gas and Its Utilization

Gas is a phase of matter characterized by relatively low density, high fluidity and lack of rigidity. A gas expands rapidly to fill any containing vessel. Usually, a small change of pressure or temperature

produces a large change in the volume of the gas[70].

Natural gas is a combustible gas that occurs in porous rock of the earth's crust and is found with or near accumulations of crude oil. Being in gaseous form, it may occur in separate reservoirs[71]. More commonly, it forms a gas cap or mass of gas entrapped between liquid petroleum and impervious capping rock layer in a petroleum reservoir. Under conditions of greater pressure, it is intimately mixed with or dissolved in crude oil[72].

Typical natural gas consists of hydrocarbon having a very low boiling point methane, ch_4 first member of the paraffin series, and with a boiling point of 254^{0f} (-159^{0c}) makes up approximately 85% of the total gas.

Gas occurs all over the world and especially the world where oil has been found. The gas that is realized during the process of extracting crude oil is commonly referred to as "associated" gas. This is because it can only be realized in the process of extracting crude oil. The end result of the gas so extracted is the Liquefied Petroleum Gas (LPG) which is put in cylinders of various sizes for use as source of energy in transportation or for cooking.

[70] Oche, P.N. op cit. p.172.
[71] This is known as Natural Gas
[72] Otherwise known as Associated Gas.

The gas which is produced from gas reservoir is simply called natural gas, that is, it is not associated with the production of crude oil. The end result of the gas so produced is the Liquefied Natural Gas (LNG) which is equally used for cooking and as a source of energy for transportation and industrial use. The natural state of the produce (gaseous) means that it can only be commercially transported in that state (gaseous) through pipelines or in liquefied form in specially constructed cryogenic tankers. Whatever mode of transportation is used, the product requires definite buyers (market) who will be linked to their sellers through pipeline network or who will have degasification plants to convert the liquefied natural gas back to natural gas.

The nature of gas makes the gas market highly inflexible and it is difficult for new suppliers to enter into existing markets especially where the suppliers are situated some distance away from prospective markets.

Unlike the market for crude oil which is mostly international, the natural gas market is both international and local. These markets are fraught with difficulties as commercial usage of gas within a domestic setting involves high levels of technology, infrastructure and investment. Nigeria, at present, is a low energy (gas) consuming country unlike USA or Japan. It is for this reason that gas business in

Nigeria has not developed as much as crude oil and refined products.

Under the Nigerian situation, sales agreements were concluded before the natural gas facilities were put in place and the production commenced. Thus, buyers for the NLNG had concluded the sale agreement years before the first shipment was made. Parties to a gas agreement decide on the price for the gas and the payment regime. There is always a take or pay clause under which the buyer makes payment for the gas[73].

The phenomenon of producing crude oil carries with it the extraction of associated gas together with the crude oil. The absence of the capacity to utilize such gas effectively or to market same or to re-inject same can only result in unwholesome burning or "flaring" of the associated gas. Nigeria has one of the world's highest flaring rates of about 70%. The existence of this state of affairs is what the provisions of the Associated Gas Re-Injection Act[74] are made to redress. It is the intendment of the statute to compel every oil company operating in Nigeria to submit to the Minister of Petroleum detailed programme and plans for either the implementation of the agreements relating to the re-injection of all produced associated gas or the schemes for a viable utilization of the same.

[73] Under this clause, buyers agree to take minimum quantities of gas for the duration of the agreement.
[74] Cap A25, LFN 2004.

At present, gas flaring is on-going. The failure to achieve total stoppage of gas flaring is attributed to various factors which include the prohibitive cost of developing viable gas transmission facilities, limited regional and international markets and absence of appropriate reservoirs for gas re-injection/storage. Moreover, government, by its ineptitude and vacillation, encourages the flouting of its laws by granting exemptions as well as extending the date of stoppage of gas flaring. It is the desire of the federal government to maintain zero gas flaring. Principally, this will ensure healthy environment and living leading to good oilfield practice. Secondly, it is the desire of the government to earn revenue from the sale of gas both locally and internationally. Towards the achievement of these goals, oil companies have begun action to eliminate gas flaring and to seek ways of utilizing the produced gas for domestic, commercial and industrial use and export same in order to earn foreign exchange.

CHAPTER THREE

THE LEGAL FRAMEWORK FOR PETROLEUM PRODUCTS MARKETING

3.1 Introduction

The activities predominant in a country's oil and gas (petroleum) industry include the exploration, extraction, exploitation, refining and marketing of petroleum products. The largest volume products of the industry are fuel oil and gasoline (petrol). Petroleum is also the raw material for many chemical products, pharmaceuticals, solvents, fertilizers and plastics. The industry is divided into three major activity components; upstream, midstream and downstream.

The upstream sector comprises of exploration, work and winning of crude oil (unrefined). A greater percentage of companies engaged in this sector are Nigerian branches of foreign multinationals such as Mobil, Texaco, Chevron and others.

The midstream, which is the intermediate stage of production, is dominated by value-adding processes. This is because crude oil as it is in strata (unrefined) is of no economic value; its 'omni potent' nature with economic value is realized if and when it is refined. At this stage, intermediate products are realizable.

The downstream which is the tail of the stream consists of

refining of crude oil, transporting the products, sales and distribution of natural gas and their derivatives. This sector includes oil refineries, petrochemical plants, petroleum product distribution, retail outlets and natural gas distribution companies. The downstream industry touches consumers through thousands of products such as petrol, diesel, jet fuel, asphalt and natural gas. The mid and downstream activities are the main focus and thrust of this dissertation.

Nigeria has been engaged in the exploration and exploitation (and until recently, gas) of crude oil for over 50 years; for more than half of that period, she has been a major producer and exporter. In fact, during the oil boom years, oil accounted for between 87% and 98.2%[1] of total government revenue in a fiscal year therefore, there is no doubt that the oil sector is the prime mover of the Nigerian economy. This makes the legal framework within which the oil is produced and marketed of vital importance and worthy of consideration.

By legal framework for petroleum marketing in Nigeria, it is meant the necessary legislative enactments, rules and regulations that serve as compulsory supporting structure upon which petroleum marketing rests. In Nigeria, such legislative enactments range from Acts

[1] Omorogbe Yinka (1997) *The Oil and Gas Industry: Exploration and Production Contracts.* 1st edition Malthouse Publishing London. p.

of parliament to military decrees (which have now been variously codified into the Laws of the Federation of Nigeria) as well as rules and regulations made by subsidiary regulatory authorities for example the Department of Petroleum Resources on the subject matter of petroleum products marketing.

The Petroleum Act, to all intent and purpose, remains the principal legislation that governs all activities pertaining to petroleum exploration and marketing within Nigeria. The Petroleum Equalization Fund Act (1975) is the enabling law that established the Petroleum Equalization Fund – a body which statutory duty is the re-imbursement to petroleum marketing companies of expenses incurred by them which arise from the sale of petroleum products at uniform price across the federation. The Oil Pipelines Act is another major legislation as far as petroleum products marketing in Nigeria is concerned. This is as a result of the crucial role of oil pipelines in petroleum products marketing and retailing. The Act makes provision for licences to be granted for the establishment and maintenance of pipelines incidental and supplementary to oilfields and oil mining and for purposes ancillary to such pipelines. The refining regulation is considered a subsidiary legislation on the establishment, maintenance and operation of a refinery ensuring compliance with good oilfield practice.

No discourse on petroleum marketing in Nigeria will be comprehensive without a consideration of the Directorate of Petroleum Resources Regulations on petroleum marketing. They cover the requisite conditions for establishing a petroleum filling station as well as guidelines and approvals for petroleum importation into Nigeria to complement local production whenever there is a shortfall in domestic production.

The uniqueness of petroleum as a necessary commodity has attracted to it various act of sabotage by saboteurs who are desperate and so apply all forms of criminal means in order to have illegal access to the commodity. Hence, an analysis is also undertaken of the various anti-sabotage laws, that is, the Special Tribunal Decree No 21 of 1984[2] and the Petroleum Production and Distribution (Anti-Sabotage) Act of 1975[3].

3.2 The Petroleum Act

The Petroleum Act[4] governs petroleum matters in Nigeria, its territorial waters and Exclusive Economic Zone (EEZ). The Petroleum Act enacts that it is "an Act to provide for the exploration of petroleum from the territorial waters and the continental shelf of Nigeria, and to vest the ownership of, and all offshore and onshore revenue from

[2] Special Tribunal (Miscellaneous Offences) (Amendment) Decree No. 20 1994
[3] Cap P12, LFN 2004.
[4] Cap P10 Vol. 13, LFN 2004

petroleum resources derivable therefrom in the Federal Government".[5]

The Petroleum Act is the principal legislation as far as issues relating to petroleum exploration and production in Nigeria are concerned. Its provisions cover issues such as oil exploration, prospecting and mining licences, establishment of petroleum refineries, control of petroleum products, offences in connection with the marketing of petroleum products, rights of pre-emption and price control. Thus it is discernable from the above that the main thrust of the Act is on the downstream sector of the petroleum industry. Hence, it dwells on such issues as oil exploration and production, refineries and their establishment, and powers of the Honourable Minister of Petroleum in that respect. As this work focuses on petroleum product marketing, it will only be extrapolating the various provisions of the Act which have direct bearing on the subject of petroleum marketing.

Section 3(1) of the Petroleum Act provides that no refinery shall be constructed or operated in Nigeria without a licence granted by the Minister. The construction of refineries will only be better appreciated by taking a closer look at the very nature of crude oil in situ which in its natural state in strata is of little or no importance. The real value of crude oil is realized when it is extracted through the process of exploitation and refined or processed into finished products such as

[5] Preamble to the Petroleum Act

premium motor spirit (PMS), automobile gas oil or diesel (AGO), dual purpose kerosene (DPK).[6] To do this, petroleum refineries are required onshore, and in the absence of this, offshore refining becomes imperative. The establishment of a petroleum refinery involves huge capital outlay and has in Nigeria, for a while been within the exclusive preserve of the Federal Government. Recently however, with the new economic direction of the federal government which aims at liberalizing the downstream sector of the petroleum industry, several state governments as well as private individuals have indicated interest in the establishment and running of private refineries in Nigeria while some have gone further in taking practical steps in this direction. Examples of these initiatives are the Orient Refinery in Anambra State and Akwa Ibom Refining and Petrochemicals Limited.

Licences granted under the Petroleum Act shall be in the prescribed form and shall be subject to the prescribed terms and conditions as may be decided or imposed by the Minister of Petroleum Resources. The section also requires payment of application fees and such other fees as may be prescribed by the Minister. It should be noted that the provisions of Section 3 of the Petroleum Act are additional to the provisions of the Hydrocarbon Oil Refineries Act.[7]

[6] Other petroleum derivatives include paraffin, wax, plastics, solvents and oils.
[7] (1965) now Cap H7 LFN 2004.

The most significant part of the Petroleum Act that has considerable impact on petroleum marketing is Section 4, which deals with the control of petroleum products. Section 4(1) makes it an offence for any person to import, store, sell or distribute any petroleum product in Nigeria without a licence granted by the Minister. However, prior to the licensing regime, particularly during colonial times, an oil company worked the entire country. This provision is aimed at generating additional revenue for the federal government as well as controlling the entry of marketers into the Nigerian Oil and Gas Industry. These licences are granted subject to the prescribed terms and conditions as may be decided or imposed by the Minister. Due compliance with this section is a condition precedent for any prospective marketer prior to engaging in any business of petroleum marketing in Nigeria. The section is the gateway into the downstream sector of the Nigerian petroleum industry. Any activity in the sector without compliance is illegal.[8] Thus, the section forms the legal bedrock for petroleum marketing in Nigeria as no activity in or discussion on petroleum marketing in Nigeria will be complete without recourse to the provisions of Section 4 of the Petroleum Act. Accordingly, section 4(6) provides that any person who does, without the appropriate licence, any act for which a licence is required shall be guilty of an offence and shall be liable on conviction to imprisonment for two years or a fine of

[8] It is criminal and has punitive sanctions provided in Section 4(6) of the Petroleum Act.

N2,000 (two thousand naira only) or both and in addition, the petroleum product in respect of which the offence was committed will be confiscated by the federal government.

The provisions of Section 4 of the Petroleum Act do not apply in respect of the following:

(a) The storage, sale or distribution of not more than 500 litres of kerosene and such other categories of petroleum products as may be exempted from the application of sub section (1) of Section 4 by the Minister, by order published in the federal gazette.

(b) The storage of petroleum products undertaken otherwise than in connection with the importation, sale or distribution of petroleum products.[9]

The purport of this provision is that the Honourable Minister of Petroleum can grant exemption for the importation, storage, distribution and/or sale of not more than 500 (five hundred) litres of kerosene or other petroleum products vide an order which shall be published in the federal gazette. The rationale for this exemption is not unconnected with the volume of petroleum products involved. Secondly, it is to encourage the growth and development of small businesses and to

[9] Section 4(3) of the Petroleum Act, Cap P10, LFN 2004.

make the products available in far flung and remote places in Nigeria. Accordingly, the federal government's policy of job creation through the encouragement and support of small and medium scale enterprises will suffer a terrible set back if retailers of petroleum products whose overall volume of transaction do not exceed the above stated limits are compelled to undergo the rigors associated with licensing processes.

The second category of exemption deals with the storage of petroleum products undertaken otherwise than in connection with the importation, distribution or sale of petroleum products. The aim of this provision is quite superfluous and misleading because being a perishable commodity, the main motive behind petroleum storage is distribution[10] and sale and as such, it becomes difficult to envisage a scenario or incidence of petroleum storage undertaken otherwise than in connection with the importation, distribution and sale of petroleum products.

Section 5 of the Petroleum Act covers offences in connection with the distribution of petroleum products. If an oil marketing company, pursuant to any agreement or arrangement between it and any other oil marketing company, borrows petroleum products from any other oil marketing company and fails to return to that company an equivalent

[10] Save for emergency situations where products are stored for safe keeping and as a measure against future scarcity.

volume of the petroleum borrowed within two (2) weeks of the date on which the products were borrowed, the first named oil company shall be guilty of an offence and on conviction, shall pay a fine of N100 per metric ton of the petroleum products concerned. This provision is meant to guard against sharp practices and thereby ensure good oil industry practice. This raises the issue of 'freedom and sincerity of enterprise'. Any two persons can agree as to the exchange of petroleum products which agreement is underscored by a personal and mutual understanding.

Section 6 of the Petroleum Act vests upon the Petroleum Minister what is termed 'power of price control'. Accordingly, while acting under this section, the Minister may, by an order published in the federal gazette, fix the prices at which petroleum products should be sold in any part of Nigeria.[11] This has been the major challenge which successive governments have been contending with in its attempt at liberalizing the downstream sector of the petroleum industry which is loosely termed 'deregulation'. The government fixing of petroleum products prices was aimed at ensuring the even economic development in the nation as a whole as well as protecting the citizenry from the exploitative tendencies of petroleum products marketers which is bound to aggravate should prices be left to be determined by the market

[11] Petroleum Products Pricing & Regulatory Agency

forces of demand and supply. An average Nigerian is at a task to understanding what "subsidy" means. Subsidy arises where producers and marketers are compelled to sell the products at uniform prices throughout the federation irrespective of the location of the retail outlet from point of refining – refineries. Government's effort at making products to be sold at uniform price throughout the federation is evidenced by the network of product pipelines, storage facilities, pump and/or flow stations and tank farms. To create a uniform price situation, the government bridges the gap by financing the shortfall between the actual amount petroleum is being sold at the international market and its retail price at the domestic market.[12] However, while a country might experience little or no hitches at all under this arrangement where such country produces its petroleum needs locally, the same cannot be said of a country that relies heavily on petroleum products importation in meeting local demands. If the government still insists on fixing prices, then there is bound to be a significant difference between the amount at which such products are bought and that at which they are sold. Where the government is the sole importer, this creates little problem. However, where the government relies on the involvement of petroleum marketers, then it must pay them such amount as represents the difference between the cost of purchase and the retail price of the

[12] Iloba-Aninye Okechukwu. (2006) Petroleum Products Pricing: A Critique of the Legal Framework and the Fallacy of Subsidy in the Oil and Gas Sector. *Ahmadu Bello University Law Journal (A.B.U.L.J)*, Vols. 24-25, pp. 156-170

commodity as fixed by the Minister inclusive of transport cost. This, in effect, is referred to as subsidy.

The Act in Section 7 also confers on the Minister the 'right of pre-emption'. This right means that in the event of a state of emergency or war, the Minister shall have the right of pre-emption of all petroleum products obtained, marketed or otherwise dealt with under any licence or lease granted under the Act. This is meant to take care of emergency situations where all economic activities are given direction by government with the aim of addressing the particular emergency needs.

3.3 The Petroleum Equalization Fund Act

This Act[13] establishes the Petroleum Equalization Fund which is applied to the reimbursement of petroleum marketing companies for any loss suffered or likely to be suffered by them arising from the sale of petroleum products at uniform prices throughout Nigeria. A Board manages the affairs of the fund to ensure proper application and due process.

It is deducible from the above that the main purpose of the body established by the Petroleum Equalization Fund Act is to manage such consequences that may result from the Minister of Petroleum exercising

[13] The Petroleum Equalization Fund Act, Cap P11, LFN 2004

the right conferred on him under Section 6(1) of the Petroleum Act.[14]

The Petroleum Equalization Fund Act (through the fund) is meant to cushion the effect of equal prices of petroleum products taking into cognizance the fact that Nigeria is a very large country comprising of an area of 356,667 square miles and the cost of moving imported and locally refined petroleum products to the hinterland is huge. For example the distance from the port city of Lagos to the Federal Capital Territory (FCT) alone covers over 1,200 km. What this implies is that the retail price of petrol in Lagos can never be the same with that in the Federal Capital Territory. Any pricing of petroleum products in the FCT must take into consideration the cost of moving the products from Lagos. It follows, therefore, that products will be cheaper in Lagos (where a marketer did not incur any freight) than Abuja. The sensitive nature of petroleum products in the country coupled with the cost of moving the products led to the advent of subsidy regime, culminating in the enactment of the Petroleum Equalization Fund Act to, amongst other things, establish a fund with the mandate to cushion the effect of uniform petroleum products pricing. Hence the objective of the fund is principally to sustain the uniform price regime by reimbursing petroleum marketers for losses incurred by them in the process of transporting petroleum products from the points of distribution to the points of sale

[14] This is otherwise known as the power of price control which is currently exercised by the PPPRA.

nationwide.

The net surplus revenue recoverable from an oil marketing company under the Act is calculated by reference to the volume of the affected products sold on zonal basis and to the amount by which the uniform prices at which the products were sold exceeded or were less than the prices of those products prevailing immediately before the fixing of the uniform prices for the products.[15] Any person who fails to comply with any requirement under the Petroleum Equalization Fund Act, or willfully makes a false entry in any record required to be produced under the Act with the intent to defraud shall be guilty of an offence and liable on conviction to a fine of N50,000 (fifty thousand naira) or to imprisonment for a term of five years.[16] In the present economic dispensation and the current pump prices of petroleum products, this fine becomes unrealistic. Moreover, it is curious to observe that for over 10 years that the Act came into force, no effective trial and conviction has been recorded. It is, however, notorious that products have been sold across the country in flagrant disobedience of the uniform price fixed by government.

[15] Section 5, Petroleum Equalization Fund Act, Cap P11, LFN 2004.
[16] Ibid

3.4 The Oil Pipelines Act[17]

It is only when refined petroleum gets to the final consumer that its relevance in a nation's development is acknowledged. In its natural state in strata, it is useless. To get to the final consumer, it must be refined. For this also refineries are built. Transportation of either crude or refined products, therefore, at any stage is an integral part of petroleum production.

Different modes of conveyance are employed after taking into consideration the volatile nature of the products. One of the most reliable and convenient modes of transporting petroleum and its products is through pipelines. Oil pipelines are constructed and laid underground in such manner as to link up the point of production with that of distribution and storage. The construction of oil pipelines in Nigeria as a medium of transporting petroleum and its products is regulated by the Oil Pipelines Act. Accordingly, the Oil Pipelines Act makes provision for licences to be granted for the establishment and maintenance of oil pipelines incidental and supplementary to oil fields and for purposes ancillary to such pipelines.[18]

The Oil Pipelines Act requires permission to survey as a pre-requisite to engaging in construction of pipelines. Thus an application

[17] Cap O7, LFN 2044.
[18] Section 7, Oil Pipelines Act, Cap O7, LFN 2004

lies to the Honourable Minister of Petroleum Resources. If the Minister refuses to grant the permit to survey, he must notify the applicant in writing of such refusal and reason therefore.[19] A permit to survey legitimizes (which otherwise would be illegal) all actions pursuant to the laying of the pipelines.

Upon the grant to survey, an application for the grant of an oil pipeline licence is made in respect of any oil pipeline.[20] The Minister may grant the licence on payment of the fees required by Section 31 of the Act, or refuse to grant the licence, in which case, he shall notify the applicant in writing of such refusal and the reasons therefore. No person other than the holder of a licence shall construct, maintain or operate an oil pipeline, and any person who acts in contravention of the Act shall be guilty of an offence and shall be liable on conviction to a term of imprisonment not exceeding two (2) years or to a fine of N1,000:00 (one thousand naira only) or both.[21]

An applicant for a licence shall deliver to the Minister an application at the same time stating the terminal points and giving a description of the pipeline and accompanied by a plan of the proposed route of the pipeline sufficient to identify the land affected thereby and the position of any pumping stations, tanks or other ancillary

[19] Ibid
[20] Section 7, Oil Pipelines Act, Cap O7, LFN 2004
[21] Ibid

installations. The Minister shall, upon receipt of the application, appoint a date of not less than six weeks ahead for the hearing of objections if any, and shall cause a notification of such date and place of lodging objections to be made in the federal gazette and the gazette of each state concerned.[22]

There is a remedy for those whose land may be injuriously affected by the pipelines as this is expected. Any person whose land or interest in land may be injuriously affected by the grant of a licence may, within the period stipulated for objections, lodge verbally or in writing at one of the specified addresses, notice of objection stating therein the interest of the objector and grounds for objection. If after the consideration of the report the Minister considers that the licence should not be granted in respect of the proposed route or any part of it, the Minister is expected to inform the applicant and the objector concerned, and thereupon, the applicant shall be entitled to receive a permit to survey other routes as he may propose.[23]

This procedure is judicious as it allows or entertains fairness, which fairness is symptomatic of equity and good conscience. Any legislation in this respect that does not so provide, is, it is submitted, unfair, draconian and acquisitive. Where all necessary formalities are

[22] Section 8, Oil Pipelines Act, Cap O7, LFN 2004
[23] Section 10(3), Oil Pipelines Act, Cap O7, LFN 2004

met, and a pipeline is constructed, whoever surfers as a result, is entitled to claim damages and compensation.

Thus, the only enactment which considers compensation for victims of oil spillages and pollution is the Oil Pipelines Act. Section 11(5) provides that the holder of an oil pipeline licence shall pay compensation:

(a) to any person whose land or interest in land (whether or not it is land in respect of which the license has been granted) is injuriously affected by the exercise of the right conferred by the licence, for any such injurious affection not otherwise made good; and

(b) to any person suffering damage by reason of any neglect on the part of the holder or his agents, servants or workmen to protect, maintain or repair any work, structure or thing executed under the licence, for any such damage not otherwise made good; and

(c) to any person suffering damage (other than on account of his own default or on account of the malicious act of a third person) as a consequence of any breakage of or leakage from the pipeline or an ancillary installation, for any such damage not otherwise made good.

The implication of paragraph (a) above is to compel the licensee to pay compensation, which sum shall be as determined by the court to those persons who, by virtue of pipeline installation suffer injuries on land and interest thereon. For a compensation to be merited under this head, it must be shown that a property of the claimant has been destroyed in the process of laying the pipes. It will be a case of res ipsa loquitor – **Victor Elem v. Shell-BP**[24]. In this case, oil escaped from the defendant's oil location to the plaintiff's property thereby causing substantial damage. The judge evoked the principle of res ipsa loquitor and awarded damages to the plaintiff.

Paragraph (b) makes a claim for compensation effective only if negligence is proved by the claimant. Negligence is an action in tort which raises the question of the duty of care. Most times negligence is very difficult to prove and to succeed under this head it may be necessary to come under the rule in **Rylands v Fletcher**[25] which states that "the person who, for his own purpose, brings on his land and collects there anything likely to do mischief if it escapes, must keep it at his peril and, if he does not do so, is prima facie, answerable for all the damage which is the natural consequence of its escape".[26]

[24] Suit No. PHC 101/76 P.H H/C 1979
[25] (1968) LR 3 H.L 330
[26] Per Blackburn, J., 1866.

The 3rd limb or paragraph (c) implies that compensation can only be effective on an injured person(s) where there is any breakage or leakage not caused by him, or through the malicious act of a third party. This raises the issue of sabotage which is a ready defence to oil companies.

The rights of persons injured as a result of oil industry activities is only a right of compensation. An injunction restraining the activities of an oil company is unlikely to be granted by any court because of the strategic importance of the oil industry. Of particular relevance in this area, apart from the provisions of Section 11(5) of the Oil Pipelines Act, is paragraph 37 of the 1st Schedule to the Petroleum Act which makes the holder of an Oil Exploration Licence (OEL), Oil Prospecting Licence (OPL) or Oil Mining Lease (OML) liable to pay fair and adequate compensation for the disturbance of surface or other rights to any person who owns or is in lawful occupation of the licensed or leased lands. The terms "fair" and "adequate" are highly subjective and are not statutorily defined. Therefore, adequate provision for the care of injured persons in the oil industry has not been put in place. This may be informed by the desire to prevent a situation where the oil companies and probably the government is inundated with bogus claims the cause of which must be by sabotage acts of persons and communities desirous to collect huge sums of money from the companies and

governments.

Under the African setting, burial grounds are revered as anything done in such places will be tantamount to a desecration of tradition and disrespect to the dead. But it may be asked whether a cemetery, grotto and such other places rank more than modern development which acts to encourage progress, development and employment opportunities for the locals. It is therefore submitted that certain infrastructure and amenities rank more than a burial ground, grotto or traditionally revered places. It is instructive to note that the Oil Pipelines Act authorizes the courts to adjudicate over these matters.[27]

The duration of a licence shall be for such periods not exceeding 20 (twenty) years as the Minister may direct.[28] This is also another restriction to the rights of a licence holder. It is expected that disputes may arise and so every licence shall be deemed to include a provision that any question or dispute arising between the President or the Minister and the holder regarding the licence or any matter connected to it shall be referred to arbitration.[29]

[27] Section 19, Oil Pipelines Act, Cap O7, LFN 2004
[28] Section 17, Ibid.
[29] Section 14(6), Ibid.

3.5 Petroleum Refining Regulations

A Refinery and the activities of refining constitute, figuratively, the gateway to the Petroleum downstream sub-sector which activities embrace refining, transportation, distribution, storage and sales of petroleum and petrochemical products. Petroleum refining regulations are contained in the First Schedule to the Petroleum Act.[30] These regulations are made by the Minister to supplement the Petroleum Act. A petroleum refinery is an industrial processing plant where crude oil is processed and refined into more useful petroleum products such as gasoline, diesel, premium motor spirit, asphalt base, heating oil, kerosene and liquefied petroleum gas among other products. Oil refineries are typically large sprawling industrial complexes with extensive pipelines carrying streams of fluids between large chemical processing units. A Refinery is very essential to the downstream sector of the petroleum industry. Crude oil in its natural state has little worth and its real value is only obtainable when it is refined into finished products. This entails the process of refining which inevitably leads to the construction of a refinery. This means that the industry requires regulations and oversight considering its sensitive, volatile, and useful nature to the economy. .

Petroleum refining regulations contain the legal framework as

[30] Cap P10, LFN 2004

well as policy guidelines formulated and laid down for effective and coordinated refining processes as may be required in oil refineries under the Nigerian oil and gas industry.

3.5.1 Application for Licence to Construct a Refinery

Application for a licence to construct and/or operate a refinery lies to the Minister of Petroleum in Form A.[31] Such application shall be accompanied by three (3) copies of a detailed study of the project and prescribed non-refundable fees.[32] This is to ensure that only serious and capable companies are granted licence to construct refineries and that the environment is protected in the process.

The capacity and user of a refinery cannot be increased, altered or otherwise adjusted without the Minister of Petroleum notification and approval.[33] This is to enable the authorities have a thorough and statistical database for effective control and development. This regulation is to control the volume and quality of refined products in the country with a view to avoiding sharp and corrupt practices.

The work in connection with the construction and operation of a refinery shall be conducted under the direction of a Manager who must

[31] Paragraph 1(1), Petroleum Refining Regulations
[32] Paragraph 1(2), Ibid.
[33] Paragraph 3(2), Ibid.

have continued charge of all operations authorized by the licence.[34] New appointments and changes must be approved by the Director of Petroleum Resources so as to have firm grasp of all employees and of goings-on in the refinery.[35] Even in the aspect of the construction, operation and maintenance of a refinery, if there are no specific regulations, practices conforming to international standard shall be observed subject to the approval of the Director.[36]

It is a notorious fact that refineries are sensitive installations which products ensure that the engines of a nation continue to grind thereby ensuring national development and progress. Thus all refinery areas are restricted, clearly defined by a boundary and only persons authorized by the Manager will be allowed in such restricted areas.[37] Refineries are very sensitive installations and constitute a risky venture open to hazards of fire and explosions. This informs the regulations for a Manager to ensure safety and security. It is in a bid to secure refineries that they are located in far flung places from residential quarters or densely populated areas.

Furthermore, regulations ensure that only the services of competent persons who are to be responsible for ensuring the observance of all fire and safety precaution within the restricted areas

[34] Paragraph 4(1), Ibid
[35] Paragraph 6 Ibid
[36] Paragraph 7 Ibid
[37] Paragraph 9 Ibid. This provision has been made more relevant in the light of present day terrorists' actions.

are engaged.[38] As a regulatory measure, installations that forewarn refinery workers of the risk of fire outbreak are located and installed within the premises.

Matters relating to safety regulations are already in place in our legislation; what the nation presently suffers is the proper application and enforcement of these laws. A good safety law, as we have it at present, appears to be bad if the practitioners are bad. In other words, where the employees act contrary to the necessary or concomitant laws, the law appears to be bad. It is pertinent to note that the Manager has the responsibility to ensure the safety and security of a refinery. The extent to which these laws have been applied in Nigerian refineries leaves much to be desired due to the non-functioning or partial operation carried on by these refineries.

To ensure effective and efficient refineries coupled with the highest safety standards, all permanently placed storage tanks shall be installed within a bound wall capable of retaining the contents of the largest tank plus ten per cent of the remaining tanks. This is to ensure that any disaster is adequately contained before a clean-up proper. Residues, sludge, rusts and similar effluents from tanks which may have contaminated leaded petroleum products shall be disposed off according to good refining practices and only to such places as have

[38] Paragraph 10(2) Ibid.

been approved by the Director. The extent to which the Director approves and ensures compliance is indeterminate in the face of near comatose refineries and the arrival of private refineries.[39]

In totality, the Manager must adopt all practicable precautions to prevent the pollution of the environment by petroleum or petroleum products, and where such pollution occurs, the Manager shall take prompt steps to control and if possible, end it.

The penalty of N100.00 (one hundred naira only) for contravention[40] appears ridiculous in the economic realities in the country. Its relative cheapness may incite an offender who feels he has the stated sum.

3.6 Rules and Regulations of the Department of Petroleum Resources (DPR) in Petroleum Marketing

The Department of Petroleum Resources (DPR) is a statutory creation in the Nigerian National Petroleum Corporation (NNPC)[41] that oversees all the activities of companies licensed to engage in any petroleum activity in Nigeria with the objective of ensuring that national goals and aspirations are not thwarted, and that oil companies carry out their operations according to international oil industry standard and practices. The DPR keeps records and other data of the oil industry's

[39] Paragraph 30 Ibid.
[40] Paragraph 45 Ibid.
[41] Established by the Nigerian National Petroleum Corporation Act, Cap N123, LFN, 2004.

operations and informs the government about all activities and occurrences in the petroleum industry. The DPR sets standards for the effective control and operations in the overall industry activities from exploration to production to marketing of crude oil and refined petroleum products. As the principal regulatory agency, the DPR has laid down rules and guidelines for the regulation of the different spheres of petroleum activity in Nigeria but the major ones to be considered in this work include:

i. Procedure and conditions for granting approval for the construction of a petrol station.

ii. Guidelines on importation of petroleum products into Nigeria.

iii. Guidelines for the importation, storage, transportation and distribution of biofuel in Nigeria; and

iv. Conditions for granting approval for the operation of a petrol filling station.

3.6.1 Procedure and Conditions for Granting Approval for the Construction of a Petrol Station:[42]

The application for approval to construct a filling station for retailing petroleum products shall be submitted to the Department of

[42] Made pursuant to the Petroleum Act, Cap P10, LFN 2004.

Petroleum Resources giving details of the proposals and any information that may be relevant to the project. Furthermore, the regulation requires the following documents to be submitted along with the application:

i. Three copies of approved plan showing the building and the relation of the site to the road ways;

ii. A certificate signed by the State Fire Officer authorized in that behalf that the arrangement proposed for the prevention of fire at the site is satisfactory;

iii. A certificate signed by the Area/Town Planning Authority for the construction of a petrol filling station on the proposed site;

iv. A certificate signed by the Divisional Police Officer or a Superior Officer-In-Charge of motor traffic that he is satisfied that the site and layout of the proposed filling station do not constitute an unnecessary traffic hazard.

In addition to the above requirements, the applicant must also furnish evidence that the company applying is duly registered as a limited liability company.[43] After the above-listed documents and requirements are met, they are submitted with the application to

[43] This means a company registered with the Corporate Affairs Commission (CAC) pursuant to the Companies and Allied Matters Act, Cap C20, LFN 2004.

necessitate an on-the-site inspection to ascertain whether the proposed site qualifies for approval. If the site qualifies, the inspection of the site will then be carried out. Approval to construct will be granted by the Operations Controller if the proposed site meets the procedure and conditions for granting approval for the construction of a petrol station as enumerated under the 'petroleum regulations'[44].

3.6.2 Department of Petroleum Resources Guidelines on Importation of Petroleum Products into Nigeria

The DPR guidelines on the importation of petroleum products list four (4) categories of companies that are eligible to apply for permit to import petroleum products. They are:

First, the Petroleum Products Marketing Companies (PPMC);

Second, the Major Petroleum Products Marketing Companies;

Third, the Independent Petroleum Products Marketing Companies with storage facilities; and

Fourth, the Independent Petroleum Products Marketing Companies with need to understand arrangements with NNPC/PPMC or any major Petroleum Products Marketing Companies.[45]

Any of the above-named categories of oil marketing companies

[44] Made pursuant to the Petroleum Act, Cap P10, LFN 2004.
[45] Paragraph A of the DPR Guidelines on the Importation of Petroleum Products into Nigeria.

shall forward its application for import permit to the Director of Petroleum Resources which must be accompanied by:

(a) A copy of the Certificate of Incorporation of the applicant company;

(b) A copy of the current storage or sales licence issued by the Directorate of Petroleum Resources;

(c) A Bank Reference Certificate.

Every import permit issued under the guidelines have a duration of ninety (90) days from the date of issue and an application/processing fee of N50,000 (fifty thousand naira only) in bank draft shall be made payable to the Federal Government of Nigeria through the DPR (fees) account by every applicant.[46]

Other conditions for grant are contained in Appendix 'A' to the Regulations and it principally states that:

i. Any petroleum product imported contrary to the terms of the permit shall be confiscated;

ii. The permit may be modified or revoked at any time by the DPR;

iii. The permit is non-transferable;

[46] Regulation (iv) paragraph B.

iv. The DPR may require the importer, at the time of importation, to produce such evidence it may deem necessary as to the origin, quality, quantity and date of ordering of the petroleum products;

v. Samples of the products and Quality Certificate shall be sent directly to the DPR from the export refinery;

vi. Upon receipt of the Samples and Quality Certificate, the DPR shall send the samples to any laboratory designated by it for confirmation analysis;

vii. Upon the arrival of the vessel in Nigeria, products samples shall be taken from the vessel prior to the issuance of the approval to discharge the cargo by the DPR; and

viii. If the product(s) is/are suspected to be below the quality specification prescribed in Appendix '8', the DPR shall refuse the discharge of such product(s) for sale in Nigeria while any importer(s) involved in the importation of such off specification product(s) shall be blacklisted.

These guidelines for importation of petroleum products are meant to protect the populace from inferior and dangerous products, avoid dumping and regulate importation generally. The quality of petroleum products imported into the country has raised eyebrows as many

disasters, explosions and terror have been experienced leading to destruction of lives and property.

The import permit is required to be produced to the Department of Customs at the time of entry of the petroleum product(s) import, and such permit shall be returned to the Directorate of Petroleum Resources not later than fourteen (14) days after the expiry date. This is to ascertain the quantity for import duties and subsidies to be paid to the marketing company. The regulation requires that all imported premium motor spirit (PMS) must be unleaded to avoid the health risk and hazards associated with leaded premium motor spirit (PMS). The extent of compliance with this is yet to be seen as there is little or no sanction for contravention of these guidelines.

3.6.3 Guidelines for Granting Approval for the Operation of a Petrol Filling Station

After the construction of a proposed petrol filling station, an application for a storage and sale licence must be made to the Directorate of Petroleum Resources (DPR) after inspection of the petrol station and its certification as satisfactory by the DPR.

The application for licence may be channeled through a sponsor company, that is to say, an oil marketing company with which the applicant company has concluded product supply arrangements. The following facilities must, however, be provided at the proposed petrol

station before it could be considered for licensing:

(a) Air compressor and air gauge;

(b) Provision of pipe-borne water;

(c) Power/electricity generator;

(d) Well-stocked first aid box;

(e) Refuse/container waste basket;

(f) Safety equipment or facilities; and

(g) Toilet facilities.

In addition to the above, all petrol stations Pump Attendants must be very well trained and possess valid certificates of competence obtained from an organization recognized by the Directorate of Petroleum Resources.

Whether these requirements are actually met by our 'mushroom' petrol stations is a matter of guess or conjecture. Many petrol stations do not qualify as such but are dispensing petroleum products.

Demand for petroleum products has been driven by economic growth and rising population. The industry is supplied through imports and locally refined products by both the major and independent

marketers. The Nigerian National Petroleum Corporation (NNPC) has also joined the league of players in this regard through its own retail outlets. It is the interplay of the laws and regulations highlighted and discussed above that form the bedrock of petroleum marketing in Nigeria.

3.7 Special Tribunal (Miscellaneous Offences) Decree No. 21 1984 (Amended By Decree No. 20 1994)[47]

After the oil boom of the 1970s caused in the main by the closure of the Suez Canal and Middle East Crises, and after the massive mismanagement that followed, the 1980s oil boom in Nigeria saw a new form of syndicated criminal activity begin to threaten the foundations of Nigeria's petroleum industry. That problem is illegal bunkering of crude oil and its derivatives.

In the Nigerian world view, 'bunkering' is synonymous with stealing crude petroleum or its derivatives. In the Oxford English dictionary,[48]'bunkering' is a legitimate process whereby a duly licenced operator provides fuel, water and lubricants for marine vessels on request. Simply stated, bunkering is the fuelling of ships. Bunker fuel consists mainly of Automotive Gas Oil (AGO) which has been perennially scarce in Nigeria and Low Profile Fuel Oil (LPFO) – an environmentally unfriendly residue of petroleum refining operations. Against the true

[47] Now Miscellaneous Offences Act Cap M17 LFN, 2004.
[48] 25th edition at p. 264.

meaning of the word, a direct opposite has come to stay as the meaning of bunkering in Nigeria.[49]

For several years, the act of oil bunkering which mainly involves oil theft continued to plague the Nigerian petroleum industry as the involvement of foreign collaborators provided a ready market for such stolen petroleum products and increased the scale of acts of sabotage to new heights. Hence the then military government, in its bid to tackle this malaise, reeled out series of punitive decrees all centred on preventing the theft of crude oil (bunkering) for example, the Petroleum Production and Distribution (anti-sabotage) Decree 1975. The decree made it an offence punishable by death or twenty-one (21) years imprisonment to sabotage, disrupt or even interfere with the smooth distribution of petroleum products in Nigeria. Offenders under the decree were tried by a military tribunal. Similarly, the Trade Dispute (Essential Services) Decree 1996 empowered the Military Head of State to proscribe any trade union or association that was involved in acts that either disrupted the smooth running of any essential services or caused industrial unrest in the Federal Republic of Nigeria. Violators risked up to five (5) years imprisonment.[50]

The Special Tribunal (Miscellaneous Offences) Decree No. 21 of

[49] References to bunkering in this work mean the adulterated Nigerian common parlance meaning rather than the true meaning of the word.
[50] The decree is part of the retroactive decrees made by the Military Junta that met with strong public outcry.

1984 is the most draconian of all the decrees against illegal oil bunkering. The decree prescribed very stiff penalties including death by firing squad, revocation of licences and forfeiture of both fixed and movable assets for offences committed against the milder provisions of the Petroleum Decree of 1969.[51]

The scope of the Special Tribunal (Miscellaneous Offences) Decree, 1984, covers willful or malicious obstruction, damage, destruction, tampering or interference with the free flow of crude oil and/or refined petroleum products.

3.8 The Petroleum Production and Distribution (Anti-Sabotage) Act[52]

The word 'sabotage' has been variously defined. However, a common thread running through the definitions is that it refers to a deliberate injury or attack on equipment or direct unauthorized interference with petroleum production, refining and distribution. This unwholesome act is inspired by the desire to right perceived wrongs, and above all to obtain a fair and equitable share of the natural wealth rightly or wrongly deposited within their area.[53] In relation to the petroleum industry, the word sabotage means a deliberate injury or interference with petroleum exploration and production equipment in

[51] Ibid
[52] Cap P12, LFN 2004
[53] This in most cases has to do with stealing of products, but at times, it is employed by militants to make a statement for a change in the status quo.

such manner as to affect their usage, effectiveness and efficiency. Sabotage in the petroleum industry involves illegal tampering with petroleum production or transportation equipment in order to satisfy a pre-determined motive. Such activity may take the form of tampering with oil pipeline by breaking or blowing it up in order to have access to the petroleum products being transported through it, attacking petroleum barges on the high seas with the intention of dispossessing the owners of their cargo, adulterating petroleum or any of its by-products, blowing up oil installations, kidnapping oil workers and vandalizing oil transport facilities.[54] Several motives have been advanced as reasons behind every act of sabotage in the petroleum industry but in Nigeria, the principal motives are economic and political. It is economic in the sense that perpetrators sabotage, attack, injure, break or bore equipment with the sole aim of carting away refined products for sale or usage. These acts of sabotage dwindle Nigeria's oil production and by implication, the nations revenue. Over the years, these acts of sabotage have increased and developed a measure of sophistication and a network of supply and sale involving both local and foreign elements.[55] This has led to massive vandalization of oil pipelines or facility from where this product is drained.

The political motive is a recent development in Nigeria and it

[54] Goldman A. Peel. (2003) *How Nigerian Oil Thieves Operate*, Financial Times, London. p.90.
[55] This is otherwise known as illegal oil bunkering

found expression in the quest by the inhabitants of the oil producing areas for a greater share in oil revenues derivable from their areas which have experienced environmental degradation, gas flaring, oil explosions, leakages and corporate social neglect that is unequalled in recent past. They are clutches at the straw of vandalization of oil pipelines and other acts of sabotage to make their voices heard. Most of these inhabitants are organized into various militant and pressure groups. The most notable ones are the Movement for the Emancipation of the Niger Delta (MEND) and Niger Delta Volunteer Force (NDVF) which were engaged in a bitter running battle with Nigerian Defence Forces until a cease-fire that culminated in an "amnesty" was reached. To drive their message home, after several years of perceived indifference and neglect by the Federal Government, dangerous techniques were employed which include outright sabotage of oil facilities by bombing oil platforms, bombing of oil transport pipelines, kidnapping of local and expatriate oil workers and violent attacks on members of the security agencies.

The economic consequences of acts of sabotage and vandalism are quite enormous. The nation loses oil revenue through vandalization and other criminal activities associated with oil theft. This is not even inclusive of the cost of replacing the infrastructure after every act of sabotage. The effect of sabotage in the petroleum industry leads to a

declaration of force-majeure – a technical term for distress, showing the inability of an oil company to meet its obligations and revenue targets which, in turn, adversely affects the budget and fiscal policies of the country. To stem this ugly trend, the Federal Government enacted the Petroleum Production and Distribution (Anti-Sabotage) Act. In the main the Anti-Sabotage Act criminalizes actions and punishes persons, who by their act, disturb the petroleum products distribution in and across the nation especially when the act is malicious, premeditated and calculated to injure the Nigerian economy, while enriching themselves unjustly. This Act makes the act of sabotage in the production and distribution of petroleum products a criminal offence.

The penalty for any person who commits the offence of sabotage on conviction is death or imprisonment for a term not exceeding twenty-one years.[56] The harsh punishment prescribed has not deterred perpetrators of acts of sabotage from carrying on with renewed vigor or devising new areas or systems of sabotage.

It is curiously interesting to note that an act against this law is tantamount to the offence of murder, under both the criminal code and penal code. It is curious indeed. Life is sanctimonious in all faiths and cannot be exactly replaced. Life is the peak of God's creation on earth; hence He gave man dominion over everything which was made for his

[56] Cap P12, LFN 2004

use and pleasure. For this life to be on the same pedestal and ranking with a product, no matter its value, is presumptuous judgment on God's wisdom and action. It is here suggested that the twenty-one years of imprisonment is more adequate, proper and just. For if a man of 20-25 years of age is convicted and imprisoned, upon release he is likely to be between 40-45 years of age. He would have learnt a lesson and still have the chance to lead a good and normal life for at least twenty more years where life expectancy is between 60–70 years.

3.9 Conclusion

The Petroleum Act is the 'mother' of all matters relating to oil and gas to search, work and win. It is from it that regulations and other matters connected therewith derive.

However, it is submitted that the Petroleum Act does not capture all matters that necessarily will come to light as it is put into operation. The oil industry is now so complex with new sectional discoveries that the industry is operating under names hitherto alien to the Nigerian Oil and Gas. For example, the words "upstream", "midstream" and "downstream" can nowhere be found in the Petroleum Act, Cap P10, Vol. 13, LFN 2004. Furthermore, in some countries, for example Iran, the gas sector is sub-divided into upstream and downstream gas activities. This should be emulated in Nigeria. Indeed, the two sectors

of the petroleum industry can be run independently and/or concurrently with each sector having its own legal framework, workers and conditions of service. There should be an Act to this effect, each taking care of one section.

More specifically, some refineries ought to refine products only for export while others supply the local market. This will mean each geo-political zone having a refinery and it will be only during emergencies, with approval, that products can be moved across the zones.

The petrochemical companies should be detached from the refineries both in name and administration. Much as a petrochemical plant depends on the refinery for feedstock, it can conveniently be operated some distance away from the main refinery. The petrochemical plant of Kaduna refinery can conveniently be located in Zaria or Kafanchan. Again, the offences contained in the Act can safely be transferred to a "Petroleum Offences Section" in both the Criminal and Penal Codes so as to make the Petroleum Act contain directions and directives.

Powers of the Petroleum Minister under the Petroleum Act are equally conferred on the Petroleum Products Pricing and Regulatory Agency (PPPRA) without clear indication as to whose authority or

decision will be final in matters of petroleum products price fixing. Under this situation, there might be anarchy where both officers fix different pump prices. The Acts should be streamlined in consonance with current realities.

The Petroleum Equalization Fund Act has outlived its usefulness and ought to be repealed. It has been so done in the Petroleum Industry Bill, 2012.

The Oil Pipelines Act deserves commendation for obvious reasons; greater volume of petroleum and its products are moved faster, safely and more economically than any other mode of transporting both crude and refined products. In appropriate places and occasions, compensations are paid for use of private lands or acquisition of right of way for pipelines. What is in want of amendment or revocation is Section 11(5)(c) which inadvertently provides an escape route to avoiding liability in the event of injury, loss of life or damage to property. It is a ready defense on the part of pipeline owners or operators.

CHAPTER FOUR

OIL MARKETERS AND THEIR OPERATIONS

4.1 Introduction

In the past decades, petroleum (crude oil) has claimed the top position in Nigeria's export list, constituting and forcing a very fundamental change in the structure of the country's international trade[1]. The sensitivity of petroleum resource is carefully reflected in the fact that it has remained the goose that lays the golden eggs for the Nigerian economy and the highest foreign exchange earner contributing as much as 80 percent of government revenues and helps in the development of Nigeria's infrastructures as well as other industries[2]. Oil prospecting began in Nigeria as far back as 1908[3] but actual production and export started in 1958 in a Shell-BP field located at Oloibiri,[4] when Nigeria joined the ranks of oil producers as its first oilfield came on stream producing 5,100 barrels per day (bpd). Other companies joined soon after independence and the number of oil producing and exporting companies has increased since then[5].

[1] Assael, H. (2000) *Overview of Petroleum Industry, Nigeria Oil and Gas.* Foundation Publishers, Lagos, pp. 11-13.
[2] Osoka, O. (1996) *Oil and the Nigeria Economy.* Panache Publications Limited, Lagos. p. 17.
[3] The Nigerian Bitumen Co. & British Colonial Petroleum commenced commercial operations around Okitipupa in present –day Ondo State South-West Nigeria. In 1938 Shell D' Archy was granted exploration license to prospect for oil throughout Nigeria and Mobil Oil Corporation started operations in 1955. Retrieved January 19 2013. From www.nnpc.com>Business_Information>Oil_&_Gas_in_Nigeria>Industry_History.
[4] A town in present day Bayelsa state of Nigeria's oil-rich Niger Delta region.
[5] In 1962 Elf started operations in Nigeria as Safrap; Phillips Oil Company started operations in the then Bendel State in 1965; and Mobil Producing Nigeria Limited was formed in 1968.

The Nigerian petroleum products marketing sector is part of the downstream oil industry. It involves the import, export, sale and distribution of petroleum products such as Premium Motor Spirit (PMS), Dual Purpose Kerosene (DPK), Automotive Gas Oil (AGO), Liquefied Petroleum Gas (LPG), Low Profile Fuel Oil (LPFO), Aviation Turbine Kerosene (ATK), High Profile Fuel Oil (HPFO).

Petroleum products dominate Nigeria's energy consumption with a mixed average of seventy-seven percent of the total over the last five years[6]. Natural gas is beginning to show a material market too, accounting for eight percent of the total in 2007. The demand for petroleum products is driven by economic growth, increase in use of vehicles and inadequate supply of electricity. The lack of progress in developing a cheap and sustainable electrical power supply has led to a greater proportion of energy supply used in Nigeria to be privately generated through PMS and AGO powered generators[7].

The Nigerian downstream oil industry is supplied through imports and locally refined products by both major and independent marketers. Major marketers account for seventy per cent of products distributed in 2010 according to the Nigerian National Petroleum Corporation

[6] Anya, A.O. (2010) "*Science, Oil and the Future of Nigeria Economy"*, The Guardian Newspapers (Lagos), Wednesday, March 13 2010.
[7] Ibid.

(NNPC)[8]. They include the state owned NNPC retail, multinational petroleum marketing companies such as Total, Mobil and Chevron and the largest indigenous operators, African petroleum (AP) now Forte Oil, Oando and Conoil. The independent marketers comprise a large number of indigenous operators.

Domestic supply of petroleum is through the nation's three refineries namely: Warri Refinery and Petrochemical Company; Kaduna Refinery and Petrochemical Company; and Port Harcourt Refinery and Petrochemical Company. These companies process crude oil allocated to them by the Federal Government through the NNPC. Due to lack of maintenance and bureaucracy, the local refineries continue to operate well below their installed capacity. In 2008, the average capacity utilization of all three refineries was twenty-two per cent with an average of twenty-five per cent over the last five years[9]. The government has made stringent effort over the years to encourage private sector investment in the refining sector by creating enabling laws allowing for establishment of refineries and granting licences for the establishment of private refineries. Recently, there were calls for the revocation of these licences from the highest levels of government

[8] Retrieved January 19 2013, From www.nnpcgroup.com/
[9] Agoro S.B., (2013) "How feasible is Nigeria's Policy of Increasing Petroleum Production?'', Retrieved January 19, from www.dundee.ac.uk/cepmlp/car/html

and civil society[10]. Government efforts in this respect are yet to achieve appreciable results as investors make reference to petroleum subsidy regime as major obstacle. At present only one of such refineries is operational many years after these licences were granted[11].

Inadequate local supply necessarily makes Nigeria highly dependent on imported petroleum products[12]. It is estimated that imports alone account for close to seventy per cent of total demand. The importation of Premium Motor Spirit and Dual Purpose Kerosene into Nigeria is regulated by the Federal Government[13], which has tried to encourage private sector participation through the issuance of import quotas, based mainly on importers' and marketers' storage and distribution capacity.

4.2 The Nigerian National Petroleum Corporation (NNPC)

The Nigerian National Petroleum Corporation (NNPC)[14] is the driving force behind the economic development of Nigeria, providing fuel and fuel stock for the nation's industrial facilities and meeting the energy needs of individual consumers and commercial enterprises.

[10] Iferi, B. (2011) Reps Probe Licenses to Private Refineries, The Dailytimes Newspapers December 2. Retrieved March 2 2013 From www.dailytimes.com.ng/articles .

[11] Alike, E. (2011) First Private Refinery Begins Operation in Rivers State, Thisday Newspapers November 28. Retrieved March 22013, from www.thisdaylive.com>HOME>NEWS. The private refinery owned by Niger Delta Petroleum Resources Ltd (NDPR), a subsidiary of Niger Delta Exploration and Production Plc has begun test-run operations in Rivers State as at the time of writing.

[12] Agoro, S.B. op cit. footnote 9

[13] This is because oil and gas are objects within the Exclusive Legislative List of the Constitution of the Federal Republic of Nigeria 1999 (as amended)

[14] This is established under the Nigerian National Petroleum Act 1977 (now Cap N123, L.F.N 2004).

NNPC is a major revenue earner for the nation. Its operations span the length and breadth of Nigeria and involve the entire spectrum of the Nigerian petroleum industry[15]. The NNPC is the holding company that oversees the Nigerian state's interests in the country's oil industry. Oil production is the cornerstone of Nigeria's economy - the country ranks as the largest oil producer in Africa. Oil operations account for twenty per cent of the country's gross domestic product and NNPC is responsible for nearly sixty-five per cent of the government's budgetary revenues[16].

Following the discovery of oil in Nigeria in 1908, commercial exploitation did not begin until the late 1950s[17]. The Nigerian government subsequently introduced its first regulations governing the taxation of oil industry profits which was split in two between the government and the oil company in question (that is to say in a 50:50 ratio). The industry grew during the 1960s, and by the mid 1960s, Nigeria began to consider ways in resources being exported by foreign oil companies could be better harnessed for the country's development. Nigeria's oil planners formulated its first agreement for taking an equity stake (and took an equity stake) in one of the companies producing oil - the Nigerian Agip Oil Company, jointly owned by Agip of Italy and

[15] Agoro, S. B. op cit. footnote 9 Also Retrieved February 19 2013, from www.nnpc.com>Business_Information>Oil_&_Gas_in_Nigeria>Industry_History.
[16] Retrieved February 19 2013, from www.nnpc.com>Business_Information>Oil_&_Gas_in_Nigeria>Industry_History,
[17] Ibid.

Philips of the United States. The option to take up an equity stake in this company in effect was the first step towards the creation of the NNPC – which was not exercised until April 1971[18].

The overriding factor, however, was Nigeria's decision to join the Organization of Petroleum Exporting Countries (OPEC) in July 1971, obliging the government to take significant stakes in the companies producing oil and gas in the country[19].

The combination of these pressures led to the formation of the Nigerian National Oil Company (NNOC) in April 1, 1971[20]. The NNOC acquired a thirty-three per cent stakes in Nigerian Agip Oil Company and thirty-five per cent in SAFRAP - the Nigerian arm of the French Company ELF. After Nigeria joined OPEC, NNOC acquired thirty-five per cent stakes in Shell–BP, Gulf Oil Plc and Mobil Oil Nigeria in April 1973. In 1973, the NNOC entered into a Production Sharing Agreement (PSA) with Ashland Oil Plc while stakes in the following companies - Elf, Agip, Philips, Shell– BP were increased to fifty-five per cent and on May 1, 1975, the NNOC acquired fifty-five per cent of Texaco Overseas operations in the country[21].

[18] Okwor, K. 1992 *"The Oil Industry and the Nigerian Economy",* The Bullion, 9(3), July-September, pp. 3-5
[19] OPEC mandates member states to have their own national oil company. Retrieved March 2, 2013, from www.opec.org/../24.htm
[20] Etikerentse, G. (2004) *Nigerian Petroleum Law.* 2nd Edition, Dredew Publishers Ltd, London. p. 221.
[21] Ibid.

The NNOC was established under the terms of the Government's decree No. 18 of 1971[22]. The NNOC was mandated to participate in all aspects of petroleum operations including exploration, production, refining, marketing, transportation and distribution. More specifically, the company was given the task of training indigenous workers and managing oil leases over large areas of the country; managing refineries and participation in marketing and ensuring price uniformity across the domestic market[23]. This was an ambitious set of objectives, several of which were only just beginning to be realized in the 1990s. The problem that the NNOC faced from its inception was that of attempting to manage a highly complex industry without adequate technical and financial resources[24]. The NNOC had limited powers as a public corporation; it could sue and be sued, hold or purchase assets and enter into partnership but could not borrow funds or dispose of assets without the specific approval of the Federal Commissioner of Mines and Power, and any surplus funds had to be disposed off at the Commissioner's discretion, subject to the approval of the ruling Federal Executive Council[25].

The NNOC operated a number of subsidiaries during the 1970s, including those in exploration and production, refining, petrochemical

[22] Ibid. Also, Retrieved March 2, 2013 from www.fundinguniverse.com
[23] Retrieved November 16, 2011, from www.fundinguniverse.com
[24] Okwor, K. op cit p. 6
[25] Onoh, J.K. (1983) *The Nigerian Oil Economy.* Beckenham Croom Helm, London. pp. 17-25.

distribution and marketing, transportation and supplies. Its success was marked in the export field. Boosted by sharp price rise that followed the first oil shock of 1973, Nigeria saw its oil export earnings rise from ₦219m in 1970 to ₦10.6b in 1979[26].

The NNOC was reconstituted as the Nigerian National Petroleum Corporation (NNPC) in April, 1977 just six years after it had been set up. One reason for the change was the operating failures of the NNOC during the 1970s which resulted in widespread corruption and culminated in the setting up of the 1980 Crude Oil Sales Tribunal. This investigation revealed that from 1975 to 1978, the NNOC and NNPC had failed to collect some 182.95 million barrels of their equity share of oil being produced by Shell-BP, Mobil Oil and Gulf Oil companies, with potential revenue estimated to be in excess of $2 billion. This situation arose because the NNOC was unable to find buyers for its oil at the price it wanted. The NNOC has, however, paid the full share of operating costs to the producers during the period of the operation. Further revelations showed that until forced to do so by the Tribunal, the NNOC had not produced audited accounts from 1975 onward[27]. It is worth stating that the NNOC failed woefully to make a dent in the lofty ambitions and dreams of its planners but nonetheless it laid the groundwork and stepping stone necessary for the eventual

[26] Ibid.
[27] Ibid.

establishment of its successor tapping from its 'huge' experience. The bane of the NNOC was massive corruption, personal and ethnic interests, ineptitude and management and system failure.

Like the NNOC, the NNPC began life essentially as a holding company[28]. The decree[29] establishing the NNPC vested the assets and liabilities of the NNOC in the NNPC and conferred on the new body responsibility for some functions of the Ministry of Mines and Power[30]. The NNPC also had some additional commercial freedom as the ceiling on contracts that it could award rose fifty fold and it was granted limited borrowing powers. Its board structure was similar to NNOC's although the Federal Commissioner for Petroleum replaced the Permanent Secretary of Mines and Power as Chairman[31].

Also established by Decree no 33 as part of the NNPC was the Petroleum Inspectorate which was given the responsibility for issuing licences for various activities such as enforcing the Oil Pipelines Act[32] and other Petroleum Decrees. The Chief Executive of the Division was nevertheless free from control by the NNPC board and reported directly to the Commissioner for Petroleum[33].

[28] Retrieved February 22 2013, from www.fundinguniverse.com. See also Falegan, J.I. (2007) *Oil and Politics of National Resource.* Lagos. pp. 4-6.
[29] Now the Nigerian National Petroleum Corporation Act, Cap N123, L.F.N 2004
[30] Ibid
[31] Falegan, J.I. op cit. pp. 4-6.
[32] Cap O7 L.F.N 2004
[33] Falegan, J.I. op cit. pp. 4-6.

In line with the objectives of government, the NNPC's holding in the oil industry operations in Nigeria increased significantly on July 1, 1979 when its stakes in Elf, Agip, Gulf Oil, Mobil Oil companies were raised to sixty per cent. Further, the NNPC's stakes in its joint venture with Shell-BP was raised to eighty per cent in August 1979 after Shell-BP lost its twenty per cent stakes in the joint venture following disagreements with the Nigerian government over apartheid South Africa[34].

The outcome of the Oil Sales Tribunal was series of reforms designed to decentralize the NNPC. Nine subsidiaries were established in 1981: the Nigerian Petroleum Exploration and Exploitation Company; the Nigerian Petroleum Refining Company Warri Ltd; the Nigerian Petroleum Refining Company Port Harcourt Ltd; the Nigerian Petroleum Products Pipelines and Depots Company Ltd; the Nigerian Petrochemical Company; the Nigerian Gas Company Ltd; the Nigerian Petroleum Marine Transportation Company Ltd; and the Petroleum Research and Engineering Company[35]. The decentralization of Nigeria's three refineries, two of which had been built in the early 1950s and late 1970s promoted competition and the establishment of a number of subsidiaries designed to instill a more commercial approach in a more diversified corporation.

[34] Ibid
[35] Ibid.

The end of the 1980s saw a number of initiatives geared towards establishing the NNPC as a financially autonomous and commercially integrated oil company[36]. Three areas of responsibility were defined for the Corporation, that is, Corporate Services, Operations and Petroleum Investment Management Services and eleven subsidiaries were also established for the Corporation. The subsidiary companies include: the Nigerian Petroleum Development Company; the Warri Refining and Petrochemical Company; the Kaduna Refining and Petrochemical Company; the Pipelines and Product Marketing Company; the Engineering Company of Nigeria; the Nigerian Gas Development Company, the LNG Company; the Port Harcourt Refining Company; the Eleme Petrochemical Company; and the Integrated Data Services Company[37].

Over the years, the source of supply of petroleum products into the Nigerian market has been through the NNPC which source is through local refineries and importation[38]. Importation arose mainly as a result of the poor state of Nigerian refineries[39]. The installed refining capacity of the refineries in Nigeria is 445,000 barrels per day (bpd)

[36] This was in line with the federal government privatization and commercialization drive at that time.
[37] Retrieved March 2 2013, from www.nnpc.gov.ng
[38] Local refineries are the three existing refineries, that is, the Port Harcourt, Warri and Kaduna refineries.
[39] This is due to the lack of the mandatory Turn-Around Maintenance (TAM) prescribed by the refinery master plans and the companies that constructed them. Here the TAM became a veritable source of personal aggrandizement and perpetual cycles of corruption which is no longer news. The refineries are near comatose!

while the optimum refining capacity ever achieved was 360,000[40]. It is worth noting that the commissioning of the new Port Harcourt refinery early in 1988 increased the total refining capacity to 445,000 barrels per day[41].

The NNPC purchases 260,000 barrels at international price, processes them in these refineries and then sells the products to oil marketing companies from its depots which are linked by 3,000 kilometers of pipeline[42]. These developments have not prevented long queues in retail outlets or outright scarcity as much of the petroleum products are lost to hoarding and cross boarder smuggling because these products are subsidized in Nigeria and more expensive in neighboring countries that have no fuel subsidy policies[43]. The Nigerian government on January 1 2012 shocked Nigerians when it suddenly removed the entire subsidy on petroleum products. This singular act immediately increased the pump price of petrol by 110 per cent. This was a huge blow to the populace of over seventy per cent living below two dollars a day. Among other things, the Nigerian government officials argued that the removal of subsidy and the consequent increase in the price of petroleum products would prevent the

[40] Oluyemi, S.A. (1996) *Deregulation and the Performance of Oil and Gas Industry in Nigeria: An Overview*, Vol. 59(1) *NDIC Quarterly*. pp 49-67.
[41] Ibid
[42] The Main Report of the Vision 2010 Committee (September 1997) contains a detailed statistics and report on this issue.
[43] Echono, A. (2013) *"Nigeria's Oil Subsidy Crisis: A Common Sense Approach"* Retrieved February 142013, from www.thelawyerchronicle.com>Home>Trends&Development

smuggling and illegal exportation of refined petrol to neighbouring countries where petroleum products are much more expensive. This argument is an admission that smuggling and illegal exportation is an ongoing phenomenon in Nigeria.[44] Elsewhere it has been stated that eighty per cent of PMS or petrol consumed in the neighbouring Republic of Benin, is smuggled from Nigeria and has again brought to the fore the broad leakages in the distribution system of the downstream oil and gas sector in Nigeria.[45] It is important to note that any marketing strategy adopted in the distribution and sale of petroleum products without plugging the loopholes of hoarding and smuggling will come to nought.

The policy of the government is to ensure a balanced supply of petroleum throughout the country. This informed the decision to locate some of these refineries and the depots in far flung corners of the country for easy access and cheaper supply of petroleum products[46]. The supplies of the products are directly affected by smooth operation of the refineries and other pipelines and depot equipment. When refineries are shut down due to non-availability of spare parts or Turn-Around Maintenance, there is bound to be scarcity of petroleum products in that vicinity or area even though effort is usually made to

[44] *Ibid*
[45] "Ending Smuggling of Fuel" Retrieved February 14 2013 from www.compassnewspaper.org>Home>Editorial
[46] Falegan, J .I. op cit pp.4-6.

supply the area from such other refineries that are operating. The performance of the refineries has been in the decline over the years due to poor maintenance and inadequate funding (or more appropriately mismanagement?). Concerned about sporadic shortages and inadequate supply of petroleum products to the domestic market, the federal government, in 1998, partially de-regulated the marketing sector of the oil and gas industry[47]. This singular government action allowed the participation of major oil marketers, independent oil marketers and third parties in the importation of petroleum products into the country[48]. The immediate past deregulation exercise witnessed a bridge of the usual supply gap that resulted in long queues in the retail outlets across the country.

NNPC's marketing and distribution of fuels and lubricants is undertaken by five international companies namely Agip, Elf, Exxon Mobil, Texaco Nigeria and Total Nigeria[49]. There are some 750 other marketing independents licensed by the NNPC to market petroleum products. Until recently the NNPC was not engaged directly in the marketing of refined products[50]. It however has substantial interest in major marketing companies and is therefore involved in the whole

[47] Agoro, S.B, (2011) *"How Feasible is Nigeria's Policy of Increasing Petroleum Production?''* Retrieved August 18 2013 from www.dundee.ac.uk/cepmlp/car/html.
[48] Ibid
[49] Ibid
[50] Ibid

downstream chain. To be specific, the role of the NNPC in petroleum marketing in Nigeria can be summed up as follows[51]:

a. acquisition of crude oil for processing by the refineries;

b. refining, where it processes crude oil into finished petroleum products;

c. distribution of petroleum products to NNPC depots located in various strategic towns and cities across the country; and

d. sale of petroleum products to licensed independent marketing companies.

Recently, however, in line with its diversification policy and the desire by the federal government to solve the perennial problem of petroleum shortages and scarcity, the NNPC ventured into retail sale of petroleum products by establishing retail outlets known as mega petrol or gas stations across the country operated by a subsidiary of the NNPC known as NNPC Retail Ltd[52]. The new stations are categorized into super mega stations, mega stations, standard stations, and a cocktail of mega stations, floating mega stations and affiliate stations; the corporation currently has thirty-seven mega-stations, twelve floating

[51] Akinyele, S.T. (2010) *Impact of Strategic Marketing Management on the Performance of Firms in the Downstream Sector of Nigerian Oil and Gas Industry,* PhD Thesis Postgraduate School, Covenant University, Ota. pp. 78-82.

[52] *"NNPC to Boost Retail Operations with Fifty New Fuel Stations"*. Retrieved February 22 2013 from www.nnpcgroup.com/PublicRelations/N.

stations and 265 affiliate stations across the country. The affiliate stations are being increased on a continuous basis[53]. These stations provide a variety of services ranging from the sale of petroleum products and its derivatives to the provision of ancillary services.

4.3 The Pipelines and Product Marketing Company Limited (PPMC)

The Pipelines and Product Marketing Company Limited (PPMC) is one of the subsidiaries of the Nigerian National Petroleum Corporation (NNPC). When in March, 1988 the NNPC was reorganized for the purpose of proper capitalization and commercialization, one of the subsidiaries created was the Pipelines and Product Marketing Company (PPMC)[54]. Being the creation of the 1988 reorganization of the NNPC, the establishment of this subsidiary is directly responsible for the comparative ease with which petroleum products are sourced and distributed to all parts of the country at a uniform price[55]. The PPMC ensures, amongst other things, the availability of petroleum products to sustain our industries, run automobiles and for domestic cooking.

Until 1965 when Nigeria's first petroleum refinery was established in Port-Harcourt by Shell and British Petroleum (BP), petroleum products used in the country were imported. The importation of

[53] Ibid
[54] Retrieved September 21 2012 from www.ppmcng.gov
[55] Ibid, See Also Akinyele, S.T. op cit. pp. 78-82. See also Oluyemi, S.A. (1996) Deregulation and the Performance of Oil and Gas Industry in Nigeria: An Overview, Vol. 59(1), *NDIC Quarterly.* pp. 49-67.

petroleum products continued even after the refurbishment of the old Port Harcourt refinery which was damaged during the civil war. For quite some time therefore marketers and consumers of petroleum products in Nigeria depended on external sources for the products[56].

The PPMC was set up with the objective to provide excellent petroleum services by transporting crude oil to the refineries and moving petroleum products to the existing and future markets efficiently and at low cost through a safe and well-maintained network of pipelines and depots[57]. It is also part of the objectives of the company to profitably and efficiently market refined petroleum products in the domestic as well as export markets especially in the Economic Community of West African States (ECOWAS) sub-region[58], provide marine services and maintain uninterrupted supply of refined products from the local refineries[59].

To actualize the objectives, vision and business mission of the PPMC, the company has continued with the implementation of the programme as contained in its strategic planning at inception. Having consolidated in the home market within the first few years, the company has been exploring the possibility of extending its pipeline network to neighbouring countries to earn valuable revenue. It

[56] Ibid.
[57] Retrieved February 23 2013 from www.nnpcgroup.com/NNPCBusiness/subsidiaries/PPMC.aspx.
[58] Ibid.
[59] Ibid.

consciously minimizes costs of services and other cost elements that go into products price determination[60]. The company maximizes utilization of coastal vessels for products supply on a continuous basis.

The PPMC is structured to operate under a Board of Directors headed by a Non-Executive Chairman. The company is managed daily by a Chief Executive Officer, the Managing Director who is assisted by four Executive Directors namely Executive Director Operations, Executive Director Services, Executive Director Commercial and Executive Director Finance and Accounts[61].

The PPMC receives crude oil from the NNPC Corporate Services Unit called the National Petroleum Investments Management Services (NAPIMS)[62] which it supplies to the NNPC local refineries. However, petroleum products are sometimes imported to supplement local production when the local refineries are unable to process enough for the country's needs.

Petroleum products which are either imported or refined locally are received by the PPMC through import jetties or refinery depots and distributed through pipelines to depots strategically located all over the country from where petroleum tankers lift the products to designated

[60] Ibid.
[61] Ibid.
[62] The NAPIMS is a petroleum investment management company set up to earn margins arising from investments in the Joint Venture Contracts (JVCs) and the Production Sharing Contracts (PSCs) with the multinationals and also protect Nigeria's strategic interests in the JVCs. In addition, the NAPIMS engages in frontier exploration services in basins where the multinationals hesitate to venture like the Chad basin.

retail outlets across the country. The company's main assignment is executed using a network of petroleum product pipelines and storage depots strategically located nationwide. The petroleum products pipelines have a total length of about 5,120 kilometres[63]. The products are transported through the pipelines by pumping or using marine and booster pumps. A number of pump stations situated at strategic points along the pipelines complement pumping of products to desired destinations. The pipeline and storage depot system along with its mainline and booster pump stations and export and import facilities are administered under five zones known as its control and headed by an Area Manager who reports directly to the Executive Director (Operations). The pump stations, depots and jetties are controlled by five Area Offices which are:

A. Port Harcourt Area Office

The Port Harcourt Area Office comprises the following depots and terminals namely: Port Harcourt Depot; Aba Depot; Enugu Depot; Makurdi Depot; Calabar Depot; and Bonny Express Terminal

[63] Retrieved February 23 2013 from www.nnpcgroup.com/NNPCBusiness/subsidiaries/PPMC.aspx

B. Warri Area Office

The Warri Area Office has the following depots, pump stations and jetty: Warri Depot; Warri Jetty; Benin Depot; Abudu Pump Station; Auchi Pump Station; Lokoja Pump Station; and Escravos Terminal.

C. Mosimi Area Office

The Mosimi Area Office has the following under its sphere of activities: Mosimi Depot; Ibadan Depot; Atlas Cove Jetty & Depot; Satellite (Ejigbo Lagos) Depot; Ore Depot; and Illorin Depot.

D. Kaduna Area Office

The Kaduna Area Office has under its purview the following depots and pump stations: Kaduna Depot; Abaji Pump Station; Izom Pump Station; Minna Depot; Suleja Depot; Sarkin Pawa Pump Station; Zaria Pump Station; Kano Depot; and Gusau Depot.

E. Gombe Area Office

The Gombe Area Office has under its jurisdiction the following depots: Jos Depot; Gombe Depot; Yola Depot; Biu Depot; and Maiduguri Depot[64].

[64] Ibid

The PPMC determines and meets the national level of petroleum products demand[65]. It stimulates the consumption of Liquefied Petroleum Gas (LPG) to a significant level in the domestic energy mix. It is also responsible for the sale of special products such as fuel oil, base oil, solvent, bitumen and promotes import substitution of petroleum products[66].

The PPMC operates a fleet of marine vessels used for moving petroleum products along Nigeria's Coastal waters – from Port Harcourt and Warri to Lagos and from Port Harcourt to Calabar. These are vessels of varying capacities[67]. There are also LPG vessels in the fleet. Petroleum products moved into Lagos through the coastal vessels are discharged primarily at the Atlas Cove Terminal where they are received into storage tanks for onward pumping to Mosimi Depot near Shagamu in Ogun State from where the products are pumped to other depots in that axis such as Ibadan, Ilorin and Ore. Also, there is throughput agreement[68] with some private depot owners for use of their storage tanks and load out facilities for depot reception and distribution[69].

[65] By ascertaining the national consumption level and working towards meeting the target it set as the national level.
[66] Retrieved February 22 2013, from www.nnpcgroup.com/NNPCBusiness/subsidiaries/PPMC.aspx
[67] Ibid.
[68] This is an agreement with a company or between a company and a transporter to route some or all units of a product through a certain mode of transportation. This is used by energy companies, for example, an oil company may agree to use a certain pipeline or ship to transport some of its oil.
[69] Retrieved February 22 2013 from www.nnpcgroup.com/NNPCBusiness/subsidiaries/PPMC.aspx.

While vessels are dedicated to the evacuation of fuel oils from Port Harcourt and Warri refineries for export, Calabar depot can only be supplied with petroleum products by marine vessels as it is not linked to the pipeline network. LPG vessels discharge directly into the market and PPMC storage facilities at Apapa[70]. It can be concluded that the PPMC is the principal actor in the marketing and distribution of petroleum products as it is involved extensively in products movement across the country. Therefore marketing petroleum products in Nigeria without the PPMC is virtually impossible.

4.4 MRS Oil Nigeria Plc (Formerly Texaco Nigeria Plc)

Texaco Nigeria Plc was incorporated in 1969 as a private limited company and became a publicly quoted company on December 8, 1978[71]. Historically, the company started marketing petroleum products in Nigeria in 1913 under the brand name "Texaco". The petroleum products were distributed exclusively by Compagnie Francaise de l'Afrique Occidentale (CFAO), a French multinational retail company. In 1964, Texaco Africa Limited started direct marketing of Texaco products selling through kiosks acquired from the said multinational retail

[70] Ibid.
[71] Retrieved February 23 2013 from www.nigeria-oil-gas.com/TEXACO_Nigeria

company on lease terms. It also entered into the aviation and bunkering process[72].

On August 12 1969, Texaco Nigeria Limited was incorporated as a wholly-owned subsidiary of Texaco Africa Limited thus inheriting the business formerly carried out in Nigeria by Texaco Africa Limited. With the promulgation of the Indigenization Decree of 1978, forty per cent of Texaco Nigeria Limited was sold to Nigerian individuals and organizations by Texaco Petroleum Company[73]. By the late 1960s, oil had replaced cocoa, groundnuts and palm products as the country's biggest foreign exchange earner. In 1971, Nigeria - by then the world's seventh largest petroleum producer – became a member of the Organization of Petroleum Exporting Countries (OPEC). The dramatic rise in the world oil prices in 1974 caused a sudden flood of wealth that can be described as 'dynamic chaos'. Much of the revenue went into investment to diversify the economy but it also spurred inflation, corruption and unemployment.

In 1975, production fell sharply as a result of the sudden decrease in world demand and prices moved downward until late in the year when OPEC intervened to raise prices. Nigeria fully supported OPEC policies. In 1972, the government issued an indigenization

[72] This is the act or process of supplying a ship with fuel.
[73] Okoroafo, S.C. (1993) Firm Performance in a Liberalized Environment: Empirical Evidence From a Developing Country, *Journal of Business Research*, Vol. 28. pp 173-187.

decree, the first of a number of Nigerian Enterprises Promotion Decrees that barred aliens from investing in specified enterprises and reserved participation in certain traits to Nigerians. At the time, about seventy per cent of commercial firms operating in Nigeria were foreign-owned. In 1975, the federal government of Nigeria bought sixty per cent of the equity in the marketing operations of the major oil companies but final nationalization was rejected as a means of furthering its programme of indigenization. Thus, the 1978 decree was a continuation of that programme.

In 1990, the coming into effect of the Companies and Allied Matters Act (CAMA)[74], necessitated the dropping of the word "Limited" from the Company's Corporate name. It became "Texaco Plc" with its shares quoted on the Nigerian Stock Exchange[75].

Following the creation of Chevron-Texaco[76] in 2001 from the merger between Chevron Corporation and former Texaco Inc, Texaco Nigeria Plc became an integral part of the new corporation[77]. As the Board of Chevron-Texaco considered the acquisition of Union Oil Company of California (UNOCAL)[78], the Board of Chevron-Texaco decided to drop "Texaco" and maintain only "Chevron" as the new

[74] Cap C20 L. F. N 2004
[75] Okoroafo, S.C. (1993) Firm Performance in a Liberalized Environment: Empirical Evidence From a Developing Country, *Journal of Business Research*, Vol. 28. p. 173.
[76] Chevron was originally Gulf Oil Company (Nigeria) Limited (GOCON)
[77] Ibid.
[78] On August 10, 2005, Unocal merged with Chevron Corporation and became a wholly owned subsidiary of Chevron. Retrieved February 23 2013, from www.chevron.com>Home>Investors>Archives

name of the enlarged corporation. Effective September 2006, the Company's name changed from Chevron-Texaco to Chevron Nigeria Plc[79] following a directive from the Chevron Corporation Headquarters to all affiliate companies designed to present a clear, strong and unified presence of Chevron Corporation throughout the world[80].

Early in 2009, in an effort to continue to grow and expand its business, MRS Oil Nigeria Plc[81] concluded a high profile acquisition of Chevron downstream assets in Nigeria. With this acquisition, a very strong brand foundation with over 50 years presence in Nigeria was inherited by the MRS Oil Nigeria Plc[82].

Before its acquisition by the MRS Oil Nigeria Plc, Texaco Nigeria Plc was principally engaged in the marketing and distribution of petroleum products. Its range of businesses within this sector includes 'blending of lubricants, manufacturing of greases and the production of petroleum jelly'. The company has an approved and registered agreement with Texaco Overseas Holding Inc. which is aimed at ensuring the transfer of latest technical know-how in order to enhance operations, production processes and introduce developed product lines

[79] This is contained in the Company Resolution of August 12, 2011 and filed together with its documents of incorporation as required under the CAMA Cap C20 L.F.N 2004.

[80] Okoroafo, S.C. (1993) Firm Performance in a Liberalized Environment: Empirical Evidence From a Developing Country, *Journal of Business Research,* Vol. 28, pp. 173-187.

[81] The parent company of MRS Nigeria Plc, a company incorporated in 1969 and listed on the Nigerian Stock Exchange on December 8, 1978.

[82] Mamman, H. and Oluyemi, S.A. (1995) Oil Management Issues and Restoring the Health of Nigerian Downstream Through Improving the Quality of Management/Employees. *NDIC Quarterly* Vol. 4(4). pp. 56-70.

in the Nigerian market. This is very important considering the dearth of indigenous technology in Nigeria especially in the critical oil and gas sector of the economy. While other major oil producing countries have near complete control over their oil and gas industry, only recently did the Nigerian government put in place a legal framework necessary to internalize technology and ancillary services[83].

Under the agreement between MRS Oil Nigeria Plc and Texaco Nigeria Plc, Texaco Overseas Holding Inc. provides assistance to MRS Oil Nigeria Plc in several areas of technical support including the Escravos Gas Project to which Texaco Nigeria Plc is a partner. It was the initial plan of Texaco to partner with the Johannesburg based Sasol Ltd in its proven synfuels[84] conversion technology[85].

The acronym for synthetic fuels is a liquid fuel obtained from coal, natural gas, oil shale or biomass. It may also refer to fuels derived from other solids such as plastics or rubber wastes. It can also be described as fuels manufactured through Fischer-Tropsch conversion, methanol to gasoline conversion or direct coal liquefaction. The interest in alternative, clean synthetic fuels produced from fossil and renewable

[83] This is made possible with the recent enactment of the Nigerian Oil and Gas Industry Content Development Act 2010 otherwise known as the Local Content Act. Also Oluyemi, L. "An Overview of the Nigerian Oil and Gas Industry Content Development Act 2010", Thursday march 24 2011, Retrieved February 23 2013. From www.businessdayonline.com>Law>Legal_Culture.

[84] Retrieved February 23 2013, from www.synfuel2012.org/; www.merriam-webster.com/../synfuel

[85] Sasol Ltd is an integrated energy and chemical company that began in Sasolburg, South Africa in 1950. It develops and commercializes technologies and builds and operates world-scale facilities to produce a range of product streams including liquid fuels, chemicals and electricity. In particular, Sasol produces petrol and diesel profitably from coal and natural gas using the Fischer-Tropsch process. Retrieved February 21 2013, from www.reuters.com/finance/stocks/comp

resources has been steadily growing in recent years. It is suggested that Nigeria invest heavily in this area as our environment is practically littered with used plastics and gas flaring continues with renewed alacrity unabated. Many developing countries are tapping into synthetic fuel alternates, why can't we!

This did not materialize. The plant produces premium quality ultra low sulphur diesel fuel and naphtha which are sold in Europe and the United States. It is encouraging to note that the engineering and technical aspects have been carried out and which project is a key element in the Federal Government directive to reduce gas flaring. The project start-up was originally slated for 2007 but has to be shifted to 2012 due to technical reasons[86]. Currently, Chevron and MRS Oil Nigeria Plc are partnering in the marketing of petroleum products and lead a consortium on the West African Gas Pipeline. This West African Gas Pipeline is sponsored by the governments of Ghana, Togo, Republic of Benin and Nigeria to develop a planned $500 million 600 kilometre pipeline linking the Niger Delta[87] gas fields and supplies to power generators and industrial customers in the Republic of Benin, Togo and Ghana. Subject to government approval, the West African Gas Pipeline

[86] Mamman, H. and Oluyemi, S.A. (1995) Oil Management Issues and Restoring the Health of Nigerian Downstream Through Improving the Quality of Management/Employees, *NDIC Quarterly.* Vol. 4(4), pp. 56-70.
[87] This is the major oil and gas production region in Nigeria and cuts across several states of the Federation of Nigeria and its ocean shelves and low water marks.

became operational in 2012[88] and it is operated by the West African Pipeline Company (WAPCO)[89].

In addition to this gigantic marketing strategy, MRS Oil Nigeria Plc operates a terminal and storage facility at Apapa, near Lagos. This serves the importation needs of the country and doubles as a discharge point for some oil tankers laden with fuel destined for Nigeria.

MRS Oil Nigeria Plc owns and operates more than three hundred retail fuel and service stations and supplies motor oil to hundreds of third-party-owned outlets. As a leading marketer of lubricants, oil, greases, petroleum jelly and plastic containers, the company owns several manufacturing facilities including a lubricating blending plant at Apapa which is capable of producing 186,000 barrels per year.[90]

4.5 Mobil Oil Nigeria

Mobil Oil Nigeria (Mobil Nigeria) is a subsidiary of Exxon Mobil Corporation and it is the second largest oil exporter in Nigeria[91]. Mobil Oil Nigeria is also a publicly-traded company listed on the Nigerian stock exchange[92].

[88] Retrieved February 21 2013, from www.chevron.com/global/operations
[89] The company has its headquarters in Accra, Ghana, with an office in Badagry, Nigeria, and field offices in Cotonou-Benin, Lome-Togo, Tema and Tokaradi, both in Ghana. Retrieved February 19 2013, from www.wagpco.com/
[90] Retrieved February 19 2013, from www.chevron.com/global/operations
[91] Retrieved February 19 2013, from www.exxonmobil.com/operations
[92] Ibid

Mobil Nigeria has two upstream subsidiaries with long history of operations in Nigeria with significant oil and natural gas production and a leadership exploration position in the deepwater offshore Nigeria[93]. The company's operation is one of the largest sources of revenue for the Nigerian government and the economy[94]. There are approximately 1,900 Exxon Mobil employees with Nigerians representing 96% of the entire workforce[95]. The company's headquarters is in Lagos. It began operations in Nigeria in 1955 under the name Mobil Exploration Nigeria Incorporation and was incorporated as Mobil Producing Nigeria on June 16, 1969. The Company commenced the production of crude oil in February 1970 from the Idoho field located off the coast of Akwa-Ibom State, south east Nigeria[96].

Mobil Oil Nigeria Plc engages in downstream operations including manufacture, sale and marketing of petroleum products through retail outlets in Nigeria. It also leases buildings or more appropriately its fuel stations to other companies that engage in retail too. The company operates approximately 200 retail outlets spread across the country. In addition, it manufactures lubricants, petroleum jelly and insecticides. Mobil Oil Nigeria Plc is a leading operator in the downstream sector of

[93] They are Mobil Producing Nigeria Unlimited and Esso Exploration and Production Nigeria Limited and are involved in upstream operations that include exploration, development, production and gas commercialization.
[94] Bolaji, K. (2009) *"Oil and the Politics of Natural Resources Governance in Nigeria",* a paper presented at the 14th Biennial Congress of the African Association of Political Science (AAPS) held in Durban, South Africa, June 26-28.
[95] Ibid
[96] Nigeria oil and gas industry information. Retrieved February 19 2013, from www.oilandgasbrief.com

the Nigerian oil and gas industry and distributes its petroleum products through 228 retail outlets countrywide. The petroleum products are supplied from twenty-one NNPC depots and three NNPC refineries as well as four storage and distribution locations owned by Mobil Oil Nigeria Plc[97].

4.6 Conoil Plc (Formerly National Oil and Chemicals Marketing Company Plc)

Conoil Plc formerly National Oil and Chemicals Marketing Company Plc is a Nigerian based company engaged in the marketing of refined petroleum products and the manufacturing and marketing of lubricants, household and industrial chemicals[98]. The major supplier of the company's products is the Nigerian National Petroleum Corporation (NNPC) and the distribution of its petroleum products is done through its own network of branches, dealers and distributors[99]. As at December 31, 2006, the company had 361 dealers and distributors across the country[100]and by December 1, 2006, Conpetro Limited held a seventy-four per cent interest in the company[101].

In line with its long term retail expansion drive to become the largest retailer in Africa, Conoil Plc, a frontline indigenous petroleum products marketing company, has opened four ultramodern retail

[97] Retrieved February 19 2013, from www.exxonmobil.com.ng/nigeria
[98] Retrieved February 19 2013, from www.conoilplc.com/keyfacts.
[99] Ibid
[100] Detailed information is accessible from the Conoil Plc Company Annual Report for the year ended December 2007.
[101] Ibid

outlets in Minna, Nsukka and Abuja. The recently commissioned outlets estimated to have a total cost over ₦400 million include one mega station with hi-tech facilities designed to provide a variety of services beyond the customary business of selling petroleum products[102].

Conoil pioneered the mega station idea in Nigeria with the largest retail network offering world class services. Among cities where mega stations are already in operation are Lagos, Abuja, Makurdi, Yola, Jos, Enugu and Port Harcourt. Conoil launched its business plan on massive investment in new retail outlets and the upgrade of its over 400 fuel stations countrywide. To complement its retail expansion programme, the company put in place robust plans to ensure petroleum products availability through well structured acquisition and upgrade of storage capacities[103].

Conoil has programmed charter vessels for regular and uninterrupted importation of petroleum products all year round to boost fuel supply in the Country[104]. Product facilities upgraded include the storage tanks at its Apapa installation for premium motor spirit (PMS) popularly called petrol, Automotive Gas Oil (AGO) commonly known as diesel, and Dual Purpose Kerosene (DPK) popularly known as kerosene.

[102] Retrieved February 19 2013 from www.conoilplc.com/keyfacts
[103] Ibid
[104] The Conoil Plc Company Annual Report for the year ended December 2007 contains a detailed description of these activities.

Conoil Plc has established a depot in Warri as well as its aviation fuel storage capacity at its service centres in Ikeja, Abuja, Kano, Kaduna, Jos and Port Harcourt. The company won major contracts for the supply of jet fuel to five international airlines operating in Nigeria. They include Saudi Arabian Airlines, South African Airlines, Egypt Air, and Sudan Air amongst others[105].

Conoil petroleum products portfolio consists of gasoline, diesel, steam engine oils, automotive gear oils, brake and clutch fluids, industrial lubricants, hydraulic oils as well as industrial chemicals. Its depot located near the Free Port Zone of Onne consists of an ultra modern facility which costs about ₦12billion and provides easy access to fuel

imports and eases the current pressure on available jetties and other port infrastructure in Lagos[106].

The complex has a storage facility capable of holding 70,000 metric tons of all products namely, Premium Motor Spirit (PMS), Automotive Gas Oil (AGO), Dual Purpose Kerosene (DPK), Aviation fuel and bitumen. The huge storage capacity enables the supply of fifty-five million litres of fuel per day delivering 300 trucks on a daily basis[107].

[105] Retrieved November 2013, from www.conoilplc.com/.../Specialised-Products
[106] Ibid
[107] Retrieved February 19 2013, from www.nigeria-oil-gas.com/conoil

4.7 Oando Nigeria Plc

Oando is a Pan-African multinational energy corporation headquartered in Lagos, Nigeria, with active presence in various African countries[108]. The company is engaged in every aspect of the energy value chain including petroleum marketing, exploration and production, refining and power generation. Oando Nigeria Plc is Nigeria's largest non-government owned company in the energy industry. It is the first Nigerian company to achieve a dual listing on both the Nigerian and Johannesburg stock exchanges with a market capitalization of about $1 billion[109]. The history of Oando Nigeria Plc can be traced to the formation of Esso Africa in 1956[110]. Esso Africa was a petroleum marketing company - a subsidiary of Exxon Mobil Corporation of USA. In 1976, the Nigerian government purchased a controlling stake in the company and rebranded the company as Unipetrol Nigeria[111]. On March 1 1991, Unipetrol became a public limited company[112]. Later in the same year, the Nigerian government sold sixty per cent equity of its

[108] Oando has active presence in Republic of Benin, Ghana and Togo countries strategically situated along West Africa without large or known oil and gas reserves. The exception is Ghana which recently struck the black gold.
[109] Oluyemi, S.A. (2009) Deregulation and the Performance of Oil and Gas Industry in Nigeria: An Overview", Vol. 59(1), *NDIC Quarterly*. p. 49-67.
[110] Ibid
[111]."What is Wrong with the Nigerian Oil Industry?". The Guardian newspapers, Lagos, Wednesday, January 25 2006, pp. 1-2.
[112] Ibid

shares to the Nigerian public in an initial public offer and by February 1992, Unipetrol was listed on the Nigerian Stock Exchange (NSE)[113].

In 1999, Unipetrol acquired a forty per cent stake in Gas Link Nigeria Limited, a gas utility company. The acquisition was motivated by a desire to utilize its exclusive Gas Sale and Purchase Agreement with the Nigerian Gas Company (NGC). In the year 2000, Ocean and Oil, a private investment company acquired a thirty per cent controlling interest in Unipetrol Plc and in 2001, Ocean and Oil increased its stakes in Unipetrol to forty-two per cent through an irredeemable convertible loan stock issue[114]. In 2002, Ocean and Oil led Unipetrol's bid for a sixty per cent stake of Agip Nigeria Plc, a rival petroleum marketing firm owned by Agip Petrol BV, an Italy based oil company. The two companies merged and the result is a company named Oando Plc in 2003, making the company the largest downstream petroleum marketing company in Nigeria[115].

In 2005, Oando Energy Services was incorporated as an integrated oil field services company to achieve the group's objective in the upstream services industry. In 2007, Oando Energy Services acquired two oil drilling rigs in Nigeria's Niger Delta region and in 2008,

[113] Ibid
[114] Ibid
[115] Oluyemi, S.A op cit; As the nation's leading oil retailer, with one in every litre of petroleum products being sold or distributed by Oando Marketing Plc through its over 500 retail service stations and strategically located terminals, it has continuously ensured products supply and availability in Nigeria and West Africa. Retrieved February 20 2013 from www.oandoplc.com/about-oando

the company emerged as the first indigenous company with interests in producing deep water assets through the acquisition of equity in two oil blocks[116]. By 2009, the company had acquired five swamp rigs and in 2010, the company launched its first independent power plant for the Lagos Water Corporation. The project involved the construction of a 12.5MW power plant to provide uninterrupted power supply to the Lagos Water Corporation. In this wise, it can be rightly put that Oando is marketing petroleum products with the provision of services in the technical services industry while turning itself into the sole supplier of the fuel or other products needed or necessary to run the facility or service. It is a multi-business approach adopted by the company especially as it is doing business in a country in need of all useful technology it can get necessary for creation of jobs and development.

As a fuel marketer, Oando currently operates a group structure consisting of six subsidiaries across the energy value chain. Oando Marketing Limited, the company's downstream subsidiary, owns Nigeria's largest petroleum retail network with over 600 petrol stations. Oando Supply and Trading, another subsidiary of the company, is a major independent importer of PMS which imported four million metric tons of petroleum products into Nigeria in 2009 alone[117]. This is a huge testimony of its strong market presence and huge market share of the

[116] Namely OML 125 and OML 134

[117] The Department of Petroleum Resources Quarterly Report for 2006, released 10th May, 2010.

company which continues to rise astronomically and will continue to rise in the coming years as the economy continues to expand albeit slowly as its impact is rarely felt below the rungs of society. In the upstream sector, Oando Exploration and Production is the operator of two oil blocks in Nigeria's Niger Delta Region with Oil Prospecting Licence (OPL) 236 and OPL 278[118]. The company was also a Nigerian content partner with Agip Oil on OPL 282 and had forty-five per cent interest in a marginal field, Oil Mining Lease (OML) 56[119].

Oando Nigeria Plc has been a beacon of Nigeria's local content law which seeks to increase indigenous participation in the oil and gas industry. The Company is organized functionally into a number of operating divisions. These divisions are grouped into three categories as follows:

a. Upstream (Oando Exploration and Production Limited, Oando Energy Services)

b. Midstream (Oando Gas and Power, Akute Power Limited, Gas Link Nigeria Limited)

[118] Ibid
[119] Ibid

c. Downstream (Oando Marketing Limited, Oando Supply and Trading, Corporate Affairs)[120]

Tentatively it is worth noting that Oando Nigeria Plc in its quest to position itself as the first major indigenous major player in the Nigerian oil and gas industry has racked up an array of assets better called strategic assets that include: over 600 retail outlets in West Africa; seven petroleum storage depots; three aviation fuel depots; two bitumen plants; two lubricant blending plants; one grease plant; one aerosol filing plant; 100 kilometre gas pipeline in Lagos and 128 kilometre ongoing gas pipeline in south eastern Nigeria; five swamp drilling rigs; and other assets in West Africa[121]. This is huge progress as far as marketing petroleum products in Nigeria is concerned more so for an indigenous oil and gas company!

4.8 Forte Oil Plc (Formerly African Petroleum)

Forte Oil Plc began business in colonial Nigeria as British Petroleum (BP)[122] after it took over from Atlantic Richfield[123] in 1954. Subsequently in 2010, with its own depots in Apapa, Jos and Kano, Forte Oil Plc receives its fuel supplies from the Nigerian National

[120] Ibid
[121] Retrieved February 20 2013, from www.oandoplc.com/about-oando
[122] This is British multinational oil and gas company headquartered in London, United Kingdom. It is the third largest energy company in the world measured by 2011 revenues and is one of the six oil and gas super majors. It is vertically integrated and operates in all areas of the oil and gas industry, including exploration and production, refining, distribution and marketing petrochemicals, power generation and trading. Retrieved February 19 2013 from www.bp.com/history
[123] This is American Oil Company with operations in the United States as well as in Indonesia, the North Sea, and the South China Sea. Retrieved February 21 2013 from www.wikipedia.org/wiki/ARCO

Petroleum Corporation (NNPC) network of depots and refineries. The Company's core areas of business today are marketing, aviation, industry and commerce. Petroleum products marketed and distributed by the company range from petrol, diesel, household kerosene, fuel oil to jet A1 fuel (Aviation Turbine Kerosene)[124].

Following a strategic diversification plan between 1991 and 1995, two core areas were created. One core area is in real estate and aims at developing, managing and investing in the company's 320 retail outlets and shopping in the complexes across the country which currently employ over 3,000 staff[125].

The other core area is in chemicals and deals with importing and selling chemicals to industrial concerns like Dunlop, Vita foam, Winco foam Industries Ltd[126], Mouka foam, Guinness Nigeria Plc, NNPC Refineries and Petrochemical Companies[127]. In 1996, Forte Oil Plc initiated joint venture with Newfield International (AP/Chevron) and Star Oil fields (Star/AP), widening further its vast potential. In addition, the company has established a Lubricant Oils Blending Plant which

[124] Ibid
[125] Ibid
[126] Retrieved February 11 2013 from www.wincofoam.com/winco_aboutus
[127] Retrieved February 11 2013 from www.nnpcgroup.com/nnpcbusiness/ and www.finelib.com/../petrochemicals

production capacity has recently been increased to 50,000 metric tonnes[128].

In 2010, the company underwent corporate restructuring when shareholders of the company overwhelmingly approved the change of name of the company to Forte Oil Plc[129]. The new name, according to the Chairman of the company, was part of the strategic plan of the company to make a fresh start and do away with the past which had been enmeshed in all sorts of controversies[130].

4.9 Total Nigeria Plc (Formerly Totalfinaelf)

Total Nigeria Plc was incorporated as a private company on June 1, 1956[131] to market petroleum products in Nigeria. It became Total Nigeria Ltd in 1967, and Total Nigeria Plc in 1978 after it went public in accordance with the Nigerian Enterprises Promotion Decree 1977[132], with 10 million naira share capital held by Nigerian shareholders and, Total S.A.[133] a French Company as the principal shareholder.

On the other hand, Elf Oil Ltd was incorporated as a private liability company on November 20, 1981 to engage in the business of marketing petroleum products, lubricants and chemicals. Elf Acquitaine

[128] Retrieved February 11 2013 from www.webbizafrica.com/suppliers
[129] Retrieved February 17 2013 from www.forteoilplc.com/
[130] Ibid
[131] This is in compliance with the mandatory requirements of the CAMA Cap C20 L.F.N., 2004. Retrieved September 6 2012 from www.ng.total.com/
[132] Now the Nigerian Export Promotion Council Act, Cap N108, L.F.N., 2004.
[133] Retrieved September 6 2012 from www.ng.total.com/

S.A., a French company, held sixty-seven per cent of the authorized share capital while Enifor Ltd held thirty-three per cent. With the merger, Total Nigeria Plc holds forty-five per cent while Elf Acquitaine Paris holds sixteen per cent, Enifor Ltd holds eight per cent while Nigerian shareholders hold thirty per cent[134].

Total Nigeria Plc is a marketer of refined petroleum products with presence in virtually all the major towns and cities in Nigeria[135]. The company commissioned its first service station at Herbert Macaulay Street, Yaba, Lagos in 1956 and had since expanded its business through a network of over 500 retail outlets and corporate customers and organizations that are served through five regions which regions are Western Region, Mid-Western Region, Eastern Region, Far North and North-Central. The company also has bulk storage facilities at Apapa, Ibadan, Kano, Kaduna and Bukuru depots[136].

Total Nigeria Plc with the support of Air Total International Paris[137] is well established as one of the major suppliers of aviation fuel to the aviation industry in Nigeria. The company is currently one of the two largest suppliers of Jet A-1 fuel in Nigeria. Total Nigeria Plc has invested in the establishment of three lubricant blending plants at Koko

[134] Retrieved February 17 2013 from www.moneyhub.net/scripts/cgiip.wsc/
[135] Assael, H. Op. Cit. footnote 1. Also Retrieved September 6, 2012 from www.ng.total.com/
[136] Ibid
[137] Ibid

in Delta State, South-South Nigeria with other plants in Kaduna State and Apapa in Lagos State[138].

A unique aspect of petroleum marketing that distinguishes Total Nigeria Plc from other petroleum marketing companies is its investment in the area of bottling of Liquefied Petroleum Gas (LPG)[139]. Thus Total Nigeria LPG is a common feature of several homes and industrial concerns in the country. The company has ten (10) LPG bottling plants strategically located in different parts of the country with a coastal storage centre at Apapa in Lagos. Today, Total service stations are a one-stop centre for not only petrol but lubricants, car wash, oil change and other services. The company keeps investing and upgrading its network of facilities nationwide[140].

Industrial safety is one of the company's concerns as is reflected in the company's deliberate investment in advanced safety equipment at its locations coupled with massive training programmes for its staff and business partners[141].

[138] Retrieved September 6, 2012 from www.ng.total.com/
[139] Ibid
[140] Akinbode, A.O. (2009) "*Millennia Safety Concerns"*; Being a paper presented at The Safety Week of Total Nigeria Plc held at Muson Centre, Lagos on August 18.
[141] Ibid. It may also not be unconnected with the security challenges posed by unrest or militancy and spates of kidnap for ransoms witnessed in this oil producing region of Nigeria.

4.10 The Independent Petroleum Marketers Association of Nigeria (IPMAN)

The Independent Petroleum Marketers Association of Nigeria (IPMAN) is a body established by the government in furtherance of its objective of encouraging indigenous participation in the downstream sector of the petroleum industry. It was founded to safeguard the noble ideas of the federal government in encouraging indigenous entrepreneurs to venture into the downstream petroleum industry[142] and its primary mission is to nationally unify petroleum marketers throughout the country in order to effectively further the common business interests of the petroleum marketing industry[143]. The organization which was inaugurated in 1978[144] represents marketers in Nigeria and provides its members with access to several services and promotional materials that help them run their businesses more efficiently[145].

The IPMAN, among other objectives, principally seeks to protect, promote and further the financial, administrative and ancillary interests of its members. Prime amongst these is the obtaining of licences, renewal of permits and co-operation with the federal government.

[142] Adegbulugbe. A. O. (2002) *Energy Supply and Demand Balance in Nigeria. Issues and Options: Energy Policy Agenda for Nigeria.* International Energy Services Ltd. Lagos. pp. 6 -11.
[143] Retrieved November 18, 2011 from www.ipmanonline.org
[144] Ibid
[145] Ibid

IPMAN presently controls about sixty-three per cent of the retail outlets in Nigeria[146]. It has three thousand eight hundred (3,800) members and eight thousand six hundred and seventy one (8,671) petroleum outlets nationwide[147]. IPMAN's investment in the downstream is well over twenty-five billion naira and its member companies claim to have over seventy per cent of the market share in the downstream sector. This is as a result of their overwhelming investments in all the nooks and crannies of this country to make petroleum products available even in the remote areas. The total staff strength of IPMAN is about 22,000 in all their service outlets with the expectation of five and a half per cent increase in their employment profile across the country annually[148].

The Independent Petroleum Marketers Association of Nigeria and the Nigerian Independent Petroleum Company (IPMAN-NIPCO)[149] have been acknowledged as the second largest employer of labour after the federal government in the sector. Indeed the successful IPMAN-NIPCO story exemplifies triumph in co-operation. By pooling their resources,

[146] Adebgulugbe, A.O. Op. Cit. footnote 142
[147] Ibid
[148] Ibid
[149] Nigerian Independent Petroleum Company (NIPCO Plc) formerly called IPMAN Petroleum Marketing Company Limited (IPMCL) was incorporated by members of IPMAN on January 8 2001 as a private limited liability company to participate in the distribution of White Petroleum Products business across the nooks and crannies of the country. Retrieved February 11 2013 from www.nipcoplc.com/

indigenous marketers have become major players in the downstream sector[150].

With over 6,000 fuel service stations across the country and an investment of over four and a half billion naira (₦4.5 billion) in the downstream sector, IPMAN has metamorphosed into a key player in ensuring petroleum product availability across the country[151].

4.11 The Department of Petroleum Resources

The present day Department of Petroleum Resources started as a Hydro Carbon Section of the Ministry of Lagos Affairs in the early fifties[152]. It is the first statutory agency set up to supervise and regulate the petroleum industry in Nigeria and, at the time, it reported to the Governor–General. Later, the section was upgraded to a Petroleum Division within the then Ministry of Mines and Power[153]. The Petroleum Division, in 1970, became the Department of Petroleum Resources (DPR)[154]. In 1971, a new body called the Nigerian National Oil Corporation (NNOC) was created to engage in commercial activities in the petroleum industry with the department continuing to perform the statutory supervisory and control duties in the oil industry.

[150] Assael, H. Op. Cit. footnote 1
[151] Ibid
[152] Etikerentse, G. op cit
[153] Ibid
[154] This was possible through Decree 37 of 1970 and meant to handle the new sensitive all-important industry with increasing oil revenues especially after a very painful civil war where millions died and a lot of resources required for reconstruction and rehabilitation.

The Department of Petroleum Resources was, in 1975, upgraded and became the Ministry of Petroleum Resources (MPR) after energy matters were excised and transferred to another arm of government; the then Ministry of Mines and Power. The MPR and the NNOC were subsequently merged to form the Nigerian National Petroleum Corporation (NNPC)[155]. This was in a bid to optimize the utilization of the then scarce local manpower resources in the public sector of the industry. The Decree[156] also created the Petroleum Inspectorate as part of the NNPC and granted it a semi-autonomous status with its head reporting to the Minister of Petroleum Resources who also doubled as Chairman of the NNPC. The Petroleum Inspectorate continued to regulate the industry but was barred by the Decree[157] from engaging in commercial transactions or being involved in commercial decisions of the NNPC[158].

In 1985, a new Ministry of Petroleum Resources (MPR) was created while the Petroleum Inspectorate remained in the NNPC and retained its regulatory functions. On March 23 1988, with the commercialization of the NNPC, the Petroleum Inspectorate was excised from the Corporation and this was due to the non-commercial nature of its functions, and merged with the new MPR to form its technical arm.

[155] This was through the proclamation of Decree 33, of 1977 (now the NNPC Act, Cap N124, L.F.N 2004)
[156] Ibid
[157] Ibid
[158] Decree 37 of 1970

The Petroleum Inspectorate has continued to oversee all the activities of companies licensed to engage in any petroleum activity in the country with the objective of ensuring that national goals and aspirations are not thwarted and that oil companies carry out their operations according to international oil industry standards and practice. It keeps records and other data of the oil industry operations and informs the government about all activities and occurrences in the petroleum industry[159]. The Petroleum Inspectorate was re-aligned with the Ministry of Energy in December, 2006 when the government merged the Ministries of Petroleum Resources and Power and Mines together to form a single entity.

In the petroleum industry, the DPR is the apex regulatory body with regards to regulating and monitoring oil and gas activities in Nigeria in order to ensure standards, compliance and best international industry practices. This is with a view to conserving the nation's hydrocarbon resources and maximizing returns on investment to government especially as the petroleum industry accounts for more than ninety per cent of the country's foreign exchange earnings through crude oil exports and over seventy per cent of its total annual income[160].

[159] Retrieved September 10, 2010 from www.dprnigeria.com
[160] Oluyemi, S.A. (2006) Deregulation and the Performance of Oil and Gas Industry in Nigeria: An Overview. *NDIC Quarterly*, Vol. 59(1), pp. 49-67.

Even though it is one of the most restructured agencies of government, and while the debate to be or not to be rages on at the National Assembly, the DPR has performed its functions to the extent that operators and the general public alike are in no doubt about who is in charge of what in the petroleum industry from the downstream to the upstream sectors[161]. Under the proposed Petroleum Industry Bill[162], some of the functions of the DPR will be shared among the various regulators along the lines of sub-sectors while it retains most of its technical functions.

The above notwithstanding, the DPR currently serves as the repository for all oil and gas data in Nigeria. It advises government on the nation's authentic oil and gas reserves, production and export for planning and development purposes[163]. The DPR ensures that oil and gas operations in Nigeria have and continue to meet linkages with the host communities and meet local content aspirations of government. It ensures that oil and gas activities are carried out in a safe and environmentally sustainable manner. It manages and administers Nigeria's oil and gas acreage and concessions and follows development

[161] Ibid
[162] clauses 37-40 of the proposed Petroleum Industry Bill 2009
[163] Ibid

in global Health, Safety and Environment (HSE) standards and adapts these to domestic circumstances[164].

Furthermore, the agency introduced the open electronic and competitive licensing (bidding) round while also launching a major initiative to deliver gas as a separate business from oil. It has also completed a comprehensive review of the fiscal terms applicable to oil and gas exploration and production and applies these to production sharing contracts (PSCs) which paid off with additional 780,000 bpd new oil from deep offshore region since 2003. It has also undertaken a successful drive for marginal fields development programme[165].

Although it could not give details, the DPR is said to have consistently surpassed its revenue targets in terms of royalties and other revenues for government. In the downstream sector, it had increased petroleum products storage capacity from 1.4 million metric tonnes to 3.75 million metric tonnes and corresponding distribution network by 270 percent from 2005 to date. It supervised the successful completion of the engineering and fabrication of components for the first private refinery soon to be installed[166].

[164] Umunnaehila, A. (1996) *Oil Failures in Nigeria: History, Causes and Remedies*. Foundation Publishers, Lagos. pp. 19-28.
[165] Osuagwu, (2004) Relationship Marketing Strategies in Nigerian Companies, *The Marketing Management Journal*, Vol. 14(2), pp. 114-128
[166] Orient Refinery, owned by Orient Petroleum Resources Plc in Anambra State South East of Nigeria.

In 2008 the DPR succeeded in reducing gas flaring to twenty per cent while generating a comprehensive gas map flare points as well as successful audit of oil and gas reserves and successfully introduced Compressed Natural Gas (CNG) as an automotive fuel[167].

In addition, the DPR has a National Data Repository (NDR) which provides a digital platform for DPR's regulatory activities and the National Production Monitoring System (NPMS) which provides the platform for transmission of production and export data by companies to DPR and for the generation of certificate of quantity at terminals and Floating Production Storage and Offloading (FPSO)[168] during crude oil loading[169].

With twenty-one branch offices for effective monitoring of oil and gas facilities nationwide, the agency has metamorphosed over the years taking up and shedding responsibilities to reflect its status at each point in time.

4.12 Concluding Critique

"Oil marketers and their operations" in this work highlights and discusses the various institutions and efforts employed principally by the

[167] Retrieved September 10, 2010 from www.dprnigeria.com
[168] This is a floating vessel used by the offshore oil and gas industry for the processing of hydrocarbons and for storage of oil. It is designed to receive hydrocarbons produced from nearby platforms or subsea template, process them, and store oil until it can be offloaded onto a tanker or, less frequently, transported through a pipeline.
[169] Ibid

federal government and major stake holders in the petroleum sector towards ensuring constant domestic availability of petroleum products in the country to effectively cater for its domestic consumption needs[170].

Nigeria is no doubt the sixth largest producer of oil in the world[171] but at present it is confronted with the challenge of meeting local demand for refined petroleum products for reasons which have been discussed earlier[172]. However, before delving into the theory of cause and effect, it is necessary at this juncture to give a brief analysis of the present situation as is obtainable in the downstream sector of the Nigerian petroleum industry.

The Nigerian oil sector has been categorized into three main sub-sectors namely upstream, midstream and downstream. The most problematic over the years has been the downstream sector which is the distribution sector and its direct contact with final consumers of refined petroleum products. The incessant crisis in the supply of products culminated in the decision by the government in 2003 to

[170] We have discussed some of the reasons why resort was had to importation despite Nigeria being a major oil producing nation.
[171] Retrieved November 20, 2011, from www.opec.org/opec_web/en/data.
[172] Agoro S.B., "How feasible is Nigeria's Policy of Increasing Petroleum Production?'', Retrieved January 19 2013 from www.dundee.ac.uk/cepmlp/car/html.

deregulate the downstream subsector[173]. However, the manner of its implementation has been controversial because it ignores the economic realities in Nigeria[174].

Oil production by the Joint Venture Companies (JVCs) accounts for about seventy-five per cent of Nigeria's crude oil production. Shell-BP, which operates the largest joint venture in Nigeria with fifty-five per cent government interest (through the Nigerian National Petroleum Corporation), produces about fifty per cent of Nigeria's crude oil[175]. Mobil Oil Nigeria, MRS Nigeria Plc, Oando Nigeria Plc and Total Nigeria Plc operate the other JVs in which the NNPC has sixty per cent stake.

Nigeria's overdependence on oil has created vulnerability to the vagaries of the international market[176]. In particular, the place of oil in the psyche of the average Nigerian has become more profound since the imperfect deregulation of the downstream segment of the Nigerian oil industry in 2003. The contradiction is more glaring now with the recent rise in crude oil prices at the global market which meant more external earning for Nigeria. But also increased is the expensive burden of imported refined petroleum products. It is such contradictions

[173]This was intended to free up the market from strict government control thus allowing the prevailing market forces determine price. It was argued that the market forces of demand and supply will force petroleum marketers to supply petroleum products especially with increased competition among marketers. Unfortunately, this theory and argument has not sailed the waters of the Nigerian market without turbulence and to the extreme it can be concluded that the Nigerian situation has shattered the theory as petroleum products remain scarce and very exorbitant.

[174] Anya, A.O, (2008) *Science, Oil and the Future of Nigeria Economy*, The Guardian (Lagos), Wednesday, March 13, p. 16.

[175] Retrieved February 11 2013 from www.shell.com.ng/content/

[176] Anya, A.O. Op. Cit. footnote 6

(perhaps aberrations) that make the Nigerian economy appear strange sometimes as its policies seem to ignore what appears obvious. As such, policies designed to address the deficiencies and defects in the structure end up being poorly articulated and/or implemented because of regional, political or rent-seeking selfish interests.

Obviously, it is the same rent-seekers that continually sabotage the re-invigoration of the domestic refineries thus making the country depend on importation of refined petroleum products to meet domestic need. At present, Nigeria has four refineries with a combined installed refining capacity of 445,000 barrels per day (bpd). These four refineries are:

i. The first Port Harcourt refinery commissioned in 1965 with an installed capacity of 35,000 bpd and later expanded to 60,000 bpd;

ii. The Warri refinery commissioned in 1978 with an installed refining capacity of 100,000 bpd and upgraded to 125,000 bpd in 1986;

iii. The Kaduna refinery commissioned in 1980 with an installed refining capacity of 100,000 bpd and upgraded to 110,000 bpd in 1986; and

iv. The second Port Harcourt refinery commissioned in 1989 with 150,000 bpd processing capacity and designed to fulfill the dual role of supplying the domestic market and exporting its surplus.

The combined capacity of these refineries exceeds the domestic consumption of refined products, chief of which is Premium Motor Spirit (PMS), which demand is estimated at 33 million litres daily. The refineries are, however, operating far below their installed capacities. This factor has come to make product importation inevitable because overtime they have led to severe fuel shortages that can only be cured through importation.

Petroleum substitution or import thus became inevitable in the face of an increasing population, economic expansion which in turn results in increased consumption[177]. The situation has been worsened by the poor and near epileptic power supply situation in the country with $7.6 billion (about ₦1.15 trillion) spent on importing an estimated 8.1 million metric tonnes of petroleum products from around the world in the third quarter of 2011 alone, from both oil and non-oil producing nations, thus the country is very far from achieving energy sufficiency. It is a paradox for a country that enjoys global recognition as the sixth

[177] Boyd, H., Frank, R.K. and Massy, W.F. (1994) On the Use of Marketing Research in Emerging Economies, *Journal of Marketing Research*, Vol. 1, pp. 20-23.

largest crude oil exporter[178]to be an importer of petroleum products. Unfortunately, since the country gained political independence in 1960, enough has not been achieved towards the nation's energy sufficiency and independence. Most of the oil and gas facilities in Nigeria were built during the military era. The subsequent civilian administrations were only more interested in selling off the crude oil and getting hold of the petro-dollars than ensuring energy security by adding value through refining and maintenance[179]. Indeed, petroleum products importation has kept Nigeria in the league of developing and third world countries where its peers which boast of even lesser natural resources have moved way ahead, leaving it struggling to catch up and failing[180]. More importantly, high volume of petroleum products import has led to a near collapse of the country's downstream sector and has contributed to the crisis in the banking sector now undergoing reforms[181]. With importation, the four refineries in the country have been left comatose even when government representatives claim they are working at optimum capacities[182] - statistics from the Ministry of Petroleum Resources show that government was merely making these claims for political reasons. For the whole of 2010, the four refineries with a

[178] This is according to OPEC rankings as Nigeria is ranked eleventh in the world when non OPEC members are included in the picture or survey. Retrieved February 13, 2013, from www.opec.org/opec_web/en/data.
[179] Adegbulugbe. A. O. Op. Cit. footnote 142.
[180] Ibid
[181] Aristobulo, J. (2010) From Good Bankers to Bad Bankers: Ineffective Supervision and Management Deterioration as Major Elements in Banking Crisis, EDI Working Papers, World Bank, Washington.
[182] Per the Nigerian National Petroleum Corporation press briefing of August 18, 2008.

combined capacity in excess of 445,000 barrels per day could only refine mere 80,757 metric tonnes of petroleum products[183]. These are 19,967 metric tonnes of Premium Motor Spirit (PMS), 53,223.4 metric tonnes of Automotive Gas Oil (AGO) or diesel and 7,567 metric tonnes of Liquefied Petroleum Gas (LPG); the remaining volume of the 8.1 million metric tonnes of petroleum products that came into the downstream sector was imported (only LPG was not imported). Broken further, the statistics show that about 4.32 million PMS was imported into the country between January and November 2010. Based on the Petroleum Products Pricing Regulatory Agency (PPPRA) pricing template, the value is estimated at over $4.27 billion or ₦653.6 billion at an exchange rate of $1 to ₦152. Petrol is being subsidized by the PPPRA under government's petroleum support fund such that the retail price is ₦65 per litre against the landing cost of ₦111.11 per litre. Other products imported during the eleven months under review include Dual Purpose Kerosene (DPK) at a value of $1.71 billion or ₦260 billion and ordinary kerosene at ₦50 as against ₦116.53.53 per litre landing cost[184].

Apart from petrol and kerosene, other products are not subsidized. Accordingly, about $1.71 billion worth of Automotive Gas Oil (AGO) was imported; estimated $404.83 million of Aviation Turbine

[183] Retrieved November 12 2011 from www.nigerianstat.gov.ng
[184] Ibid

Kerosene (ATK) or Aviation Fuel and about $40.2 billion worth of Low Profile Fuel Oil (LPFO) or black oil were also imported during the period[185].

Nigeria's average demand is put at thirty to thirty-three million litres of PMS, twelve million litres of AGO, ten million litres of DPK and 1.6 million to three million litres of ATK depending on the season.

Petroleum products are imported by operators who are mostly made up to marketing companies as well as jetty and depot operators. The operators are classified as Pipelines and Product Marketing Company, (PPMC) - the marketing arm of the Nigerian National Petroleum Corporation (NNPC); the majors made up of Mobil Oil Nigeria, Total Nigeria Plc, Oando Nigeria Plc, Conoil Plc, Forte Oil Plc and MRS Oil Nigeria Plc. The bulk of the petroleum products are imported by independent marketers which number is hard to determine but include the Nigerian Independent Petroleum Company (NIPCO), MRS Oil and Gas, Capital Oil, Integrated Oil, Sahara Oil and Zenon Oil and Gas etc.

The way out of the current downstream quagmire is not only to get the four refineries to be truly operational but to invest in Greenfield

[185] Ibid

refineries as well[186]. To this end, the NNPC and some private investors have spoken a lot about many Greenfield refineries but the DPR says it has not received any application whether from the NNPC or the states for the establishment of refineries as required by law. Efforts by the government to compel major marketers which include multinationals such as Mobil and Total to establish such refineries have failed. It has thus been argued that as long as it is easier for people to secure import licences even when it is very difficult to judge their capacities, and as long as Nigeria cannot have competitive pricing and better standard for all industry players, the downstream will remain at the development stage[187].

Industry experts have continuously harped on government's folly in the petroleum sector such that a country with crude oil reserves in excess of thirty-five billion barrels and natural gas of more than 187 trillion cubic feet should still be importing almost all her domestic fuel need. The more worrisome is the fact that the products are even imported from non-oil producing countries like Netherland, India, Korea, Finland, Singapore, France and Italy. Worse still, majority of the products are ex-vessels rather than ex-depots.

[186] A Greenfield refinery or any Greenfield project is a project that is considered to have minimum impact on the environment. The opposite to greenfield is a brownfield which usually relates to an un-environmentally friendly industry such as a coal refinery. Also Amanze-Nwachukwu, C. "Uncertainty Trails Greenfield Refineries Project" . Retrieved February 17 2013. , from www.thisdaylive.com>HOME>NEWS

[187] Mamman, H. and Oluyemi, S.A. (1995) Oil Management Issues and Restoring the Health of Nigerian Downstream through Improving the Quality of Management/Employees, *NDIC Quarterly*, Vol. 4(4), pp. 56-70.

The sadness of imports as well as the resultant subsidies that go with them made a former Minister of National Planning and former PPPRA Board chairman, Chief Rasheed Gbadamosi to declare thus "…*trillions of Naira which should have been used to develop other sectors by providing basic infrastructure such as water, roads, schools and hospitals etc are being wasted because the downstream allowed monumental laziness*"[188].

Considering what import money can buy based on the current value, the $7.6 billion used to import petroleum products between January and November 2010 can comfortably build at least 10 Greenfield refineries[189].

The Greenfield refineries would have created thousands of employment opportunities that could have doused youth restiveness in addition to spurning the development of other industries such as chemicals and manufacturing[190]. Furthermore, the equivalent of ₦1.15 trillion used in financing imports could have been used to finance more than twenty-five per cent of government's ₦4.07 trillion national budget of 2010 if the refineries were working, and broken further, the amount could have comfortably funded over eighty per cent of the capital expenditure for that year. Power challenges which have remained the

[188] Mu'azu, Y. (2013) "*Ahmadu Ali takes Over as PPPRA Chairman*" The Presidency News Release, Retrieved February 17 2013 from www.pointblanknews.com/os2625.html
[189] Adebulugbe, A.O. Op. Cit. footnote 142.
[190] Ibid

bane of Nigeria's economic growth could have been permanently overcome with the import money[191].

However, the government appears to be addressing this problem by trying to attract private sector investment and management into the refining sector. Although this process is proceeding painfully slowly, it would not be surprising if Nigeria was able to satisfy its own fuel needs in ten years time.

[191] Ibid

CHAPTER FIVE

DOWNSTREAM OIL AND GAS ACTIVITIES

5.1 Introduction

The downstream[1] sector of the Nigerian petroleum industry includes all activities following the capture and delivery of crude petroleum to processing plants for refining, conversion and value addition into gasoline, diesel, kerosene and petrochemicals. The sector further includes transportation, storage, marketing of the refined products and associated services[2]. The value chain entails the supply of crude oil to the refineries, (known as primary distribution) and from refineries to depots (know as secondary distribution) and finally to consumer distribution through retail outlets for marketing[3] (know as tertiary distribution).

The components of the downstream sector consist of petrochemical plants and petroleum products distribution retail outlets and natural gas distribution companies. The downstream sector of the petroleum industry touches consumers through many products such as

[1] Surprisingly though, the word downstream is not anywhere found in our statute books. It is used to describe all activities within the tail of an imaginary "river of oil" which activities include but not limited to construction of a refinery, delivery and processing of the crude into intermediate, derivatives and end products for direct consumption. The downstream captures petrochemicals and all processes that add value to the crude oil such as pharmaceuticals. The activities therein contained are climaxed by transportation to final consumers.
[2] Retrieved August 12 2012, from www.providentenergy.com/breitburn/company/hist_california.pdf
[3] ibid

petrol, diesel, jet fuel, fertilizers, natural gas, propane, pesticides, synthetic rubber, plastics, asphalt and lubricants[4].

Unlike the upstream sector, which is considered to be successful and relatively efficient, dominated by the international oil companies and private sector operators and mind-set, the downstream sector of the Nigerian petroleum industry is widely perceived to be unsuccessful, inefficient, and corrupt[5]. The downstream operation also, in sharp contrast with the upstream sub-sector, is dominated by state-owned enterprises, government regulations and price control[6]. According to the 2010 British Petroleum (BP) statistical energy survey, Nigeria had proven reserves of 37.2 million barrels at the end of 2009 or 2.79% of the world's oil reserve[7] - African countries with the largest oil reserves include Libya, Nigeria, Angola and Algeria.

Nigeria produced an average of 2060.7 thousand barrels of crude oil per day in 2009, 2.59% of the world's total output and a change of

[4] Aluko, O. (2010) Petroleum Downstream, Planning for Sustainable Development in Nigeria. *Journal of sustainable development in Africa,* 12(7), pp. 88-95.
[5] This has been attributed to the prolonged military government in the country under which rules and regulations having direct bearing on the sector were deliberately and flagrantly violated resulting in weak regulatory functions with corruption taking the centre stage.
[6] Due to the overwhelming government participatory interests in the sector.
[7] Aigbedion & Iyayi S.E. (2011) Diversifying Nigeria's Petroleum Industry. *Nigeria Economic Summit Group (NESG) Economic Indicators,* Vol.13 No.4 pp 41-50

3.5% compared to 2008[8]. Nigeria, Algeria, Angola and Libya produced the bulk of Africa's oil production[9].

Nigeria is the largest oil producer in Africa and the 11th largest in the world, averaging 2.5 million barrels per day of oil in 2009[10]. In August 2004, the Nigerian Finance Minister announced plans to increase oil production to 3 million barrels per day in 2006 and 4 million barrels per day in 2010[11]. Such aspirations have led to disputes with OPEC as Nigeria frequently exceeds its quotas[12]. OPEC had in March 2005, set Nigeria's production quota at 2,265,000 barrels per day, compared to 2,224 000 barrels per day quota set in September 2004.

In the main, this chapter focuses on the downstream activities of the Nigerian oil and gas industry with special attention paid to the various facilities which are pre-requisites and vital to any participation in the sector. Licences are of prime importance as they confer rights to partake in, work, win, carry and transport petroleum and its products in Nigeria. One of the foundations upon which the downstream petroleum sector is founded, and heavily reliant, is petroleum infrastructure. For, without the oil pipelines, refineries, depots, tank farms, pump stations, power supply, ports of loading and discharge, activities in the

[8] Aluko, O. (2010) op cit footnote 4.
[9] *Extraction of Crude Petroleum in Nigeria – Overview*. Retrieved June 12 2013, from www.mbendi.com/indy/oilg/af/ng/p0005.htm,
[10] Ibid
[11] Vanguard newspaper of August 12, 2011, p. 19
[12] Ogbeifun, L.P. (2010) Labour *Crises in the Oil and Gas Sector; Challenges to Development. Paper Presented at Workshop Organized* by NIM, Jos.

downstream sector would be a mirage. These infrastructure form the bedrock of activities in the downstream sector of any petroleum and petroleum products industry. This chapter takes a look at downstream petroleum infrastructure in Nigeria as well as the various modes of transporting crude oil and its derivatives – which are crucial to an oil export dependent economy like Nigeria.

Equally considered is storage of petroleum products and supply. As a perishable and highly inflammable liquid, petroleum requires a unique mode of transportation, storage and distribution. In addition to crude oil, Nigeria holds the largest natural gas reserves in Africa but has limited infrastructure in place to develop the sector. Natural gas that is associated with oil production is mostly flared[13] but the development of regional pipelines, expansion of liquefied natural gas (LNG) infrastructure and policies to ban gas flaring are expected to accelerate growth in the sector both for export and domestic use in electricity generation. Lastly, the role of government in downstream operations in Nigeria will be examined.

5.2 Downstream Operation and Licences

The oil and gas operations that take place after the production phase through to the point of sale is known as downstream petroleum

[13] Against which several laws have been enacted e.g. Associated Gas Re-injection Act, Cap A25 LFN, 2004.

operations. Bye-products of crude oil include gasoline, petroleum gas liquids, diesel and a variety of other energy sources. Basically, it is an oil industry term used to refer to all petroleum activities from the processing of refined crude oil into petroleum products to the distribution, marketing and shipping of the products. The reverse activity of downstream is upstream. The "upstream oil sector" is a term commonly used to refer to the searching for, recovery and production of crude oil and natural gas. The upstream oil sector is also known as the exploration and production sector[14].

Nigeria, with its vast quantities of oil, ranks as the 6th largest oil producer in the Organization of Petroleum Exporting Countries (OPEC), and has generated billions of dollars in oil revenues since oil was found in Nigeria. As in most developing countries where corruption and mismanagement are rife, this has not translated to an improved economy.

The Federal Government of Nigeria, reacting to a near total collapse of the industry, decided to emulate other developing and developed economies by privatizing and liberalizing the downstream sector which was hitherto managed by the Nigerian National Petroleum Corporation (NNPC) on behalf of the government. The first oil refinery built in the country is located in Port Harcourt and it started operations

[14] Skeptics Query "Golden Age" of Refining. *Petroleum Intelligence Weekly*, February 21, 2011.

in 1965 with a capacity of 38,000 bpd. Since then, three more refineries have been built to cater for the expanding domestic needs over the last thirty years.

In the 1990s, with a fast growing population, the country was caught in a situation in which the domestic demand for petroleum products far outweighed supply[15], and with corruption, smuggling and fraud, the refineries were operating at less than half of optimal levels. Turn-Around Maintenance (TAM) was done on the refineries to improve capacity but this did not get the desired effect and so NNPC had to import the short fall for local consumption from abroad thereby affecting actual revenue derived from oil exports. International financial institutions started lending excessively to oil producing countries and successive Nigerian government borrowed heavily to subsidize income from oil exports. Unfortunately, because of the periodical non-servicing of these loans by successive military regimes, Nigeria found herself in the grip of huge external debt[16]. Consequently, the country asked OPEC for an increased export quota, so as to generate more revenue[17].

Democratic government (from 1999) found a near comatose economy and a heavy debt burden[18]. After analyzing this problem,

[15] Ogbeifun, L.B. (2008). Labour crises in the Oil and Gas Sector; Challenges to Development in the Oil and Gas Sector. Paper presented at a workshop organized by NIM, Jos.
[16] Ibid
[17] Olayiwola, A. (2009): History of Nigerian Oil and Gas Industry (online). Available http://www.pengassan.org.
[18] Ogbeifun, L.B Op. cit. footnote 15.

where international oil prices were rising and actual refined production in the country was dropping, the government decided that it could not afford the continued luxury of subsidies on the pump price of petroleum products as it was buying refined petroleum at huge international prices, only to sell in the domestic market at heavily subsidized rate[19].

The government, realizing that it will be necessary to boost production levels of the refineries but at a huge cost, decided to invite local marketers to apply for licences to build, construct and operate private refineries[20].

Under the new arrangement of private involvement, petroleum marketers shall obtain the necessary permits and approvals while the government acts as a regulator. However, this approach is incubating as the marketers, who were solely driven by profit maximization were not interested in so far as government still controls the pump price of petroleum products[21]. This lack of interest by private investors dictated in the main by government involvement at any stage of the petroleum value-chain made it necessary to deregulate and privatize the downstream sector of the petroleum industry in the country. The government-owned refineries were overhauled and maintained to make them attractive for private acquisition.

[19] The concepts of deregulation and liberalization are discussed in extenso, infra.
[20] Omodia, S.M. (2007). Problems and Prospects of Deregulation in the Nigerian Fourth Republic: Implication for Democratic Survival in Nigeria. *Medwell Journal of International Business Management* (2), p. 43.
[21] Onipede, S. (2003). Towards Creating an Environment for Sustainable Economic Growth in Nigeria.

The Nigerian government went ahead with the policy even against widespread disapproval on the part of the citizenry[22]. The reason why government sought deregulation is to increase the savings generated from divesting in the sector as well as free funds for other activities.

Potential savings from the downstream sector is the difference between the actual cost of supplying petroleum products to consumers (either through imports or by refining crude) and a benchmark cost price corresponding with the procurement price of these products from world markets under competitive conditions.

For the government to fully realize its goal of effective deregulation of the downstream sector with the government maintaining the role of overseeing the sector, the federal government introduced the instrument of downstream licences which licences include the following:

5.2.a Oil Refinery Licence

The Petroleum Act[23] provides that no one shall carry out any petroleum refining activity without the requisite licence from the appropriate authority. The Department of Petroleum Resources (DPR),

[22] For instance, the removal will result in higher cost for companies and individuals. This means lower profit for companies and less disposable income for individuals.
[23] Cap P10, Laws of the Federation of Nigeria (2004).

being the principal government agency charged with the task of overseeing this activity, issued guidelines for the establishment of hydrocarbon processing plant (petroleum refinery and petrochemical plants) in Nigeria. The regulation, which was made pursuant to regulations (2) and (3) of the Petroleum Refining Regulations 1974, applies to the construction of petroleum refineries and petrochemical plants in Nigeria. The regulation requires an application for the establishment of a refinery to be made to the DPR in the prescribed form.

5.2.b Oil Pipeline Licence

The Oil Pipelines Act[24] made provision for licences to be granted for the establishment and maintenance of pipelines which are incidental to, and supplementary to oil fields and oil mining. Accordingly, it is an offence punishable under the Act for any person to lay pipelines for conveying petroleum products without due approval first had and obtained[25].

5.3 Petroleum Refineries and Petroleum Products Infrastructure in Nigeria

Meeting energy requirements of any modern state go beyond crude oil exploration, production and refining as petroleum (crude) is not the only source of energy; other sources include solar, wind and

[24] Cap O7 Laws of the Federation of Nigeria (2004)
[25] Ibid.

water. However, the availability of refined petroleum products plays a key role in stabilizing the economy and general well-being of the citizenry.

The Nigerian economy is heavily dependent on the oil sector which, according to the World Bank, accounts for over 95% of export earnings and about 85% of government revenues[26].

Petroleum products are used across the country and the world over-gasoline and diesel are the primary fuels used in road transportation. Oil is used in power generation while adequate and reliable supply of transport services and electricity in turn are essential for meaningful economic development.

Households use a variety of petroleum products such as kerosene for cooking, lighting and heating; liquefied petroleum gas (LPG) for cooking and heating, gasoline and diesel for private vehicles as well as captive power generation from day-to-day.

Globally, the oil market infrastructure moves oil from the point of production to the consuming regions. Movement of oil products in most countries is through pipelines while a few countries still use only

[26] Ibid

tankers. In the United States of America, pipelines are the core of US petroleum products transportation system[27].

Petroleum products are an integral part of the day-to-day living in Nigeria. Petroleum is not only used as the means of getting to places of work and recreation; it is also essential in transporting goods to the market throughout the world. Petroleum refineries, storage terminals, petroleum pipelines and petroleum retail distribution are part of Nigeria's oil and gas operations. The Nigerian marketing assets and infrastructure include 5,284 oil wells, 10 gas plants, 275 flow stations and 10 export terminals[28] all of which are connected by a network of pipelines that criss-cross the country[29].

Petroleum and the refining industry have become part of the history of the Federal Republic of Nigeria. Petroleum development began in the early 1960s whereas Nigeria's oil history dates back to after World War I when Shell D'Arcy, a consortium of Shell and Royal Dutch, resumed oil exploration in 1937 at Owerri, on the northern fringes of the Niger Delta. Some years later, the first producing oil well was drilled at Oloibiri, a town in present day Bayelsa State in South-South Nigeria. Historically, petroleum and its products were originally

[27] Kinder Morgan Energy Partners L.L.P. (2011) "Annual Report for the fiscal year ended December 31", Form 10-K, United States Securities and Exchange Commission.
[28] Olayiwola, A. (2009): History of Nigerian Oil and Gas Industry. Retrieved August 13 2013 from http://www.pengassan.org
[29] Retrieved August 13 2013 from http://www.ppmc.gov.ng/

transported in whiskey barrels via horse-drawn wagons[30]. Then, railways were used. Majority of rail shipments were delivered to the most populated areas where demand and consumption were higher. In Nigeria, a combination of railway tanks and tanker-trucks were employed to deliver petroleum to various units. Later on, particularly with the surge in frequent usage and poor maintenance, the railway ultimately became too risky and inefficient. This led to the construction of pipelines and storage terminals. Pipelines are generally the most economical way to transport large quantities of petroleum and its products or natural gas over land[31] and, compared with shipping and/or railway, they have lower cost per unit and higher capacity. Oil pipelines, as a transportation medium, originated when the oil transport association of the USA first constructed a 2 inch (51mm) track from an oil field in Pennsylvania to a railway station in oil creek in the 1860s[32].

Through pipelines, oil, which flows at a speed of about 1 to 6 metres per second, is kept in motion by pump stations along the pipeline and, while multi-product pipelines are used to transport two or more different products in sequential alternates, there is usually no physical separation between the different products. Some mixing of adjacent product occurs, producing an interface known in the industry

[30] Retrieved August 12 June 2013 from www.providentenergy.com/breitburn/company/hist_california.pdf
[31] Ibid
[32] Western States Petroleum Association. California's Petroleum Industry (PowerPoint Presentation). Retrieved June 12 2013 from http://wspa.org/issues/ei.htm.

as "transmix"[33]. At the receiving facilities, this interface is usually absorbed in one of the products pre-calculated absorption rates.

Pipelines are part of the core infrastructure of petroleum and gas marketing. They are necessary for the transportation and marketing of natural gas, crude oil and refined petroleum products; available data put the nation's pipeline network at over 300km[34]. Pipelines are used to transport petroleum products from oil refineries and import-receiving jetties to storage depots in Nigeria. Petroleum pipeline transverses the country's geo-political zones ranging from the sub-sea swamp, rainforest to the savannah grasslands and are exposed to diverse climates and soil conditions with varying consequences which include the leaking and seeping of petroleum products with damaging implications on the environment[35].

Petroleum pipelines are essential mode of transportation and are, therefore, an infrastructure of a highly specialized nature. Unlike other modes of transport such as road, pipelines are not accessible to people in communities through which they pass. Rather, they impose constraints on interactions, and when close to houses, are potentially hazardous to life.

[33] Transmix is a mixture of gasoline and diesel fuels that result from various sources such as pipeline transfers, cross contermination of tanks and Barge transfers.
[34] Retrieved June 12 2013 from www.ppmc.gov.ng.
[35] Ajakaiye, B.A. (2008). "Combating Oil Spill in Nigeria: Primary role and responsibility of the National Oil Spill Detection and Response Agency (NOSDRA)" Stakeholders' Consultative Workshop. August 4 – 6, 2008, Calabar, Nigeria.

In Nigeria, the Pipelines and Product Marketing Company (PPMC) is the body charged with the task of managing the country's network of petroleum pipelines. Petroleum products imported or refined locally are received by the PPMC through import jetties and distributed through pipelines strategically located all over the country to designated retail outlets.

5.3.1 Natural Gas

According to the BP statistical review of world energy, Nigeria, in addition to petroleum, had an estimated 187 trillion cubic feet (TCF) of proven natural gas reserves as at December 2010, which makes her the ninth largest natural gas reserve holder in the world and the largest in Africa.[36] A significant portion of Nigeria's marketed natural gas is processed into LNG. In 2009, Nigeria exported close to 500 billion cubic feet (BCF) of LNG and of this, 13.3 BCF went to the USA, providing 3% of total US LNG imports; this is 2% of Nigerian gas exports. Most of Nigerian LNG was exported to Europe (66%), Spain (31%), and the remaining to France, Portugal, Asia and Mexico[37].

[36] BP Statistical Review provides data series for proved global oil and gas reserves. Also, Retrieved August 15 2012 from www.bp.com/liveassets/bp_internet/

[37] LNG activities are regulated under the Petroleum Act and its subsidiary regulations, which include Petroleum Refining Regulations. LNG export is regulated by the Oil Terminals Act, Crude Oil (Transportation and Shipment) Regulations, the Nigerian Ports Authority Act, the Pre-shipment Inspection of Export Act, the Customs and Excise Act, the Foreign Exchange (Monitoring & Miscellaneous Provisions) Act, and the Foreign Exchange Manual(issued by the Central Bank of Nigeria).

Nigerian LNG exports were down to 30% from 2008 volumes which was attributable to problems in the Niger Delta specifically problems at the Soku gas processing facility.

Nigeria's main natural gas project is the Nigerian Liquefied Natural Gas (NLNG) facility in Bonny Island. Partners include NNPC, Shell, Total and Agip. The first phase of the facility was completed in September 1999[38]. The Nigerian Liquefied Natural Gas (NLNG) currently has six trains and a production capacity of 22 million metric tons per year. A seventh train is under construction[39]. Three additional LNG plants with a total of 7 trains were expected to come online after 2013, but their expected startups have been postponed beyond 2016. Plants include the O.K. LNG (4 trains), Brass LNG (2 trains) and Progress LNG (1 train). These are in varying stages of development and investment decisions will depend heavily on security in the Niger-Delta, world LNG market and the final outcome of the petroleum industry bill[40]. Availability of natural gas will also depend on Nigeria's effort to expand the use of natural gas for domestic electricity generation[41]. In addition to LNG, Nigeria began exporting some of its natural gas via the West African Gas pipeline (WAGP) in 2010[42]. The 420 mile pipeline carries

[38] Retrieved August 15 2012 from www.nlng.com,
[39] Ibid
[40] A revised version of the Petroleum Industry Bill has been recently submitted to parliament by the President in July 2012.
[41] Byrne J., Martinez C., and Glover L. (2002) A brief on Nigerian Gas. London: Transaction Publisher
[42] Ibid

natural gas from Nigeria to Ghana via Togo and Benin. Exports will eventually reach initial capacity suggestion of 170 million cubic feet per day while plans are underway to expand the capacity to as much as 450 million cubic feet with the possibility of extending the pipeline further west to Cote d'Ivoire.

Furthermore, Nigeria and Algeria have continued to discuss the possibility of constructing the Trans-Saharan Gas Pipeline which will carry natural gas from oil fields in Nigeria's Delta Region to Algeria's Beni Saf export terminal on the Mediterranean Sea.

5.4 Refineries

An oil refinery is an industrial plant where crude oil is processed and refined into more useful products such as white products[43]. Oil refineries are typically large sprawling industrial complexes with extensive piping throughout, carrying streams of fluids between large chemical processing units. An oil refinery is an essential part of the downstream sector of the petroleum industry.

The Nigerian downstream industry is well established even though badly managed. This is because the Nigerian National Petroleum Corporation (NNPC) has four refineries located across the country; two in Port Harcourt – The Port Harcourt Refining Company (PHRC) and

[43] Omorogbe, Y. (2001) *Oil and Gas Law in Nigeria*. Malthouse Press Ltd. Ikeja Lagos. pp. 58-60.

Eleme Petrochemical Company; one each in Kaduna – The Kaduna Refining and Petrochemical Company (KRPC); and Warri – The Warri Refining and Petrochemical Company (WRPC). The refineries have a combined installed capacity of 445,000 barrels per day[44]. A comprehensive network of pipelines and depots strategically located throughout Nigeria links those refineries. The PHRC is made up of two refineries located at Alasa, Eleme, near Port Harcourt, with a jetty (for product import and export). The jetty is located 7.5km away from the refinery complex. In 1983, the Port Harcourt refinery with 60,000 barrels per day name-plate and tankage facilities was acquired by the NNPC from Shell. Subsequently, a new 150,000 barrel per day export refinery was built in 1988 and commissioned in 1989. Therefore, the current combined installed capacity of the PHRC is 210,000 barrel per day. The installed capacities of KRPC and WRPC are 110,000 barrels per day and 125,000 barrels per day respectively.[45]

However, due to the long period of neglect, coupled with significant corruption in the system, the performance of the four refineries suffered serious decline to the extent where the four refineries achieved an average of 39.2% capacity utilization over a period of eleven years[46]. This, according to analysts, helps to make the

[44] Retrieved August 15 2012 from www.nnpc.gov.ng
[45] See Appendix A
[46] Skeptics Query. Op cit footnote 14

case against the continued involvement of government in the operation of key national assets like the refineries[47]. The refineries, along with the adjoining depots and pipeline networks cost Nigeria about 3 billion U.S dollars[48].

5.5 Petroleum Depot/Tank Farm/Oil Terminal

An oil depot, technically called a tank farm installation, is an industrial facility for the storage of oil and/or petrochemical products and from which those products are usually transported to end users. An oil depot typically has tanks, either above the ground or underground and, "Gantries" for the discharge of products into road tankers (trucks) or other vehicles (such as barges) or pipelines. Oil depots are usually situated close to oil refineries or in locations where marine tankers containing products can easily discharge their cargo. Some depots are attached to pipelines through which they draw their supplies. Depots can also be fed by rail, by barge and by road tanker (also known as bridging).

An oil depot is comparatively an unsophisticated facility because, in most cases, there is no processing or other transformation on site. The products which reach the depot from a refinery are in their final form suitable for delivery to consumers.

[47] Iloba-Aninye, O. (2006) Petroleum Products Pricing: A critique of the Legal Framework and the Fallacy of Subsidy in the Oil and Gas Sector, *Ahmadu Bello University Law Journal (ABULJ),* Vol. 24-25, pp. 144-155.
[48] Retrieved July 12 2012 from www.bussinesdayonline.com/oil_&_gas_fields

In Nigeria, several products depots dot the landscape with most of them privately owned. The PPMC is the government agency charged with the management of petroleum depots belonging to the Federal Government of Nigeria. Thus, petroleum products which are either imported or refined locally are received by PPMC through import jetties or refinery depots and distributed through pipelines to depots located all over the country from where tankers lift the products to designated retail outlets (filling stations). Pipelines and storage depot system, along with its mainline, booster pump stations and export/import facilities are administered under five zones known as ''Operation Area''.

5.6 Transportation of Crude Oil and its By-Products

Transportation in the oil industry is two folds, viz:

(a) Transporting crude to the refineries for processing and production.[49]

(b) Transporting the final products from the refineries to depot, storage facilities and finally to filling or petrol stations.[50]

Pipelines, marine vessels, tank trucks and rail tank cars are used to transport crude oil, compressed and liquefied hydrocarbon gases,

[49] See Appendix B
[50] See Appendix C

liquid petroleum products and other chemicals from their point of origin to pipeline terminals, refineries, distributors and consumers[51].

Crude oil and its products are transported, handled and stored in their natural liquid state. Hydrocarbon gases are transported, handled and stored in both the gaseous and liquid states and must completely be confined in pipelines, tanks, cylinders or other containers prior to use. The most important characteristic of liquefied hydrocarbon gases (LHG) is that it is stored, handled and shipped as liquids, taking up a relatively small amount of space and then expanding into gas when used.

5.6.1 Pipelines

Crude oil, natural gas, liquefied natural gas and petroleum products flow through pipelines at some time in their migration from the well to a refinery or gas plant, then to a terminal and eventually to the consumer. Oil pipelines run throughout the world, from the frozen tundra of Alaska and Siberia, to the hot deserts of the Middle East, across rivers, lakes and swamps of the Nigerian Niger-Delta[52].

Although the initial construction of pipelines is difficult and expensive, once they are built, properly maintained and operated, they

[51] The majority of ethanol shipments in the United State are by railcar while some ethanol arrive by barge. Intrastate shipments of ethanol are made by way of railcar, tanker truck, and dedicated pipelines from larger ethanol storage locations.

[52] Public Awareness Programs for Pipeline Operators, American Petroleum Institute Recommended Practice 1162, Washington, D.C., May 2003

provide one of the safest, most economical and fastest means of transporting those products.

In Nigeria, crude oil, compressed natural gas and liquid petroleum products are moved long distances through pipelines at a speed of 5.5km to 9km per hour by large pumps or compressors located along the route of the pipeline at intervals known as pump stations. Pumping pressures and flow rates are controlled throughout the system to maintain a constant movement of product within the pipeline[53].

5.6.1.a Four types of pipelines exist in the oil and gas industry in Nigeria and they are as follows:

(a) Flow-lines

Flow-line pipes move crude oil or natural gas from producing wells to producing field storage tanks and reservoirs. Offshore oil platforms use flow-lines to move crude oil and gas from wells to the platform storage and loading facility.

(b) Feeder Lines

These are gathering lines that collect oil from several locations for delivery to central accumulating points such as from field crude oil tanks

[53] The Oil Pipelines Act, 1956 regulates the construction, operation and maintenance of gas pipelines and associated infrastructure and the Petroleum Act. These laws are implemented by the DPR, a department in the Ministry of Petroleum Resources.

and gas plants to marine docks. Feeder lines collect oil and gas from several locations for delivery into trunk lines such as moving crude oil from offshore platforms to onshore crude trunk pipelines.

(c) Crude Gas Trunk Pipelines

Natural gas and crude oil are moved long distances from producing areas or marine docks to refineries and from refineries to storage and distribution facilities. The real use and importance of pipelines is appreciated in product distribution and supplies.

(d) Petroleum Products Pipelines

These petroleum pipelines move liquid petroleum and the products from point of capture to refineries and from there to distribution terminals. Product pipelines may also distribute products from terminals to bulk plants and consumer storage facilities and occasionally from refineries direct to consumers by special arrangements with bulk purchasers. Product pipelines are used to move LPG from refineries to distributor-storage facilities or large industrial users.

Nigerian National Petroleum Corporation (NNPC) is working towards building critical gas infrastructure including the 395km Calabar-Ajaokuta Pipeline and the 740km Ajaokuta–Kaduna–Kano Pipeline which

will help guarantee the long-term energy security of Nigeria[54]. The two pipeline projects will be connected to form the South–North Pipeline, transporting gas to the eastern, middle belt and northern regions of Nigeria. This pipeline will form part of the Trans-Saharan Gas Pipeline.

Pipelines were designed and constructed to link the new private power stations and will also serve as a throughput for gas supply to other gas-based industries including petrochemical and fertilizer plants across the country.

"Atlas International Engineering Services", Nigeria, was awarded a contract for the Ajaokuta–Kaduna–Kano Pipeline. The contract covers conceptual studies, front-end engineering and design, mapping of right-of-way, environmental impact studies and contracting services for the engineering, procurement and construction phase. Also, Frazimex Engineering Ltd was awarded the engineering consultancy contract for the Calabar–Ajaokuta Pipeline. The pipelines are part of the federal government's plan to boost power generation from 4,000 MW to 40,000 MW.

The role of pipelines became better appreciated when the Oputa Panel's report in 1975 was being implemented.

The Nigerian economy was supplied with petroleum products

[54] Retrieved August 15 2012 from www.nnpc.gov.ng,

through imports by multinationals such as Shell, Esso, BP among others prior to the commissioning of the old Port Harcourt refinery in 1966. As the economy expanded in the seventies, the production from this 35,000 bpd refinery became grossly inadequate to meet the demand. Serious nationwide shortages resulted prompting the federal government to appoint the Oputa Panel of Enquiry to examine the cause of the shortage. The panel's main findings were:[55]

a. Domestic demand had outstripped domestic refining capability;

b. Marketing companies possessed inadequate financial resources to:

    i. Undertake the importation of the substantial quantities of petroleum products required to augment domestic production;

    ii. Construct the practically non-existent infrastructure needed to receive and distribute products to the geographically wide-spread consumption centres in the hinterland.

Based on these, the following solutions were recommended and accepted:

[55] Retrieved June 15 2013 from www.ppmc.gov.ng

a) Government should take over the importation of petroleum products from the oil marketing companies;

b) Government should expand domestic refining capacity; and

c) Government should expand the products import receiving facilities as part of a nationwide system of pipelines to facilitate petroleum products distribution in the long run.

Consequently, government, through the NNPC, took over the importation of petroleum products into Nigeria and started the construction of refining and storage facilities and pipelines to link these storage centres. This culminated in the construction and commissioning of the 125,000 bpd capacity Warri refinery in 1978, the pipeline systems phases I & II with 17 storage depots in 1979 and the 110,000 bpd capacity Kaduna refinery in 1980. The commissioning of the Kaduna complex enabled the nation to produce base oil for manufacturing of engine oils, and bitumen for road construction.

The nation's pursuit of self-sufficiency in refined petroleum products led to additional investment in the expansion of the old Port Harcourt refineries to 60,000 bpd, the construction and commissioning of the new 150,000 bpd capacity Port Harcourt refinery (1989) and the Phase III Pipelines and Depots Interlink (1995).

Although NNPC concluded phases I and II of her gigantic Pipelines and Depots projects between 1979 and 1980, it was soon apparent that more work needed to be done if the nation was to reap the full benefits of the pipeline interlink project. This was because the three major refining centres were yet to be interlinked. For this reason, the Pipeline Phase III Project was prosecuted in 1991 with the prime objective of expanding and integrating this existing pipeline system into a national grid of products pipelines. This is with a view to improving the network capacity, operational flexibility and reliability.

The expansion of the pipeline network and the construction of the storage facilities in both existing and new sites were designed to satisfy a minimum of 45 (forty-five) days local demand for normal operations up to the year 2010.

With the commissioning of the last stages of the project the following successes were achieved.

(a) Interconnection of all the existing refineries and import/ export facilities with old and new storage depots;

(b) Provision of additional distribution depots at Suleja, Minna and Yola in order to satisfy the local demand in these areas;

(c) Connection of the Kaduna refinery products depot with the refineries at Port Harcourt and Warri not only to make up the production shortfall there but also to ensure the continued supply of products to the northern areas in the event of Kaduna refinery outage;

(d) Construction of facilities to enable products to be pumped from Port Harcourt to the western areas via Benin not only to augment Warri refinery production but also to continue supplies in the event of its total outage;

(e) The removal of bottlenecks in the limited capacity of the existing 6 diameter pipelines between Jos and Gombe.

(f) Finally, put in place some alterations, upgrades and repairs within the existing system necessary to accommodate the new facilities.[56]

With the completion of the Pipeline Interlink Project (Pipeline Phase III), the size of the nation's products distribution pipeline and depot complex has grown to four thousand nine hundred and fifty kilometers of pipelines of various diameters linking twenty storage depots. The complex is classified into five basic systems referred to as System 2A, 2B, 2C, 2D and 2E. In addition there are four sub-systems

[56] Retrieved June 12 2013 from www.ppmc.gov.ng

which are extensions of the basic systems namely; Systems 2AX, 2CX, 2DX and 2EX.

While Pipelines System 2A runs from Warri through Benin and Ore depots and terminates at Mosimi depot, System 2EX, for example originates at Port Harcourt, runs through Aba and Enugu depots up to Markurdi (parallel to System 2E) and then proceeds to terminate at Yola depot. On the other hand, while System 2C (crude oil line) runs from Escravos through Warri, Abudu, Auchi, Lokoja, Abaji, Izom and Sarkin Pawa to terminate at Kaduna, System 2CX starts from Enugu, crosses the River Niger to Auchi, proceeds to Suleja with a spur to Minna depot and then terminates in Kaduna.[57]

5.6.1.b Pipeline Vandalism

In Nigeria, as in most developed parts of the world, pipelines are common features in the distribution and supplies of petroleum and its products. So it was that Nigeria's network of pipelines was legally given birth to in 1965 by The Oil Pipelines Act, Cap P13, LFN 2004.

Nigeria has a network of 50,001km of pipelines consisting of 4,315km of multi-product and over 666km of crude oil pipelines. The pipelines interlink twenty-two petroleum storage depots which are located strategically all over Nigeria.

[57] See Appendix D

The pipeline and depot systems are further interlinked with the four local refineries at Kaduna, Warri and Port Harcourt, two offshore terminals at Escravos and Bonny and four jetties at Okrika, Atlas Cove, Warri and Calabar.

The pipelines are laid on a twenty-five metre-wide right-of-way which has been specifically acquired by government for this purpose. They are buried at a depth of three feet to avoid accidental contacts as they traverse the length and breadth of the country.

5.6.1.c Effects of Vandalization

(a) Economic

First, because of damages inflicted on the pipeline system, it is unsafe to pump products through the line. As a result, lots of products are moved by overload trucks. To move products by trucks, a lot of resources (bridging fees are paid) which could have been used for other development purposes are expended on paying tankers to move products to where the pipeline system (if it was safe) would have distributed them cheaply.

Second, distribution by trucks, apart from being costly, is also much slower. For example, products could easily be pumped within five hours from Lagos to Kano. But a truck will take three days and with less

volume. This slow process, coupled with the limited quantity transportable through tankers, creates shortages which breed black marketeering. And because fuel is essential, the public is forced to pay exorbitant prices for petrol, making consumers the poorer.

Third, shortage of products arising from the above makes it difficult for industries especially those that rely on diesel-driven generators for power to operate at optimum capacities. Low capacity utilization leads industries to retrench. Also, because they have to buy products at high prices, they pass the costs to the consumers whose ability to purchase varied products would be further reduced.

Fourth, vandalization-induced shortages lead anti-social elements in the society to adulterate products which are then sold to unsuspecting motorists and other consumers. In the process, vehicle engines are damaged further creating economic burden for vehicle owners.

Fifth, in efforts to stem vandalization, government had to procure numerous vehicles and sophisticated communication equipment to patrol the many kilometers of the pipeline system. These cost a lot of money which could have been better expended on more productive areas of the economy.

Sixth, vandalization induces fires, destroys a lot of economic crops (cocoa, coffee, palm trees) which would otherwise have yielded sustainable income.

Seventh, these incidents can also affect the ability of the PPMC to evacuate the refineries' production. This, in turn, creates carriage constraints for the refineries and can lead to shut down.

Eighth, the pipeline system has a flexibility that makes it possible to move products from Atlas Cove through Mosimi-Ore-Benin-Auchi-Kaduna to Maiduguri or from Warri-Auchi-Kaduna or Port Harcourt-Enugu-Auchi-Kaduna or Port Harcourt-Yola. Vandalization of any segment of the pipeline system threatens the flexibility derivable from the elaborate network of pipelines and makes nonsense of the huge investment on the system.

Nineth, NNPC, particularly PPMC's ability to pump products from areas of surplus to areas to need is grossly undermined by acts of vandalization. A simple pumping operation which should have taken a few hours now requires several weeks or months to accomplish.

Tenth, cases of right-of-way encroachment through erection of buildings, mechanics' workshops and sheds pose serious safety threats.

Eleventh, demurrages are incurred on export and import vessels when pipelines to Port Harcourt and Warri jetties are vandalized. These demurrages are paid for in US dollars.

(b) Human and Societal

The human cost or involvement temporarily throws a nation into an avoidable trauma. The pipeline vandalism in Jesse, Delta State which resulted in the death of not less than 1000 lives[58] threw the nation into mourning and regret. The consequences to humans and society include:

Many lives (both guilty and innocent) are lost in a most sudden, tragic and violent way when fire is mistakenly ignited through the rubbing of utensils used in scooping the products or sparks from motorcycles leaving relations in perpetual mourning of their loved ones.

Again, as a result of the death of many parents in the fires, a lot of children are now without parents, husbands without wives and vice versa (depending on who got caught in the fire) with its attendant pressure on the family system.

Even among the living, many victims suffer severe burns and damaged internal organs as a result of inhalation from fumes and smokes. Many of these have become liabilities.

[58] Retrieved August 13 2013 from http://en.wikipedia.org/wiki/Environmental. visited 13/08/2013.

(c) Environmental

In the immediate, large areas of arable land are destroyed in the fires resulting from vandalization. Marine life in the swamps and water bodies (periwinkles, crabs and fish) are killed. It takes a long time to regenerate these marine products which are so important in the nutritional regime and ecosystem. Products are also spilled into the environment in the process of vandalization further compounding the delicate environmental balance.

In the long term, spilled products washed into the swamps and water bodies are ingested by surviving marine life.

Pipeline vandalization leads to many negative economic, human, societal and environmental conditions. It goes beyond hurting the NNPC. The momentary financial gains from this anti-social activity can never remediate the monumental problems it causes. Pipeline vandalization is a national problem which every person and the government must join hands to eradicate.

5.6.2 Other Modes of Transportation

5.6.2.a Oil Marine Tankers and Barges

The majority of world's petroleum and its product requirement is transported by tankers from producing areas to consumer areas. Oil

products were originally transported in large barrels on cargo ships. The first tanker ship which was built in 1886 carried about 2,300 tons of oil. Today, super tankers can be over 300 metres long and carry over 200 times as much oil. Gathering and feeder pipelines often end at marine terminals or offshore platform loading facilities where petroleum is loaded into "tankers" or "barges" for movement to crude trunk pipelines and refineries. Petroleum products are transported from refineries to distribution terminals by tankers and barges.

Liquefied Natural Gas (LNG) is shipped as a cryogenic gas in a specialized marine vessel with heavily insulated compartments or reservoirs. At the delivery ports, the LNG is offloaded to storage facilities or re-gasification plants. Liquefied Petroleum Gas (LPG) may be shipped both as a liquid in uninsulated marine vessels and barges and as cryogenic in insulated marine vessels.

Oil tankers and barges are vessels designed for carrying crude oil and/or products with quarters at the rear of the vessel, crew members and the remainder of the vessel divided into special compartments (tanks) to carry petroleum products in bulk. Cargo pumps located in pump rooms are provided to ventilate the tanker and reduce the risk of fires and explosions in pump rooms and cargo compartments.

Barges operate mainly in coastal and inland waterways and rivers alone or in groups of two or more and are either self propelled or moved by tugboat. They may carry oil to the refineries but they more often are used as an inexpensive means of transporting petroleum products from refineries distribution terminals. Barges are also used to offload cargo from petroleum tankers offshore which sheer size does not allow easy entry to the dock.

5.6.2.b Motor Vehicle Trucks

Historically, petroleum was initially transported by horse-drawn tank wagons, then by rail road tanks and finally by motor vehicles[59]. Following receipt at terminals by marine vessels or pipelines, bulk liquid petroleum products are delivered by non-pressure tanker trucks directly to service stations and consumers or to smaller terminals called bulk plants for re-distribution. However, transportation of petroleum products by motor vehicles is regulated by government agencies (DPR) which have established regulations governing the design, construction, safety devices, testing, preventive maintenance and operations of tanker trucks. Tank trucks are typically constructed of carbon steel aluminum or a plasticized fiber glass material.

[59] Chisohlm, Hugh, ed. (1911) Encyclopedia Britannica (11th ed)

5.6.2.c Rail Tank Car

Rail tanks are constructed of aluminum or carbon steel and may be pressurized or non-pressurized, insulated or non-insulated and designed for single or multiple commodities[60]. In Nigeria, railways provided a reasonable means of getting petroleum to the hinterland from refineries and sea depots located along coastal areas. Thus, with rail track spanning across the length and breadth of Nigeria, the rail way has proved itself a worthy safer alternative to other means of transport in terms of cost and risks. The great strength of the oil producing and refining industry was put to test many times during the growth of bulk transportation. Improvement and enlargement of the tanker cars took place enabling them to carry a wide variety of liquids, even high pressure cargo such as liquefied petroleum gas (LPG).

5.6.3 Ancillary aid to Products Transport

(a) Terminals and Bulk Plants

Terminals are storage facilities which generally receive petroleum products by trucks, pipeline or marine vessels. Petroleum Product Terminals store and distribute petroleum products to end users. Petroleum terminals may be owned and operated by oil companies, pipeline companies, independent terminal operators or petroleum

[60] Herron, Jim. (2012) *"History of the Rail Tank Car"* Magazine of the Train Collectors. January 21, 2012

products distributors. Bulk plants are usually smaller than terminals and are used in the redistribution of petroleum products to end users.

(b) Tank Farms

Tank farms are groupings of storage tanks at producing fields, refineries, marine pipeline and distribution terminals and bulk plants which store petroleum products.

(c) Storage Tanks

These are a number of different types of vertical and horizontal surface atmospheric and pressure storage tanks in tank farms which contain petroleum products. Their sizes, shapes and designs depend on the type of product stored and company cum regulatory requirements.

5.7 Supply of Petroleum Products

The supply of petroleum products simply means the making of products readily available to all who need them without difficulty and at uniform price (in Nigeria) throughout the country.

The downstream sector of the Nigerian petroleum industry entails the regulation of refined petroleum products. The sector is partially de-regulated, allowing investors to participate in refining, purchasing, supplying and pricing of petroleum products. The main petroleum products used in Nigeria are Premium Motor Spirit (PMS), Automotive

Gas Oil (AGO) and Dual Purpose Kerosene (DPK). These products are highly regulated due to the payments of subsidies by federal government. Government, however, has been desirous of deregulating the sector with a view to creating un-impeded access which would engender competition and lead to more participation in the downstream petroleum market. Government argues that whilst the Petroleum Products Pricing Regulatory Agency (PPPRA) is saddled with all responsibilities relating to licensing, monitoring, technical analysis of product supply and pricing, the forces of demand and supply, in due course, will actually determine the price of products.

As a result of persistent scarcity the country resorted to importation of petroleum products to augment the products refined locally. To this end, the DPR issues what is called Petroleum Products Import Permit specifying the product, country of origin of product, quantity, quality and value of products to be imported. This is without prejudice to the importation undertaken by the NNPC and the Nigerian Oil Majors that is, Oando Nigeria Plc, Forte Oil Plc, Mobil Oil Nigeria. Most of the marketers under former IPMAN (now known as NIPCO) import petroleum products[61] which have Price Bond U.K as its core

[61] NIPCO Plc formerly called IPMAN petroleum marketing company limited was incorporated by members of the independent marketers association of Nigeria (IPMAN) on January 8,2001 as a private limited liability company to participate in the distribution of white petroleum products business throughout the nation.

investors. The products are received by PPMC and are distributed to end users.

In modern economies, effective petroleum products system supply is a sine qua non for a sustainable, quantitative and qualitative development. The Regulations for the attainment of this state of affairs is made by the Nigerian Ministry of Petroleum Resources, the Department of Petroleum Resources (DPR), the Nigerian National Petroleum Corporation (NNPC), the Pipelines and Product Marketing Company (PPMC) and the Petroleum Products Pricing Regulatory Agency (PPPRA). These are the key players in the Nigerian Oil and Gas Industry. In essence, all regulators in the petroleum sector have, in one way or the other, made regulations which are geared towards the attainment of security of petroleum products supply.

It is estimated that the daily consumption of petroleum products in Nigeria currently is; PMS 32 million litres, AGO 12 million litres and DPK 8 million litres. This amounts to 300% of the refining capacity of all refineries in the country on the assumption that they are working at full capacity[62].

To achieve supply security and meet the daily demand for petroleum products occasioned by lack of domestic sufficiency, the

[62] Iloba-Aninye, O. (2006) Petroleum Products Pricing: A critique of the Legal Framework and the Fallacy of Subsidy in the Oil and Gas Sector, *Ahmadu Bello University Law Journal (ABULJ)*, Vol. 24-25, pp.144-155.

Petroleum Ministry and DPR have sets of regulations that guide petroleum products importation. To achieve an effective supply of petroleum products, the DPR gives permit to all applicant-importers based on their storage and distribution capacities. Importers are given time limit within which to get the products delivered to NNPC. Where they import products contrary to the terms contained in their permits, the products are confiscated and the importer is fined or prosecuted[63].

With the involvement of new players in the market, the country has witnessed price increases[64]. However, these come as a departure from the era of scarcity, unavailability and total stoppage of product importation by marketers due to the tight multi-regulator interference in pricing of products.

Availability of petroleum products at a reasonable price at all times is fundamental and it is an indicator of security of supply but Nigeria relies heavily on importation of petroleum products to meet domestic demands[65]. The supply mode has, over the years demonstrated its inability to guarantee adequate supply due to factors including sabotage, vandalism, banditry and poorly maintained infrastructure. Further, the federal government and the major and independent marketers could not sustain the importation of petroleum

[63] Retrieved April 24 2012 from Available http://www.pengassan.org.
[64] Ibid
[65] Retrieved January 3 2014 from – www.pppra–nigeria.org/pms.htm

products because of the shortfall between the landing cost of imported products and their selling prices in Nigeria which made the business unprofitable.

Consequently, local consumption is dependent on the fluctuations in the international market of crude oil prices. According to the Petroleum Product Pricing Regulatory Agency (PPPRA), the landing cost of petrol as at January 2014 was N141.91 excluding N15.49 margin for transporters and marketers resulting in expected retail price of N141.91[66]. Compared to the regulated price of N97 per litre, there is a subsidy of N44.91 per litre which translates into about N870 billion per annum based on the average daily consumption of 32 million litres of petrol[67]. This is in addition to the subsidy on household kerosene which adds up to N1.2 trillion per annum compared to only N240 billion allocated to fuel subsidy in the 2011 budget. This subsidy is sourced from the federation account which would otherwise have been shared by the three tiers of government in the ratio of 52.68%, 26.72% and 20.60% respectively (federal government, 36 states and 774 local governments). The subsidy does not include taxes forgone which in some countries could constitute up to 50 percent of the pump price[68].

[66] Petroleum Product Pricing Regulatory Agency (PPPRA)Template, based on average Platt's prices for the month of 2014. Retrieved December 3 2014 from – www.pppra–nigeria.org/pms.htm
[67] Ibid.
[68] This is one issue that is yet to be addressed as to whether taxes especially VAT will be applicable to the price of petrol and kerosene when fully deregulated

Security of supply of petroleum products is achieved when the available products have reached the final end users. It follows, therefore, that distribution of products and access to storage facilities are essential for the attainment of the goal. In Nigeria, storage and distribution of products are the main constraints facing marketers as well as the unstable price of petroleum products globally.

5.8 Role of Government in Downstream Activity

Deriving the maximum benefit from petroleum involves many energy and finance through the following procedure:

Ordinary Terms		**Technical Terms**
Searching for the resource	–	Exploration
Capturing and getting it out of the ground	–	Production
Taking and carrying it to the refinery	–	Transportation
Turning it to useful and useable products	–	Refining
Delivering it to the consumer	–	Marketing
Burning it in suitable equipment	–	Utilization

The overall role of any government in the petroleum industry is to provide better ways to carry out all the above procedures for better,

cheaper, safer, cleaner, more efficient, convenient, timely and positive energies.

Petroleum has claimed the top position in Nigeria's energy requirement and export list, constituting a very fundamental change in the structure of the country's international trade.

Oil prospecting began in Nigeria as far back as 1908 but production and export started in 1958 in Shell oilfield located at Oloibiri[69]. Other companies joined soon after independence and the number of oil producing and exporting companies now stands at eleven[70].

The share of oil in total export value rose from less than 1% in 1958 to a peak of 97% in 1984 and has not been less than 90% since then. In the first half of 1990, it accounted for over 95% of total exports and its share of gross domestic product (GDP) has oscillated between 25% and 30% in recent years[71]. In the early sixties, oil was relatively insignificant to the Nigerian economy and due to lack of expertise, the role of government in the industry was primarily

[69] Aigbedion & Iyayi S.E. (2011) Diversifying Nigeria's Petroleum Industry. Nigeria Economic Summit Group (NESG) Economic Indicators, Vol.13 No.4
[70] Ibid
[71] Onipede, S. (2003). Towards Creating an Environment for Sustainable Economic Growth in Nigeria

regulatory – being limited to collection of royalties and other dues from multinational oil companies operating in Nigeria[72].

By the end of the civil war in 1970, oil had become an important component of the nation's economy. In a bid to exert its control over the industry, the Nigerian National Oil Company (NNOC) was established and given responsibility for both upstream and downstream oil operations. The NNOC also looked after government's participation in the activities of oil companies. Before 1977, the Ministry of Petroleum Resources (which also had regulatory functions) operated side by side with the NNOC. That year, they were merged to form the Nigerian National Petroleum Corporation (NNPC). The NNPC combined the functions of the defunct NNOC with the regulatory functions formerly exercised by the Ministry of Petroleum Resources.

However, the transformation and reorganization of the petroleum sector failed in yielding the desired result because of corruption and inefficiency. Thus in the 1990s, with a fast growing population, the country was caught in the situation where domestic demand for petroleum far outweighed supply and with corruption, smuggling and mismanagement, the refineries were operating at less than optimal levels. This led the federal government of Nigeria to emulate other

[72] Amnesty International. (2006). Nigeria: Oil, Poverty and violence. Retrieved September 10 2012 from http://web.amnesty.org/library/index/ENGAFR440172006.

developing and developed nations by privatizing and liberalizing the country's downstream sector of the petroleum industry which was hitherto managed by the NNPC on behalf of the government. Privatization was seen by government as a way to boost production levels of the refineries which will involve a huge cost. The government decided to invite local marketers to apply for licences to build private refineries. This approach failed as the marketers who are solely driven by profit maximization were not interested in investing in such ventures while government still controlled pump price of gas. Government then decided that it was necessary to deregulate and privatize the downstream sector[73].

The goal of the Nigerian Government in adhering to the principles of privatization is influenced by the successes of other countries in doing same. Funsho Kupuolokun (a former Group Managing Director of the NNPC), in 2004, noted that the intended goal of privatization was to dismantle the natural monopoly of the state-owned enterprise by privatizing and deregulating price controls thus creating competition in the downstream sector by encouraging more companies to get involved and eventually supplying the market at competitive price levels.

[73] In order to remedy some of the oil, natural gas and electricity industry problems, the Nigerian government is currently debating a Petroleum Industry Bill (PIB) that is designed to reform the entire energy sector (see oil section). The Bill was first introduced in 2008 and after series of delays, the Bill in its entirety continues to be debated by the National Assembly. This ongoing debate had delayed investments in oil exploration, project development and has also affected the natural gas sector by delaying planned liquefied natural gas (LNG) projects.

The role of the Nigerian government in this has overtime evolved from that of a mere regulatory and supervisory umpire to that of an active participant in petroleum exploration and development. The prayer that "as it was in the beginning…" is aptly captured when government only plays its traditional supervisory role of collection of royalties and dues with making of statutory laws regulating activity in the Oil and Gas Industry.

CHAPTER SIX

INVESTMENT, PRICING AND TAXATION IN THE DOWNSTREAM SECTOR

6.1 Introduction

Domestic prices of petroleum products vary widely across countries. In many countries, prices are market-determined and subject to only taxes and special levies[1]. However, in some other countries, notably developing countries of which Nigeria is one, prices are fixed by the government or state-owned enterprise. The prices of gasoline and diesel, two most locally consumed products, vary widely across the country unofficially. The price level of gasoline and diesel is generally very low in oil exporting countries and high in developed market economies. In general, the prices of gasoline are significantly higher than the prices of diesel fuel.

The issue of domestic prices and subsidy of petroleum products has important budgetary implications. For instance, domestic taxes on petroleum products provide a major source of revenue for both human and material development. In most notable oil-exporting African countries such as Nigeria, the prices are subsidized, implying that government forgoes a large amount of revenue as a consequence. The question, therefore, is: what are the appropriate levels of taxation and

[1] Adamolekun A (1999): Assessments of Petroleum Product Distribution Downstream in the Nigeria economy. NNPC Bulletin.

pricing of petroleum products? Or alternatively, what are the relevant issues that should be considered in setting taxes on and prices of such products? Now, in the face of subsidy, how will the government arouse and attract the interest of investors to invest in the downstream petroleum sector? These are important policy questions that have implications, not only for micro economic or allocative efficiency but also for the design of macro-economic policies. In countries suffering from revenue shortfalls, increasing taxes and prices of petroleum products is often recommended as a quick measure to boost revenue especially from International Monetary Fund (IMF). However, governments subsidize some of the products as a tool for redistributing income towards the low income segments of the population as is presently done in Nigeria.

The oil and gas industry has always been that of undertaking high risks in pursuit of high reward. As the oil and gas industry matured and evolved however, it has shifted its approach to risk management and profit maximization. Today, the operating paradigm for the industry is closer to a tightly controlled manufacturing style. Accordingly, the focus for the downstream companies is on how to manage all kinds of risks in order to rein costs thus making investment in the petroleum industry face unprecedented waves of costs, new regulatory challenges and product price uncertainty. This forms the basis for discussing

investment, pricing and taxation of petroleum products in the downstream sector in this chapter.

6.2 Financing Investments in the Downstream Sector

Nigeria is one of the world's largest producers of crude oil. The country currently produces an average of 2.5 million barrels of crude oil per day[2]. This makes her the 11th largest producer of crude oil in the world and 6th largest exporter amongst OPEC members[3]. Production currently stands at about 3 million barrels per day whilst reserves are about 35 billion barrels which the government intends to increase to 40 billion barrels by the year 2020[4].

The issue of financing petroleum investment and development in the downstream sector of the petroleum industry does not arise or take place in a vacuum; it emerges as a result of market developments as the production of goods and services requires some form of energy inputs[5]. Energy is integral to development and thus to prosperity in the 20th century and beyond - fossil fuels provide more than ninety percent of the energy needs for economic development. Despite the transformation of global economy, fossil fuels still command a ninety percent share of worlds total energy supplies. The issue then arises as

[2] Retrieved September 3 2012 from Nigerian National Petroleum Corporation (NNPC) www.nnpcgroup.com
[3] Ibiyemi, S. (2004). Energy Update: General Improvement with Setback. A Paper Published in Financial Standard, January 5, 2004, Lagos, Nigeria pp. 245-257.
[4] Ibid
[5] ibid

to whether or not this share is sustainable over the next 20 or 30 years and to what degree expanding world energy requirements will be met by hydrocarbons. There is no doubt that the world's population is growing geometrically and if the needs of the world's growing population are to be met, economic expansion becomes a sine qua non. With the growth in emerging market economy particularly in Asia, the world energy demand is expected to grow at a rate of two percent per year and oil demand, as a share of world energy, is expected to remain constant at forty percent[6].

However, there are two major factors that may affect the growth of oil demand although their impact may not be felt for another ten to twenty years. These developments are the desire to reduce greenhouse gas emissions including carbon dioxide emission as exemplified by the Kyoto protocol and the introduction of new alternative fuels.

On the supply side, conventional crude oil reserves are adequate to meet growing demands. Keeping pace with demand growth of two percent per year, production from conventional sources could reach 90 million barrels per day[7]. However, these increased production levels still leave a substantial reverse and resources in the ground. Consequently,

[6] ibid
[7] ibid

the world will not, in the immediate future, face the prospect of resource–driven production declines.

The objective in providing these details is to emphasize the long term stability of the oil industry and to underline the central part that investment in the industry will play in the energy arena in future. The financial resources needed to expand production capacity depend on several factors – foremost being the price of oil[8]. The price of oil is the basic determination of revenue and investment and provides the equilibrium between demand and supply[9]. Until the mid eighties, producing countries and major oil companies were able to finance most of their downstream investments with revenues generated by petroleum sales at adequate prices. Following the price crash of 1986[10], OPEC countries continued to finance their expanding expenditure capacities from internal sources. Their exploration expenditure were relatively low, as they already enjoyed large reserves, and their development costs were relatively modest.

Major oil companies on the other hand, were faced with high exploration and development costs in areas like the North Sea, West Africa and the Gulf of Mexico. They were compelled to borrow heavily

[8] Lukeman R (2003). Capacity Growth in the Nigeria Petroleum Industry. A Keynote Address Proceedings of the SPC 26th Nigeria Annual International Conference and Exhibition, Lagos, Nigeria pp.4-9.
[9] Ibiyemi S (2004). Op cit. footnote 3
[10] Omorogbe Yinka (1997) *The Oil and Gas Industry: Exploration and Production Contracts.* 1st edition Malthouse Publishing London. p.19.

as the cost of building up capacity in these areas[11]. The price fall of 1998, while hurting all players, aggravated oil company finances to such extent that for many, the solution to their funding problems lay not in additional borrowing but in mergers and restructuring[12]. These events bring into sharp focus the importance of the price of petroleum in financing investments in the downstream sector. While oil prices should be adequate to induce efficient supply, they should not be so high as to inhibit real demand. A stable oil price that satisfies both ends of the market, and which continues to prevail for the long term, not only creates confidence and encourages appropriate planning by oil producers but also encourages bankers to extend credit to oil industry borrowers. The rising volumes of petroleum supplies will clearly not be absorbed by consumers in their raw form. Crude oil must be processed in refineries, transported by pipelines or tankers and then distributed to end users. So as upstream production grows to meet demand, there must also be an expansion of downstream facilities and distribution capabilities.

But while nations seek to meet consumers' growing needs by investing heavily in upstream and downstream programs, they are increasingly focusing their attention on expanding their own

[11] Lukeman R (2003). Op cit. footnote 8
[12] Ibid.

economies[13]. Their energy policies have dual objectives. They claim to increase their petroleum exports and they seek to implement projects designed to diversify and strengthen their economies. Such projects cover wide range of activities including refining, gas processing, petrochemicals, power generation and water desalination. The input feed for such projects is a mix of petroleum, oil exports and natural gas. So the viability of the project hinges on long term supplies of energy at competitive prices[14]. Local investors, whether single-handedly or in association with multinational companies, may be able to provide equity financing of 40% of the capital required. The other 60% will have to be financed from external sources. Semi-governmental institutions and local banks may be able to provide an additional 10% of that capital leaving a 50% share which must be provided by global financial institutions, commercial banks and perhaps bond issues.

In 1996 alone, commercial banks extended energy loans nationwide in the neighborhood of $120 billion, of which 54% went to oil and gas, and 46% to power generation[15]. These trends suggest a need for a multitude of downstream projects – and of course a similar need to secure financing for them[16]. The funding which energy projects

[13] United Nations (2001). Nigeria Common Country Assessment United Nations System in Nigeria. Lagos, Nigeria pp.73-79.
[14] Ibid.
[15] HRH Prince Faisal Bin Turki Bin 'Abdul 'Aziz A-Sa'ud (2000) *Financing Petroleum and the Experience of Saudi Arabia.* World Petroleum Congress, Calgary, Alberta, Canada, 13 June 2000. Retrieved September 3 2012 from www.world-petrolem.org/docs/docs/16th/faisal.doc
[16] ibid

have received from international bank financing appears to be small and will not keep pace with the expansion of energy demand. Borrowing to finance petroleum projects in high cost areas siphons a large part of banks liquidity since more capital is required for incremental unit of production[17]. The same amount of capital may finance three to four times as much capacity expansion in the gulf region, enhancing the efficiency of capital worldwide.

It is instructive to note that there is developing a new important trend in the oil industry where multinationals have sought co-operation with OPEC member countries. These companies are becoming more active and showing a willingness to invest in downstream as well as upstream projects. It must be remembered however, that co-operation between the companies and major petroleum producing countries should be structured in such a way that helps to realize those nations' programmes for economic expansion and diversification.

6.3 Legal/Economic Barriers to Entry into Petroleum Marketing

The Nigerian downstream petroleum industry was in the hands of multinational oil companies before, during and immediately after the pre-independence era. Many disadvantaged Nigerians were excluded

[17] Odularu, G.O (2007): Crude Oil and the Nigeria Economy Performance, Retrieved from Oil and Gas Business. Retrieved September 3 2013 from http://www.ogbus.ru/eng/

from the mainstream industry through laws and capital availability[18]. Against this background, the Nigerian government initiated several policies that were aimed at restructuring and transforming the petroleum industry to allow indigenous Nigerian companies enter the industry in order to achieve sustainable presence in the ownership and control of the industry[19]. Since the introduction of these policies, little progress has been made towards achieving this government key policy objective. Instead, there is still minimal entry into the industry especially by indigenous companies and the companies continue to struggle in most cases to increase their market share.

Three categories of barriers have been identified in the downstream petroleum industry. These are economic, non-economic and cross-sectoral barriers[20]. These categories of barriers prevent entry into the industry. To circumvent these barriers, and in order to make progress in the control of the industry by indigenous companies without significantly harming the multinational oil companies, government enacted the indigenization decree of 1979.

The petroleum industry is an important and crucial component of the economy as its contribution to development is significant. Apart

[18] Adeleke A (2002) Investment Opportunities for Small Medium Scale Enterprises and Partnership. Development Projects in the Oil and Gas Industry of Nigeria. Montanheiro L. Berger and Skomsay (ed) Public and Private Sector Partnership Exploring Co-Operation Sheffied. Shu Press.
[19] The local content initiative, indigenization policy are examples of such government policies in this direction
[20] Adeleke A (2002). Op cit. footnote 18

from creating employment for millions of Nigerians and foreigners, the total revenue derived from petroleum sales in 2012 alone amounted to N8.117 trillion[21].

Indigenous players that are in the industry face major challenges and constraints that serve to impede access into the downstream petroleum industry. These challenges and constraints include such barriers as restrictive regulatory and legal framework within which oil companies in the downstream petroleum industry operate. They also include some economic and non-economic factors which deter entry into the industry[22].

The Nigerian government key policy objective is to achieve sustainable presence, ownership and control by Nigerians of substantial aspect of the industry. To this end, the government white paper on Nigeria's energy policy expresses the desire by government to remove all impediments in order to allow previously disadvantaged people play a significant role in the petroleum industry. It also evidences the government determination to restructure the petroleum industry in order to achieve significant domestic ownership or control by indigenous corporations. It recognizes the heavy domination of the petroleum industry by expatriates who constitute majority in the entire

[21] Akpoghomeh, O.S. and Badejo D. (2012): *Petroleum Product Scarcity: A Review of the Supply and Distribution of Petroleum Products in Nigeria*. Retrieved January 19 2013 from www.onlinelibrary.wiley.com
[22] Ibid.

value chain. This is exacerbated by the fact that control and ownership of the industry rest in the hands of multinational oil companies[23].

In the context of the Nigerian downstream industry, a barrier to entry may be viewed as a social limitation by resource owners already in the market in order to prevent new entrants[24]. This may, for example, include the cost that new entrants into the petroleum industry incur. The absence of social limitations to entry will allow new entrants, particularly indigenous companies, easy entry.

Economic barriers are those barriers in which financial requirements are placed above any other requirement for entry to be possible. Economic barriers include inter alia:

(a) **Lack of funds to finance projects**: This is the greatest hindrance to new entrants. This problem is compounded by banks' stringent conditions for accessing finance through credits and loans. The collateral required is gargantuan, discouraging and difficult to provide. ALMON Petroleum (Nig) Limited, for instance, owned and run by a Nigerian investor, has a service station along Kaduna-Zaria Road; the cost of land acquisition and construction was three million, three hundred thousand naira (N3,300,000=00) only. This sum is not inclusive of documentations (licences, permits, approvals, inspections,

[23] Ibid.
[24] Adeleke A (2002) op cit. footnote 18.

fire and insurance). Obtaining this sum from banks became impossible as a result of the demand for collaterals.

(b) **Operating Costs:** This involves the initial sum for getting supplies of products from the refinery. It covers items such as uniforms, consumables such as water, provisions, a three month (assured) salaries of four staff and the acquisition of trucks (three) for transporting the three white products to the service station.

(c) **Advertisement**: Whether on a small or large scale, every service station incurs cost of advertisement. Notices, billboards and handbills are printed and in some cases, electronic media (radio and television) are used. This constraint can, however, be avoided.

(d) **Inevitable Costs**: Another economic barrier is inevitable costs. Inevitable costs are capital or costs that the investor cannot recover upon exit from the market and are in many instances, part of the initial costs.

(e) **Vertical Integration**: is also a barrier to entry. The vertical integration of a company arises when a company gets involved in the entire value chain of the industry or stages of production from refining, marketing and retailing. The vertical integration of a company sometimes called economies of sequence in the downstream petroleum industry means that a company engages in the refining, marketing and

retailing without the product leaving the company until it gets to the final consumer.

The non-economic barriers are those barriers that are non-financial in nature and include the following amongst others:

(a) **Geographical location of outlet**: New entrants will be at a disadvantaged position because of near-difficult conditions to meet. Greater difficulties are encountered as already existing ones have taken up strategic locations. Similarly, in several instances, the number of service stations is regulated by an agency which determines the number of new stations that can be built in a year and in what areas. The purpose of limiting the number of service stations was meant to promote work done at service stations and thereby enhance economies of scale.

(b) **Price Controls:** The non-application of the economic principle that price is a function of demand and supply means that petroleum price marketing mechanisms are controlled by the federal government. This "un-market" role of price determination was the reason for establishing the Petroleum Products Pricing and Regulatory Agency (PPPRA). The underlying principle is to make petroleum products available nationwide inspite of the retail outlets distance from the refinery at uniform price. This government intervention does not

allow for competitive pricing by petroleum marketers. This is a major barrier to entry and growth into the downstream sector, for example, because there is greater autonomy in diesel price, the price is mostly determined by demand.

(c) **Import controls**: Under the Petroleum Product Import Regulation produced by the Department of Petroleum Resources (DPR), refined petroleum products can only be imported if the importer has domestic storage facilities.

Cross-sectoral barriers are those economic or non-economic barriers that are found in two or all subsectors of the industry[25]. There are a few cross-sectoral barriers in the downstream petroleum industry which include among others;

(a) **Environmental Regulations**: These are regulations that reduce the number of entrants into the refining sub-sector. Since the Federal Ministry of Environment and the Nigerian Environmental Standards & Regulations Enforcement Agency (NESREA) provide onerous environmental compliance codes for players in the industry and since refineries emit a number of obnoxious pollutants that are a threat to the environment, they will be affected by such laws and regulations as may be enacted by the National Assembly. Laws exist that compel

[25] Ibiyemi S (2004). *Energy Update: General Improvement with Setback*. A Paper Published in Financial Standard, January 5, 2004, Lagos, Nigeria pp.245-257.

the refiner to adopt good production techniques and technologies in order to remove pollutants from the raw products and process.

Nigeria's democratic government, in 2001, embarked upon a program to encourage private investments in the oil and gas industries in order to sustain long term economic growth. In furtherance of this, the government reform plan includes privatization of the existing refineries, liberalization/deregulation of the oil industry and the removal of subsidy on petroleum products.

One aspect of the on-going liberalization and reform of the Nigerian oil industry is the issuance of permits and licences to private investors for the establishment of private refineries, gas recovery and processing plants as well as natural gas and Independent Power Projects (IPP). The federal government, through its wholly state-owned company (NNPC), controls the petroleum industry with its shareholding in the major producing companies involved in the industry. The NNPC, through its subsidiary – The Pipelines and Product Marketing Company (PPMC) - buys crude oil for the refineries at prices set by the government (DPR) and then sells the refined products to the marketing companies. The subsidiary company handles all imports of refined products through nominated contractors.

In theory, Nigeria's existing downstream petroleum infrastructural capacity should be able to meet its domestic consumption requirements estimated at approximately 445,000 barrels per day. In practice however, the country continues to experience perpetual shortage of refined products due to poor configurations and inefficient operations of the refineries resulting in frequent breakdown occasioned by poor or lack of proper turn-around maintenance (TAM)[26].

Nigeria's domestic consumption requirement for petroleum products is currently estimated at 700,000 bpd and this is expected to rise by 10%[27].

Refined petroleum products are mainly transported by the PPMC from the refineries through pipelines, coastal vessels, road trucks, and now rail wagons to the 21 regional storage terminals and distribution depots spread across the country from where marketing companies obtain their supplies. These distribution depots with a total capacity of 1,422,000 cubic meters and the transportation systems are mainly owned and managed by NNPC through its subsidiary - the Pipelines and Products Marketing Company Limited (PPMC). The depots are mostly linked to the refineries and port terminals by a 3,001 km network of pipelines in five systems. It is important to note that private depots

[26] A periodic (2years) overall maintenance of the refinery to ensure optimal performance.
[27] Igbatayo SO (2004). Nigeria Petroleum industry and Export Orientation. A paper presented at the Society of Petroleum Engineers program, Abuja, Nigeria pp.18-23.

complement the PPMC capacity. However, there is a gross underutilization of both the PPMC and privately-owned installations due to irregular supply and inconsistent ability to independently import products.

To boost domestic supply and encourage value-added (refined) products, the Nigerian government issued fifteen approvals to construct licences for refineries. Implementation will prove to be extremely difficult due to the large financial outlay involved and the fact that after all these, the government expects them to sell at controlled price. The licences for refineries are, however, not likely to come on stream due to the ready approvals given for finished products. While establishment of a few of the large refineries could in theory flood the market, there is sufficient demand for several of the small refineries to co-exist and operate profitably. In addition, full construction and installation of small modular refineries is estimated to take an average of 18 months while a standard 100,000 bpd capacity refinery will require a minimum of 3-4 years giving smaller modular refineries a significant head start.

Refineries are of various sizes and models; also their capacities and products vary. Small refineries at present do not exist in Nigeria as it was with the first refinery in Port Harcourt which produced 35 barrels per day.

In summary, the downstream sector of the Nigerian petroleum industry has economic, non-economic and cross sectoral barriers to entry. These three main barriers contribute to the failure by the federal government to achieve substantial indigenous participation in downstream operations.

6.4 Petroleum Products Taxation

Taxation remains a major source of income for both state and federal governments today. The petroleum industry constitutes the major source of income and occupies a strategic position in the economic development of Nigeria. The Statement of Accounting Standard No 14 on petroleum also stated that the petroleum industry is very strategic to the Nigerian economy as the nation's major provider of foreign income and plays a major role in facilitating the economic development of Nigeria. For the past four decades, the petroleum industry in Nigeria has been playing vital and dominant role to the economic growth of Nigeria accounting for over 90% of the total revenue of the country. Petroleum has both direct and indirect effects on the overall level of economic activities but its impact is felt more in the urban sector where petroleum revenue has been used to stimulate the economic development of the nation. The impact of petroleum on the economy of Nigeria is felt specifically through direct contribution to

the national income and output, the generation of employment and manpower development, amongst other direct benefit to the economy[28].

One major source of petroleum revenue in Nigeria is the petroleum profit tax (PPT). The petroleum profit tax is a tax applicable to upstream operations in the oil industry[29]. It is particularly related to rents, royalties, margins and profit sharing elements associated with oil prospecting, exploration and mining leases[30]. It is the most important tax in Nigeria in terms of its share of total revenue contribution – 95% and 70% of foreign exchange earnings and government revenue respectively.

The importance of petroleum to the Nigerian economy gave rise to the enactment of a different law regulating the taxation of incomes from petroleum operations. It is because of the importance that government attaches to oil exploration and production that the taxation of profits or gains of companies engaging in such operations becomes taxable under the Petroleum Profits Tax Act, Cap P13, LFN 2004 (as amended).

[28] Okumroumu, T. O. (2004) Deregulation of the downstream sector of the Oil Industry in Nigeria: Analysis of some main issues, The C.B.N Bullion, vol. 28
[29] Nigerian Oil Directory, (1993), The Role of Oil in Nigerian Economy, Nigeria: John West Publications Limited
[30] ibid

The oil and gas companies operating in Nigeria have not played the expected role to meet the economic development of Nigeria and the aspirations of the Niger Delta area in particular[31]. There has been consistent 'buck-passing' (blame-trading) between the government and oil companies. While oil companies claim that they pay 85% of petroleum profit tax which government is supposed to use in developing the country and the Niger Delta in particular, the government demands that oil companies ought to render corporate social services to their host communities that create the enabling environment for them to operate.

Nigeria, with its huge reliance on petroleum exports, the bulk of its tax revenue is derived from petroleum profit taxation. A rhetorical question then is how well have these funds been applied to ensure sustainable development for the country? Developed countries such as Germany, France and the USA have revenues from taxes which account for over 60% of the total income accruing to the government to finance government expenditure and development.[32]

The main purpose of taxation is to finance government expenditure which translates to financing development of the country. Whether the taxes collected are enough to finance the development of

[31] This fact is noticeable in the dearth of infrastructure in the region

[32] Akpoghomeh, O.S. and Badejo D. (2012): Petroleum Product Scarcity: A Review of the Supply and Distribution of Petroleum Products in Nigeria. Retrieved January 19 2013 from www.onlinelibrary.wiley.com

the country will depend on the needs of the country. However, countries can seek alternative sources of revenue to finance sustainable development.

As the nation displayed an acute petroleum dependency for its revenue, government initiated a policy intended to boost oil reserves to 40 billion barrels by 2010 but unfortunately, as at 2013, the proven reserves of the Nigerian crude oil was 37.14 billion barrels per day[33].

In addition to its crude oil reserves, Nigeria is endowed with abundant reserves of natural gas. The preponderance of gas encountered in the search for oil has led many experts to describe the Nigerian petroleum field as a "gas province with some oil in it"[34]. The proportion of natural gas in conjunction with crude oil is relatively high.

The fiscal regime of Nigeria's upstream petroleum sector is evidenced in several laws namely; The Petroleum Act, Cap P10, Laws of the Federation of Nigeria, 2004; Deep Offshore and Inland Basin Production Sharing Contract Act, Cap D3, Laws of the Federation of Nigeria, 2004; The Petroleum Profit Tax Act, Cap P13, Laws of the Federation of Nigeria, 2004. The Nigerian government has always ensured a dynamic approach to drawing up rules and fiscal regimes for

[33] Retrieved January 13 2004 from www.opec.org/opec_web/en/about_us/167.
[34] Nwachukwu C., (2011), "The Realities Facing Headlong Deregulation," Vanguard, Tuesday, November 1, Vol.25, No.61485.

the oil and gas sector which makes the industry one of the most competitive (albeit the most unco-ordinated) and investor-friendly in the world.

6.5 Government Policy on Petroleum Products Pricing

The development of the petroleum industry in the 1960s and 70s transformed Nigeria from an agricultural economy to one that is heavily dependent on oil revenues. Behind this transformation is a complicated web of political, social, commercial and environmental issues. One negative consequence of the oil industry has been the neglect of the agricultural sector. This has led to a rapid decline of local self sufficiency on agriculture and a heavy dependence on foreign imports. Large multinational oil companies (MNOCs) have become increasingly powerful as a result of the expansion of global markets over the past decades. Some critics describe the MNOCs as having superseded the state governments in the running of global affairs[35].

Nigeria is a country with a very high demand for all categories of petroleum products due to the fact of it being the largest black populated market economy in the world. Although figures vary, official sources show that average demands are put at: premium motor spirit (PMS) =30-33 million litres per day; automotive gas oil (AGO) =12

[35] Nottingham R (2004). Energy Market Strategic Practice. New York Isherwood Products Inc.

million litres per day; dual purpose kerosene (DPK) =10 million litres per day and aviation fuel (ATK) =1.6 million litres per day depending on the season[36].

Historically, Nigeria also consumes a high volume of both AGO and DPK. The Ministry of Petroleum Resources remains the overall coach of the Nigerian petroleum industry with the Nigerian National Petroleum Corporation (NNPC) under the ministry serving as an industry operator and a direct handler of government interests in the sector. NNPC first existed as the Nigerian National Oil Corporation (NNOC) which was established in 1971 to strengthen Nigeria's control over the petroleum industry in view of the activities of powerful multinational oil companies and given responsibility for both upstream and downstream activities in the sector. However, domestic refining cannot meet up with domestic consumption[37] making Nigeria to resort to the importation of refined crude oil. This is actually the tragedy of the story of the petroleum industry.

Nigeria's four refineries have a combined installed capacity of 445,000 bpd but using less than 30% of their installed capacity[38]. For the whole of 2010, the four refineries with a combined capacity in

[36] Nigerian Vanguard, January 26, 2011

[37] Atakpu, L. (2007) - Resource-based conflicts: Challenges of Oil Extraction in Nigeria; Paper presented at the European Conference hosted by the German EU Council Presidency (March 29 and 30), Berlin, Germany.

[38] NNPC (2006) Various Issues, NNPC Statistical Bulletin, Abuja. Retrieved August 3 2013 from http://www.nnpcgroup.com.

excess of 445,000 barrels per day could only refine a mere 80,757 metric tons of petroleum products[39]. The remaining volume of 8.1 million metric tons of petroleum products that came into the downstream sector was imported. With this low domestic refining capacity, Nigeria has no choice but to depend on importation of refined products to meet domestic energy requirement. What this means is that Nigeria exports raw crude, only to import refined petroleum products. To import these refined products, Nigeria would have to pay at the international price per metric ton plus other costs of landing the products in Nigeria. This explains the concept of landing pricing policy. More succinctly, one can explain the concept of importation pricing policy of petroleum products as the situation where Nigeria imports refined petroleum products at prevailing international price plus other costs of landing the products in Nigeria as indicated in the PPPRA pricing template[40]. This importation is usually undertaken by both the NNPC and independent marketers. Not only does Nigeria import refined products, the process of importation is fraught with irregularities, high level corruption, premeditated murder and the inflation of figures of imported products (in order to make high subsidy claims at huge costs to the government)[41]. It is worthy of note that the crude oil refined in

[39] Retrieved July 8 2013 from www.nnpc.com>businessinformation>Oil_&_Gas_in_Nigeria.
[40] ibid
[41] Asimi J., (2012), "Factors in Nigeria's Oil Problem," Nigerian Tribune, January 13, No. 13549.

Nigeria is supplied to end users at the same price with the imported products.

Petroleum products pricing template (daily and monthly) is provided by the PPPRA. The pricing template is a pricing information sheet detailing the components used in deriving the PPPRA daily/monthly guiding product prices. It employs import parity principle and this includes:

(i) Landing costs of products

(ii) Margins for the marketers, dealers and transporters

(iii) Jetty/Depot throughput

(iv) Other charges and taxes.

The objectives of the pricing template are to ensure transparency, full cost recovery, fairness and efficiency in the importation process but how this template has fulfilled these objectives could be called to question because of the secrecy, conservation and non-disclosure in the practical sense.

Over the years, the Nigerian government has intervened in the pricing of petroleum products[42]. The Nigerian government unilaterally determines the pricing of petroleum products through the

[42] The intervention has always been by way of subsidy on fuel

administration of a subsidy regime under the Petroleum Support Fund (PSF). Of all the essential products, only the Automotive Gas Oil (AGO) commonly known as gas is not being subsidized as it has undergone complete deregulation. The government periodically reviews the subsidy regime (and by implication the price of petroleum products) as determined by government fiscal position. Although the government views the subsidy regime as a huge financial burden, nevertheless, all attempts to completely remove the subsidy is usually met with stiff resistance by Labour Unions and the general public (who see the subsidy as the only thing the masses benefit from the government) through strikes and mass protests. So the approach of government has been to increase the prices of the products marginally and then negotiate with Labour Unions thereafter. In January 2012, President Goodluck Jonathan announced a full deregulation of the downstream sector but still pegged the price of PMS at N142.00 per litre. With this new price of N142.00, some economists argued against government use of the word deregulation as anti-economics since government still fixed the price of the products[43]. It is argued that the better term to describe the scenario was a fuel price increase[44]. Today, as reflected in the PPPRA template, the official price of PMS is fixed at N97.00, although the price varies across the country despite the existence of a

[43] Fafowora D., (2011), "Before Oil Subsidy Removal," The Nation, Thursday, December 8, Vol. 7, No. 1968.
[44] Ibid.

Petroleum Equalization Fund (PEF), due to the high level of inefficiency and profiteering in the downstream sector as against the total cost of N146.90 per litre (landing cost of N131.10 and distribution margins of 15.49) paid by government per litre imported.

Although the purpose of the subsidy is to reduce the retail price of petroleum products for end users (and thus increase welfare gains), this is argued against on the premise that government activities in the downstream sector have been largely distortionary. Below is a chronological presentation of the prices of petrol in Nigeria as administered by different political administrations since 1970:

(a) Gowon, 1973: 6k to 8.45k (40.8%)

(b) Murtala, 1976: 8.45k to 9k (0.59%)

(c) Obasanjo, October 1978. 9k to 15.3k (70%)

(d) Shagari, 1982: 15.3k to 20k (30.71%)

(e) Babangida, 1986: 20k to 39.5k (97.5%)

(f) Babangida, 1988: 39.5k to 42k (6.33%)

(g) Babangida, 1989: 42k to 60k private vehicles

(h) Babangida, December 1989: moved to uniform price of 60k (42.86%)

(i) Babangida, 1991: 60k to 70k (16.67%)

(j) Shonekan, 1993: 70k to N5 (614%)

(k) Abacha, 1993: N5 to N3.25k to N15 1994: N15 to N11

(l) Abubakar, 1998: N11 to N25 (127.27%)1999: N25 to N20 (-20%)

(m) Obasanjo, 2000: N20 – N30 (50%) June 2002: N22 – N26 2003: N26 to N42 (23%) 2007 N75

(n) Yar 'Adua, 2007: N75 to N65 (-15.38%)

(o) Jonathan, 2012: N141 (117%) January 28, 2012: to N97 (-31.20%)

From the analysis above, it is obvious that Nigeria pursues a policy of importation pricing of petroleum products essentially because she imports the bulk of her product requirement from abroad due to the fact that domestic refining capacity cannot meet up with domestic demand.

It has been submitted, that there exists an age-long conspiracy to ground the refineries or keep them at sub-optimal capacity so that the lucrative business of petroleum products importation will continue to

boom[45]. The argument, therefore, is that as long as Nigeria's domestic refining capacity cannot meet up with demands, Nigeria will always resort to importation pricing of petroleum products[46]. This importation is not an option for any inward and forward-looking country but that is the tragic situation with Nigeria.

Nigeria's policy of importation pricing has wide ranging national implications, most especially that relating to welfare loss vulnerability, loss of national pride and security. The welfare loss includes losses being incurred by the masses, the private sector, the government and the general economy. These losses are captured below:

(i) By buying petroleum products at imported prices, Nigerian citizens incur a loss in standard of living despite the existence of subsidy regime. This is because even with the subsidy, Nigerians are still buying petroleum at a higher price than it would have been if the products were refined internally. When compared with other members of the Organization of Petroleum Exporting Countries (OPEC), it becomes obvious that Nigeria has the second highest price of PMS per litre at N97 after Iran (N102.05). Yet, Iran pays a national minimum wage of N86,585.00 while about

[45] Badmus B., (2009), "Reps, NNPC and Deregulation," Sunday Tribune, November 29, No. 1710
[46] ibid

18 states of the federation are yet to comply with the National Minimum Wage Act provision of ₦18,000.

OPEC MEMBER	PMS PRICE/LITRE	MINIMUM WAGE	POPULATION	PRODUCTION "000" BPD (2007)
Venezuela	3.61 NGN	95,639 NGN	29,105,632	2,340
Kuwait	34.54 NGN	161,461 NGN	3,566,437	2,340
Saudi Arabia	25.12 NGN	99,237 NGN	27,136,977	9,800
Iran	102.05 NGN	86,585 NGN	75,330.000	3,700
Quatar	34.54 NGN	101,250 NGN	1,696,563	810
UAE	78.18 NGN		8,264,070	2,500
Algeria	63.55 NGN	55,957 NGN	36,423,600	1,360
Libya	26.69 NGN	23,813 NGN	5,670,688	1,650
Iraq	55.66 NGN	25,813 NGN	30,399,572	1,481
Nigeria	97.00 NGN	18,000 NGN	167,000,000	2,250

Source: OPEC.[47]

*As at April 2013, the exchange rate was 1USD = ₦160.

(ii) As long as Nigeria imports and the importation pricing of petroleum products continues, the country is indirectly exporting jobs to other countries and importing unemployment and poverty. More worrisome is the fact that the products are even imported

[47] Retrieved February 13, 2013, from www.opec.org/opec_web/en/data

from non-oil producing countries like Netherlands, India, Italy and Sweden. Worse still, majority of the products are ex-vessels rather than ex-depots.

If all of Nigeria's oil is refined in Nigeria, lots of jobs would have been created in the value chain of the downstream sector and this would alleviate the high level of unemployment and poverty in Nigeria.

(iii) Continued importation of petroleum products also occasions a loss for the private sector. The private sector is losing possible profits it could have recouped by investing in the building of refineries. The continuous importation pricing and particularly the regulation of the downstream petroleum sub-sector by government is a dis-incentive for private sector investment in domestic refining.

(iv) The government is also at the losing end as far as the subsidy regime (which is a result of the importation pricing policy of petroleum products) is concerned. Government views the subsidy regime as a fiscal burden (as a necessary evil) as huge funds that are supposed to be pumped into development efforts by the government are diverted into a corruption–ridden subsidy regime. Nigeria spends so much on the subsidy regime despite her infrastructural deficit. The sadness of the imports and the

subsidies situations made a former Minister of National Planning and former PPPRA Board chairman - Chief Rasheed Gbadamosi - to declare thus:

> *"Trillions of Naira which should have been used to develop other sectors by providing basic infrastructure such as water, roads and schools are being wasted, because the downstream allowed monumental laziness"*[48]

Figures presented by the Finance Minister (Dr. Ngozi Okonjo-Iweala) during a ministerial briefing between government officials (Ministry of Finance) and lawmakers show that between 2006 and 2011 the country spent N3,655.17 trillion to subsidize fuel. According to the Minister, the money was 30% of the total expenditure and 4.18% of the GDP[49]. The Minister observed that in 2011 alone, N1,436 trillion was spent between January and October. Obviously, the subsidy on imported petroleum products is a huge constraint on government finances since much of the funds that should go into infrastructural financing are swallowed by the callous subsidy.

(v) As importation and importation pricing of petroleum products continue, the whole society is incurring a loss. With a distortionary subsidy regime, there is no incentive for private

[48] Vanguard January 6, 2011.
[49] Federal House of Representatives Public hearing on subsidy payments to petroleum marketers, March 27-30 2012.

sector investment in the downstream sector (particularly refining). Since the government still dictates the price, investors (driven by profit motive) are sceptical of the determination of a market oriented price that would influence heavily their desire to recoup their investment on time. The dearth of such investment denies Nigeria the possible value-addition to the larger economy that a buoyant downstream sub-sector could have triggered.

Given the detrimental implications of the importation pricing policy of petroleum products, especially with regard to the huge national welfare losses being incurred, it becomes necessary for Nigeria to seek alternative policy actions to avoid products importation.

It is hereby submitted that the objective for which the subsidies were introduced has been clearly defeated as the policy was unable to arrest the price increases of fuel consumption in Nigeria. Therefore, further removal of fuel subsidy as is being proposed and gradually implemented by the federal government is like inviting and issuing a direct licence to anarchy. This is because the organized labour and the masses are not ready to rescind their vow to protest and make good their threat should the government go ahead to remove absolutely the subsidy on fuel consumption.

6.5.1 Supply and Pricing of Petroleum Products Under a Deregulation Regime

In the past, Nigeria's economic policy, growth and other related activities have been largely influenced by the oil industry.

The Nigerian economy is heavily dependent for foreign exchange on the oil industry. It will be stating the obvious to say that Nigeria would have been a poor country but for the abundance of crude oil (petroleum).

Oil was discovered in Nigeria by Shell-BP in 1956 at Oloibiri in the Niger Delta and Nigeria joined the ranks of oil producers in 1958 when its first oil field came on stream producing 5,100 barrels per day. After 1960, exploration rights in onshore and offshore areas adjoining the Niger Delta were extended to other foreign companies[50].

In 1970, Nigeria's oil wealth peaked. In consequence, Nigeria joined the Organization of Petroleum Exporting Countries (OPEC) in 1971 and established the Nigerian National Petroleum Company (NNPC) in 1977; a state-owned and controlled company which is a major player in both the up and downstream sectors. By the late 1960s and early 1970s, Nigeria had attained a production level of over two million barrels of crude oil per day. Although production figures dropped in the

[50] Oche, P.N. (2004) *Petroleum Law in Nigeria: Arrangements for upstream operations.* Heirs Great Commission Jos. p.14

eighties due to economic slump, 2004 saw some improvements in oil production to a record level of 2.5 million barrels per day[51].

The Nigerian petroleum industry is tied to OPEC thus Nigeria's oil fortune cannot absolutely be divorced from the decisions, successes and failures of the oil cartel.

Nigerian petroleum polices especially as regards petroleum supply reflect the basic goals of OPEC. The principal objectives of OPEC are:

a) The co-ordination and unification of the petroleum policies of member countries and the determination of the best means of safeguarding their interest individually and collectively.

b) Devising ways and means of ensuring the stabilization of prices in international oil markets with a view to eliminating harmful and unnecessary fluctuations and;

c) Ensuring a steady income to the oil producing countries and also ensuring an efficient, economic and regular supply of petroleum to consuming nations and a fair return on capital to those investing in the petroleum industry.

In respect of proven oil reserves, the federal government and relevant authorities in the oil industry have articulated strategic policies

[51] Maxwell, G. (1999) *Petroleum Development Contracts with the multinationals.* Edlinform Services, Maiduguri.

aimed at expanding the nation's oil base. A notable policy to this effect is the federal government privatization policy allowing individuals the right to private ownership of oil exploration activities. Special fiscal incentives have been provided to indigenous entrepreneurs willing to participate in upstream exploration activities. Such incentives were in the form of allocation of acreages in the nation's oil basins to indigenous investors[52] and low Deep Offshore and Inland Basins Tariff.

Other notable production-related petroleum policy of the federal government includes the introduction of non-price incentives to prospective oil explorers. These non-price incentives have been enumerated as economic and business review; Exploration incentives, Petroleum Profit Tax modification, Royalty Rate modification and Investment Tax Credit Royalty.

Under these incentives, costs of unsuccessful wells were tax deductible in order to encourage further exploration drilling.

Apart from petroleum production policies, the Nigerian government has instituted some consumption-related policies, the most outstanding of which is the fuel subsidy. The policy goal is to encourage domestic consumption of petroleum products at uniform price

[52] Loretta O. (2004). Deregulation Of The Nigerian Downstream Oil Sector Keeping Faith With A Global Trend Retrieved December 21 2011 from www.pppra-nigeria.org/articledetails.asp, www.vanguardngr.com/.../why-oil-sector_deregulation-is-imp

throughout Nigeria[53]. This policy requires the federal government to pay certain percent of the marginal cost of producing petroleum products in an effort to ensure uninterrupted distribution of such products at uniform price as well as effective transportation network. The policy recognizes the important distributive role of the transportation system in a developing economy. Lower unit cost of petroleum products were expected to enhance the movement of people and goods in commercial activities[54].

According to the Major Oil Marketers Association of Nigeria (Total, Forte Oil, Mobil) (MOMAN), in 2012, about 90% of petroleum products consumed in Nigeria was imported due to inadequate and limited local production. The importation of products by the NNPC, MOMAN and the Independent Petroleum Marketers Association of Nigeria (IPMAN) is permitted by the Petroleum Products Pricing and Regulatory Agency (PPPRA). The difference between the high cost of imported PMS as ascertained by PPPRA and the then lower regulated pump price of N65 per litre was the subsidy repaid to importers after being subjected to audit by government appointed auditors. For instance, as at December 2011, the total cost of PMS imported into the country is as presented below:

[53] Ibid.
[54] Akpoghomeh, O.S. and Badejo D. (2005): Petroleum Product Scarcity: A Review of the Supply and Distribution of Petroleum Products in Nigeria. Retrieved August 3 2013 from www.onlinelibrary.wiley.com

Table 6:1 Analysis of the cost of PMS

DESCRIPTION	PMS (N/LITRE)
Total cost of imported PMS (A)	141.38
Regulated pump price (B)	65.00
Subsidy claim (A – B)	76.38

With these facts, economists began to have some rethink on the economic benefits of petroleum subsidy in Nigeria. In recent times, there have been arguments as to the major beneficiaries of petroleum subsidy – are they the industrialists as well as actors in the informal petroleum product markets? It is submitted that fuel subsidy can only be logical in a socialist economic system in which the government plays a significant role in the production and distribution of goods and services. It may not be feasible in a capitalist system in which private participation in the production and distribution process supersedes that of the Central Authority[55]. A policy that subsidizes the purchase and consumption of petroleum products is an antithesis to a privatized competitive system. Such policy would contradict the country's expectations from its privatization policies in the petroleum industry.

[55] Akinwumi, F.S, Isuku, E.j. and Agwaranze, D.Q. (2005) "University Education Deregulation: Pros and Cons" in G.O. Akpa, S.U. Udoh and E.O. Fagbamiije (Eds).

6.5.2 The Concept of Deregulation

Under the Nigerian Oil and Gas Law, the word "deregulation" has two interpretations – the ordinary meaning and the Nigerian technical meaning. Under the ordinary context, it means removal of regulation into, within and exiting from the economic sector. On the Nigerian technical side, the word "deregulation" means the legal right of the government to remove subsidy, subsidy being that sum which the government expends in getting the products available at uniform price throughout the country.

Additionally, deregulation to the federal government means reducing government borrowing, raising revenue through taxes, promoting healthy competition in a free market environment and improving returns from investment. Deregulation also refers to private participation in the country's three oil and gas sectional activities. It is to ensure competitive oil and gas system devoid of monopoly and allowing price mechanism of demand and supply principle to prevail. Deregulation is aimed at stabilizing and restructuring the Nigerian economy for a durable growth. The main objective of deregulation is to introduce a market economy thereby increasing economic efficiency, deepening democracy and guaranteeing political freedom as well as increasing government revenue. According to Funsho Kupuolokun

(former Group Managing Director of the NNPC), the Nigerian government embrace of privatization and liberalization is influenced by the successes of other countries (Asian countries) in doing same[56]. According to the former Group Managing Director, the intended goals of privatization/deregulation are to dismantle the natural monopoly of state-owned enterprise by privatizing and deregulating price controls; creating competition in the downstream sector by encouraging more companies to get involved and eventually supplying the market at competitive pricing levels; reducing the cost government spends on subsidizing the sector which runs as high as $1.5bn annually, and can subsequently use the resources freed to cater for the socio-economic and welfare needs of the Nigerian people; boost Foreign Direct Investment (FDI) to the Nigerian economy and to reduce transportation costs of products.

Deregulation demands that government restrict itself to the areas of governance and provide guidelines for the operation of economic activities by private individuals[57].

Theoretically, the concept of deregulation is based on the neoliberal school of thought. Its fulcrum is on the doctrine of

[56] Kupuolokun, F. (2008) - Fuel subsidy removal. The pains and the gains. Retrieved July 13 2013 from www.africanagemagng.com
[57] Ibid

competition and profit motive founded on free market pricing and freedom from the interference of state regulation.

The deregulation of the Nigerian downstream petroleum sector in particular and the Nigerian economy in general is an idea packaged and sold by metropolitan agencies such as the World Bank and the International Monetary Fund (IMF)[58]. The aim is to remove encumbrances placed by Neo-Socialist governments on the free operation of a market economy with its claim to efficiency[59].

Government argues that deregulation of the downstream oil sector is premised on the expectation that it will improve the efficient use of scarce financial resources by subjecting decisions in the sector to the operations of the forces of demand and supply.

Economic pricing of petroleum products is one of the major factors that will attract private investors into the downstream petroleum sector thereby increasing competition and promoting overall productivity which will lower prices overtime. Independent Oil Marketers will be free to set their prices based on their investment. Deregulation, through subsidy removal, will lead to adjustments that will push prices towards its market determined value. Appropriate pricing achieved through this policy will make activities in the sector more profitable and

[58] Loretta O.(2004). Op cit footnote 51
[59] Ibid

attractive to private, domestic and foreign investors. The ultimate effect of this chain of activities is increased gains for the citizens who would be getting the most out of their natural resources[60].

The success in the telecommunications deregulation prompted the government to venture into the oil and gas sub sector. Government expects deregulation to reduce economic waste and lighten social burdens caused by government involvement in economic activities. For several years, Nigeria experienced scarcity of petroleum products that almost crippled national economic activities and increased the cost of doing business. The scarcity inevitably led to a flooding of the market with adulterated products which caused damage to vehicles and machines. In many parts of the rural areas, some were forced to buy fuel (in the black market) at 30% higher than their original price. The government therefore believes that the deregulation of the downstream sector of the petroleum industry remains the only viable option in expanding opportunities for economic growth and competitive downstream sector. In rationalizing deregulation, the government believes that if regulation is limited to oversight and regulatory functions aimed at guaranteeing quality of products and preventing consumer exploitation, then the process of deregulation could help achieve greater cost effectiveness. Even if all the country's refineries

[60] Kupuolokun. F, (2008) op cit. footnote 55.

were to operate at full capacity, there would still be a petrol supply deficiency due to population increase and increased industrialization. Therefore, it is submitted that importation will remain inevitable until additional refining capacities are built through the ongoing greenfield refinery project.

However, discussions are currently under way with prospective investors who are willing to provide Foreign Direct Investment (FDI) to build additional refineries in the country to ensure domestic self-sufficiency and the export of refined petroleum products within the next few years. The Petroleum Industry Bill contains special fiscal incentive to encourage the establishment of new refineries around the country. A viable local refining sector will, in the long term, bring down the pump price of petroleum products below the current import parity level.

6.6 The Uniform Products Pricing

The prices of Internationally Traded Fuels (ITFs) surged until mid 2008 when it fell sharply following the global economic milieu and then began rising again, reversing much of the price fall by 2011 - the prices on the world market have nearly doubled since then. The price per barrel of crude oil needed to balance the budget of major oil exporting countries has risen sharply over the years, making the prospect of prolonged period of low prices unlikely in the future.

Many governments in developing countries control petroleum products prices. This is so because it has become an instrument of political reward and patronage. This political inroad into economic sphere has derailed an otherwise good government. In the face of mounting subsidies, a number of governments seriously explored options for pricing reform in the period leading to mid 2008. The budgetary pressure to press on with reform subsided briefly following the price collapse of late 2008. However, those governments that had done little were caught by rising prices again soon thereafter.

The fact of Nigeria getting most of its petroleum product requirements from outside the country means that for profit to be realized, the product must be sold at a price that must contemplate profit. Therefore, any change in the international price of products immediately affects the economy. Soaring prices of petroleum have led to calls on governments across the world to take action, ranging from providing greater safety nets to the poor and increasing the national minimum wage to releasing oil from strategic reserves, reducing taxes and granting outright subsidies. Nigeria, with its heavy reliance on the global market is inexorably caught in the web of global market price intrigues. To reduce the direct impact of the global price conundrum, Nigeria has adopted a subsidy regime to keep prices at a determined

level while bridging the gap between the petroleum price at the international market and the landing cost.

However, dealing with petroleum price volatility in the world market is one thing while preventing huge price differential within the domestic market is a different matter entirely. Nigeria, with its heavy reliance on imported petroleum, is made up of 36 states and the Federal Capital Territory and sits on a land mass of 923,768 square meters. Borno state is over 1,200km distance from the Lagos port where imported petroleum products are discharged. With the distance between the two states cited above, it is only logical that transportation costs of conveying petroleum products to Maiduguri in Borno State must come to bear on the cost per liter of petroleum products in Borno State. In other words, where a marketer discharges petroleum at Apapa Port in Lagos at a landing cost of N60.00 per litre, he might decide to sell at N62.00 or N65.00 within Lagos and its environs, while after transporting the products to Maiduguri, he may be forced to sell at N90.00 or above N100.00 per litre. He might also decide to sell at N70.00 per litre at Ibadan, where he had incurred minimal transport cost from Lagos, compared to Maiduguri. Given this scenario, there is bound to be a haphazard situation that could create chaos and an unprecedented economic crisis. This is why the uniform pricing

policy/model was adopted to principally ensure uniformity of petroleum products prices across the country.

Uniformity in the pricing of petroleum products throughout the country has been ensured and sustained because of the control and regulation of the industry by the government. Thus the current proposals on the deregulation of the oil sector will not only bring heterogeneity in the prices of these products but will also bring about wholesome activities in the marketing of these products.

Before the deregulation of petroleum products pricing, the marketing of petroleum products were undertaken (at that time) by eight companies: Agip, Total, Texaco, Elf, Unipetrol, Mobil, National Oil and Chemicals Marketing Company Plc (NOLCHEM) and African Petroleum. These companies maintained uniform prices of the various products. Uniform pricing ensures that the price per litre of petroleum products remains the same throughout the country regardless of proximity and other logistic concerns. To achieve this objective, as well as cushion the effect of price differentials, the Petroleum Equalization Fund Management Board was established principally to reimburse marketers of petroleum products with the cost of transporting the products from the supply points to retail outlets[61]. This facilitates the

[61] The Act specifically mandated the PEF to apply the Laws of the Federal Republic of Nigeria as they affect the uniform pricing system in ensuring that each marketing company complies with the laws governing the equalization process

sale of the products at uniform prices as approved by the federal government throughout the country. Without the Petroleum Equalization Fund, a marketer who has to transport petroleum from Port Harcourt to Maiduguri would have to add the cost of transporting the products on the pump prices and this would result in selling the products at a higher price in Maiduguri than in Port Harcourt – price differentials!

In Nigeria, the most cost effective way of transporting the products is through pipelines but at present, the network of pipelines in the country is not in a good condition to do this mainly due to vandalization; an alternative means of product delivery is by railway. However, it is common knowledge that the railway system is moribund; even the latest effort at revitalizing the system is yet to yield concrete results.

Bridging is the movement of products to distances beyond 45km. If for any reason Petroleum Equalization Fund is not able to pay marketers their bridging claims, they cannot bridge effectively thereby causing scarcity of products with all attendant consequences.

Where the bridging is flawed, the pump price of petroleum products will go up. Thus, PEF is able to reimburse marketers promptly as they move products as required and this ensures availability of

products. However, if the bridging is faulty leading to scarcity, marketers sell at higher prices to recover the cost of transportation.

As the need for bridging of products increased due to failure of the pipelines and closure of refineries for Turn Around Maintenance (TAM), the federal government transferred the administration of the bridging scheme from the Nigerian National Petroleum Corporation (NNPC) to PEF in 1998. Government also introduced the bridging allowance of 50k per litre, which rose to N2 per liter overtime. The purpose of the scheme is to equalize transportation differentials so that petroleum products are sold at government approved prices nationwide.

The scheme encourages the delivery of petroleum products to areas otherwise considered unprofitable. The initial projection was to have a maximum of 10% of total petroleum products bridged while the balance of 90% would be pumped through the pipeline. Bridging of products is now 40% of the total products consumed daily nationwide. Products are also bridged from Lagos to the South East and South-South areas of the country whenever the refineries in Port Harcourt and Warri are shut.

The benefits of PEF activities include stable and uniform pump prices of petroleum products. The stability of prices means that inflation is checked thus supporting consumers and the economy. This is

important as virtually every single business engagement has energy input.

Similarly, the availability of petroleum products saves a lot of man-hours as the time workers spend looking for products when there is scarcity is saved. The time saved can be used in many ways that are more productive. Furthermore, the adulteration of products usually blamed on scarcity will be eliminated.

6.7 Conclusion

Is the downstream sector illegal? The operation of every sector in a country like Nigeria should and must have the mandate of law. This is not the case in the oil and gas industry in Nigeria. The operations and workings of the Nigerian oil and gas industry date back to 1952 when small amount of crude oil was discovered in Oloibiri. Could it then be said that over the past 6 decades the oil and gas industry has been operating on an illegality? The decision of the Federal High Court in **BAMIDELE ATURU V. MIN. OF PETROLEUM RESOURCES**[62] seems to suggest so. In the above case, it was the court's declaration that the word 'downstream' is unknown and rather alien to the jurisprudence and entire gamut of Nigeria's law upon which our practices are solidly based. What fell for determination before the court in the above case

[62] FHC/ABJ/CS/591/2009

was whether the federal government's deregulation policy was within the parameter of law. This question the court answered in the negative by the following notable pronouncements.

First, the court declared that the federal government's policy to deregulate the downstream sector of the petroleum industry by not fixing prices at which petroleum products may be sold was unlawful, illegal, null and void and also a violation of Section 6 of the Petroleum Act, Cap P.10, LFN, 2004.

Second, it further declared that the purported act of the federal government to deregulate was a flagrant disregard and violation of Section 4 of the Price Control Act, Cap. P28, LFN, 2004.

Third, the court further declared that the federal government's bid to totally refrain from fixing prices at which petroleum products is to be sold conflicts with Section 16(1)(b) of the Constitution of the Federal Republic of Nigeria, 1999 (as amended) which is to the effect that the government shall control the national economy in such a manner as to secure the maximum welfare, freedom and happiness of every citizen on the basis of social justice and equality of status and opportunity.

Fourth, additionally, the court also declared that the federal government's purported act to refrain from regulating the prices for the

sale of petroleum products has the effect of stalling the freedom of movement of Nigerians guaranteed under S. 41 of the Constitution.

Fifth, furthermore, it made an order restraining the federal government or its agent from deregulating the downstream sector of the petroleum industry from failing to fix prices of petroleum products as statutorily mandated by the Petroleum and Price Control Acts.

Finally, it concluded with an order directing the federal government through the Ministry of Petroleum Resources to periodically publish prices of petroleum products forthwith.

The significance of the above decision is that certain usages, practices, customs which are inherent or a part of the oil and gas industry such as upstream, midstream and downstream are terms which have no basis or legal backing in our statute book. It is therefore imperative that these terms and usages be bestowed and strengthened with the force of law.

CHAPTER SEVEN

SUMMARY, FINDINGS AND RECOMMENDATIONS

7.1 Summary

This dissertation finds that petroleum is one of the most important and highly utilized natural resources in the world scene and it is the highest export earner for Nigeria today. The legal framework upon which the marketing and sale of this rare natural resource is carried on is far from being ideal. It is something of a paradox that for over six decades since the discovery of oil in Nigeria, the legislative process has not been sensitive and pragmatic to the needs of this sector. Little wonder that the phrases "Upstream", "Midstream" and "Downstream" cannot be found in the whole gamut of Nigerian laws. As a country, Nigeria seems to have adopted the 'snail approach' to legislative process. This, of course, suggests or implies that Nigerian laws are only enacted after the practice, usage or custom which the enacted law seeks to regulate has been integrated into the society. In other words, the legislative process in Nigeria is often belated and bereft of foresight.

The historical development of the oil and gas (petroleum) industry is traceable to the colonial era when the British Government was in absolute control of the then nascent industry. The ownership

and control of revenue arising from petroleum activities then belonged to the colonial country, Britain. This status quo changed in 1960 when Nigeria became politically independent.

The petroleum industry in Nigeria occupies a prime position in the economic configuration, earning as much as 90% (ninety per cent) of its foreign exchange. During the early stage of the oil and gas industry, Nigeria's development was (and even now) inextricably tied to the revenue realized from the sale of petroleum and its products.

Just before and immediately after the amalgamation of the Southern and Northern protectorates, the Minerals Oil Act of 1914 provided the legal framework within which petroleum activities were carried out. This was enacted to search for, work and win mineral oils. Today, after series of legal enactments the Petroleum Act 2004 is the final authority of petroleum exploration and production.

The ownership of petroleum (oil and gas) is dictated by various enactments, chief of which is the Nigerian Constitution. It provides that the ownership of mineral resources shall invest or be upon the federal government. However, other theories of ownership do exist which are at variance with what obtains in Nigeria, for example, in the U.S. two major types of ownership exist – the absolute ownership and the qualified ownership. While the absolute ownership-in-place gives

unfettered ownership in severalty, the qualified theory limits ownership only when the oil is captured and reduced to possession. However for the development of petroleum, owners entered into Petroleum Development Contracts where licences and leases were granted to petroleum development companies. Ownership of produced petroleum shifted from the government to the development company. Regulations were enacted that set operation standards for good oil field practices.

To this effect, legal framework for petroleum products marketing was enacted. The Petroleum Act therefore became the point of departure in petroleum matters in Nigeria. From the Petroleum Act all legitimate petroleum activities derive including refining and sales. In other to effect the government policy of uniform pump price across the country the Petroleum Equalization Fund Act was enacted. This Act authorizes the refund of extra expenses incurred by marketers in selling at uniform price across the country.

The Oil Pipelines Act was also enacted principally to regulate easy and safe movement of petroleum and allied products, from point of production and refining to points of sale and consumption. The laying and usage of pipelines raised the issue of pipeline vandilization and subsequent compensation is under section 11(5) of the Oil Pipelines Act. For Refineries and complementary pipelines to be constructed

requisite rules and obligations were met.

In all these petroleum activities, the overseeing authority is the Department of Petroleum Resources (DPR). A department in the Nigerian National Petroleum Corporation (NNPC), it was conferred a status equal to that of the NNPC as it reports directly to the Minister or the President.

Because petroleum products are so essential in economic activities, a lot of unwholesome practices became common place. To stream this undesirable trend, appropriate enactments (Special Tribunal Decree and The Petroleum Production and Distribution Anti-Sabotage Act) were put in place, which Acts were hereinbefore discussed.

Chapter four dwelt in extenso on the product marketers and their activities. In doing this, major marketers (NNPC; Total; Mobil; Conoil; MRS; Oando; Forte Oil) were highlighted. With particular reference to NNPC, the distributive role and functions carried out by PPMC led to product availability throughout the country. This was with hiccups when products were either hoarded, diverted or sold at unofficial prices. To facilitate this product availability, a number (5) of refineries were put in place. This number was increased when individual companies built their refineries.

The distributive network went through a number of cities. These

cities in relation to product distribution became known as Area Offices, for example Port Harcourt, Warri, Mosimi, Kaduna and Gombe.

Supplementary to these efforts by NNPC, were the distributive roles of the Independent Petroleum Products Marketing Companies. The fundamental and vital role of this group was pronounced during products scarcity as most of them sourced products from any available market within or elsewhere. This they did under guidance from the Department of Petroleum Resources (DPR). In the Nigerian Petroleum Industry, the DPR is the apex regulatory body with regards to regulating and monitoring of oil and gas activities in order to ensure standards, compliance and best international industry practices.

The main thrust of this dissertation is the downstream activities which were extensively adumbrated in chapter five (5). The components of this stream consist of petroleum products distribution and retail outlets, petrochemicals and natural gas marketing. The citizens of the country are affected by many products and derivatives such as PMS, DPK, Jet Fuel, Fertilizers, etc. The chapter discussed various facilities which are prerequisite and vital to any participation in the sector. These vitals include operations and authorizations such as licences (Refining), refinery licences and oil pipeline licences.

Refineries, for which various licences are granted, are industrial

plants where crude oil is processed and made into more useful products such as white products. The refineries consist of complex and extensive piping, carrying streams of fluids between chemical processing units. Without refineries, petroleum products can never be realized. This dissertation further examined auxiliary facilities such as Depots, Tank Farms, Oil Terminals, Flow-lines and other support items.

Product availability has been quite elusive in recent past due to the fact most of the products consumed were not locally refined. In view of this fact many Nigerians suffered multiple damage to their properties. Security of supply was achieved when the available products reached the final consumers.

The penultimate chapter six (6) dealt with investment, pricing and taxation. Investment issues in the downstream sector were very sensitive and volatile. This was found to be caused by product pricing and supply.

The issue of financing petroleum investment and development in the downstream sector does not arise or take place in a vacuum. It emerges as a result of market trends and development as the production. Energy is integral to development and thus to prosperity. For this reason OPEC, to a reasonable extent can not be ignored in international energy equation, even more so as OPEC countries have a

proven oil reserve of one trillion, one hundred and ninety-nine million seven hundred and seven barrels (1,199,707 barrels).

However, the financial resources needed to expand production capacity depend on several factors – foremost being the price of oil. The price of oil is the basic determinant of investment and revenue which provided the equilibrium between demand and supply. Producing counties and major oil companies were able to finance most of their downstream investment with revenue generated from petroleum and product sales.

It was observed that most downstream actors also operate in the upstream leading to vertical integration. This notwithstanding certain obstacles discourage new entrants into the downstream – issues such as legal and economic barriers. Funding these downstream activities locally was observed to be quite difficult. Among other discouraging factors are geographical location, price control system, import control, and environment issues.

In terms of revenue, the petroleum industry constitutes the major source of income and occupies a prime position in the nation's scheme of priorities. As a major foreign earner, petroleum generates over 80 percent of Nigerian National Income. The importance necessitate the enactment of the petroleum Profit Tax Act (PPTA) which makes

provision based on 'accounting' period and not on annual basis.

The fiscal regime of the upstream sector is evidenced in several laws such as the Petroleum Act; Deep Offshore and Inland Basin Production Sharing Control Act; and the Petroleum Profit Tax Act. The Nigerian government ensures a dynamic approach to drawing up rules and fiscal regimes for the oil industry with a view to attracting investors from all over the world.

The downstream sector is the sector that touches on all citizens either through lighting, movement, cooking and production. Surprisingly the pricing of petroleum products is cacophonic as there are more approved authorities and Acts for petroleum products price fixing. As it is, there are two petroleum products price fixing authorities, the President, the Minister (where the President appoints one) and the Chairman of the Petroleum Products Pricing Regulatory Agency (PPRA). These cacophonic provisions go to show how disorderly the function of products price fixing has become in Nigeria.

Over the years, the Nigerian government has intervened in the pricing of petroleum products through subsidies. This subsidy arises when government unilaterally fixes the price at which petroleum products are to be sold. This has also given rise to market malpractice and facilities vandalism as some marketers sponsor such nefarious acts.

A necessary concomitant of this subsidy is the payment of equalization money as contained in the Petroleum Equalization Fund Act. It is obvious that Nigeria pursues importation pricing because she buys the bulk of local requirement from abroad.

The policy of importation pricing has its negatives such as welfare loss, loss of National pride and compromising of the nation's sufficiency and security. Job loss is occasioned and professionals seek greener pastures elsewhere.

The inherent inadequacies experienced as a result of subsidy regime mid-wifed the concept of product price deregulation. The positive side of deregulation is that it reduces government borrowing, raises revenue through taxes, and promotes healthy competition in free market economic. The current proposal on the deregulation of petroleum product pricing will not only bring heterogeneity in the prices but also bring about wholesome activities in the downstream petroleum activities.

7.2 Findings

The reality of law as an agent of social change became clearer with the historic emergence of sustainable competitive downstream petroleum industry in some parts of Europe, Africa and Middle East in the late 20th century. Nigeria, against that background, reveals a

downstream challenge that is majorly participatory cum regulatory. Over the years, several legislations have been enacted and policies formulated by successive governments in a bid to create a virile downstream sector in Nigeria. Yet, a virile downstream sector barely exists. The question therefore arises as to whether these laws and policies are such as to encourage private participation in developing the market and thereby promoting competition in the industry. This has been the major quest of this work. A step by step appraisal of all the existing relevant laws were undertaken, highlighting their roles on the downstream sector of the petroleum industry. In the final analysis, mismanagement, industry corruption and bureaucratic bottlenecks were identified as the bane of the downstream sector of the Nigerian petroleum industry. Having identified corruption and the absence of effective legal and regulatory framework as the major hindrance to the development of a vibrant downstream industry, it is suggested that proper legislation should be in place and complemented by sincere government commitment to fight corruption.

Consequent upon this research, the under-listed findings are hereby submitted:

(a) The legal framework for petroleum products marketing is nether clear nor comprehensive;

(b) There are apparent conflicts of functions amongst government regulatory institutions with respect to determination and fixing of petroleum products prices, for example Sections 6(1) and 9(1)(d)(iii) of the Petroleum Act empower the Minister while Section 7(a) of the Petroleum Products Pricing and Regulatory Agency Act empowers its board;

(c) There is duplication of functions by government agencies with particular reference to the Nigerian National Petroleum Corporation (NNPC), the Department of Petroleum Resources (DPR), the Petroleum Products Marketing Company (PPMC) and the Petroleum Products Pricing and Regulatory Agency (PPPRA) and therefore work at cross purposes.

(d) The Petroleum Equalization Fund put in place for the sole purpose of unifying the pump prices of petroleum products across the country is ineffective, fraught with corruption and has resulted in waste of financial resources;

(e) That government which enforces the law has become a marketer;

7.3 Recommendations

In view of the foregoing findings, it is recommended as follows:

(a) Restructuring and reforming of the regulatory and legal framework for the Nigerian petroleum industry. This is achievable through immediate passage of the Petroleum Industry Bill into a full- fledged legislation; full monitoring of the implementation of the Nigerian Local Content Act with a view to increasing the level of indigenous participation in the oil and gas sector; establishment of transparent and consistent rules in the award/bidding processes - co-opting the modus of transparency international.

(b) Legislative methods adopted in enacting laws without first constituting a committee to holistically review past and existing laws with a view to eliminating conflicts and repetitions should be looked into.

(c) The laws relating to downstream sector be reviewed for effective regulation with the roles of government agencies properly spelt out.

(d) Uniform prices of petroleum products across the country should be discontinued and the concept of bridging claims should be

scraped and brought to a total halt. This can be actualized when the government divests itself or exit all downstream activities only to act as an arbiter thereby ensuring compliance by allowing private ownership and participation.

BIBLIOGRAPHY

a) Books

Akinwumi, F.S, Isuku, E.j. and Agwaranze, D.Q.	University Education Deregulation: Pros and Cons in G.O. Akpa, S.U. Udoh and E.O. Fagbamiije (Eds). 2005
Assael, H.	Overview of Petroleum Industry, Nigeria Oil and Gas, 2000, Foundation Publishers, Lagos
Bhagavan M. R.	Petroleum Marketing in Africa - Issues in Pricing, Taxation and Investment, 2nd Edition, Zed Books Ltd, London (1999)
Byrne J., Martinez C., and Glover L.	A brief on Nigerian Gas. Transaction Publisher, London, 2002
Dias, R.W.M,	Jurisprudence, Butterworths, London, 1985
Etikerentse, G.	Nigerian Petroleum Law 2nd Edition, Dredew Publishers, 2004
Falegan, J.I.	Oil and Politics of National Resource, Lagos, 2007
Maxwell, G.	Petroleum Development Contracts with the multinationals Edlinform Services, Maiduguri 1999
Nottingham R.	Energy Market Strategic Practice. New York Isherwood Products Inc. 2004
Oche, P.N	Petroleum Law in Nigeria: Arrangements for upstream operations. Heirs great commission Jos 2004
Olisa, M.M.	Nigeria Petroleum Law and Practice, Fountain Books Limited, Ibadan, 1st Edition 1987.
Omorogbe Y	Oil and Gas Law in Nigeria, 1st Ediiton, Malthouse Press Ltd Lagos 2003
Onoh, J.K.	The Nigerian Oil Economy, Beckenham Croom

Helm, London, 1983

Osoka, O. Oil and the Nigeria Economy, Panache Publications Limited, Lagos, 1996

Umunnaehila, A. Oil Failures in Nigeria: History, Causes and Remedies, Foundation Publishers, Lagos, 1996.

b) Journals

Aigbedion & Iyayi S.E. Diversifying Nigeria's Petroleum Industry. Nigeria Economic Summit Group (NESG) Economic Indicators, Vol.13 No.4, 2011

Aluko, O. Petroleum Downstream, Planning for Sustainable Development in Nigeria. Journal of sustainable development in Africa, 12(7), 2010

Boyd, H., Frank, R.K. and Massy, W.F. On the Use of Marketing Research in Emerging Economies, Journal of Marketing Research, Vol. 1, 1994

Iloba-Aninye Okechukwu. Petroleum Products Pricing: A Critique of the Legal Framework and the Fallacy of Subsidy in the Oil and Gas Sector. Ahmadu Bello University Law Journal (A.B.U.L.J), Vols. 24-25, 2006

Mamman, H. and Oluyemi, S.A. Oil Management Issues and Restoring the Health of Nigerian Downstream Through Improving the Quality of Management/Employees, Vol. 4(4), NDIC Quarterly, 1995

Okoroafo, S.C Firm Performance in a Liberalized Environment: Empirical Evidence From a Developing Country", Journal of Business Research, Vol. 28, 1993

Oluyemi, S.A. Deregulation and the Performance of Oil and Gas Industry in Nigeria: An Overview", Vol.

59(1), NDIC Quarterly, 2009

Omodia, S.M. Problems and Prospects of Deregulation in the Nigerian Fourth Republic: Implication for Democratic Survival in Nigeria. Medwell Journal of International Business Management (2), 2007

Osuagwu, Relationship Marketing Strategies in Nigerian Companies, The Marketing Management, Vol. 14(2), Journal, 2004

c) Magazines/Newspaper

Adamolekun A. Assessments of Petroleum Product Distribution Downstream in the Nigeria economy. NNPC Bulletin, 1999.

Adegbulugbe. A. O. Energy Supply and Demand Balance in Nigeria. Issues and Options: Energy Policy Agenda for Nigeria. International Energy Services Ltd , Lagos, 2002

Anya, A.O. Science, "Oil and the Future of Nigeria Economy", The Guardian Newspapers (Lagos), Wednesday, March 13 2010.

Asimi J. Factors in Nigeria's Oil Problem, Nigerian Tribune, January 13, No. 13549, 2012

Fafowora D. Before Oil Subsidy Removal, The Nation, Thursday, December 8, Vol. 7, No. 1968. 2011

Goldman A. Peel How Nigerian oil thieves operate, Financial Times, London Friday 2 June, 2003

Herron, Jim. History of the rail tank car" Magazine of the train collectors. January 21, 2012

Ibiyemi S. Energy Update: General Improvement with Setback. A Paper Published in Financial Standard, January 5, 2004, Lagos, Nigeria

Nwachukwu C. The Realities Facing Headlong Deregulation, Vanguard, Tuesday, November 1, Vol.25, No.61485. 2011

Okumroumu, T. O. Deregulation of the downstream sector of the Oil Industry in Nigeria: Analysis of some main issues, The C.B.N Bullion, vol. 28, 2004

Okwor, K. The Oil Industry and the Nigerian Economy", The Bullion, 9(3), July-September, 1992

Oluyemi, L. An Overview of the Nigerian Oil and Gas Industry Content Development Act 2010", Thursday march 24 2011

Skeptics Query Golden Age of Refining. Petroleum Intelligence Weekly, February 21, 2011

d) Internet

Akpoghomeh, O.S. and Badejo D. Petroleum Product Scarcity: A Review of the Supply and Distribution of Petroleum Products in Nigeria. www.onlinelibrary.wiley.com accessed January 19 2013

Agoro S.B. How feasible is Nigeria's Policy of Increasing Petroleum Production?, sourced from www.dundee.ac.uk/cepmlp/car/html accessed January 19 2013.

Alike, E. First Private Refinery Begins Operation in Rivers State, Thisday Newspapers November 28 2011. www.thisdaylive.com>HOME>NEWS

Echono, A. Nigeria's Oil Subsidy Crisis: A Common Sense Approach culled from

www.thelawyerchronicle.com>Home>Trends& Development accessed February 14 2013

Iferi, B. Reps Probe Licenses to Private Refineries, The Dailytimes Newspapers December 2 2011. www.dailytimes.com.ng/articles accessed March 2, 2013.

Kupuolokun, F. Fuel subsidy removal. The pains and the gains. www.africanagemagng.com 2008

Mu'azu, Y. Ahmadu Ali takes Over as PPPRA Chairman, The Presidency News Release, sourced from www.pointblanknews.com/os2625.html accessed February 17 2013.

Odularu, G.O Crude Oil and the Nigeria Economy Performance, Retrieved from Oil and Gas Business: http://www.ogbus.ru/eng/, 2007

Olayiwola, A. History of Nigerian Oil and Gas Industry {online}. Available http://www.pengassan.org. 2009

Olubunmi, A., Olumide A., and Olugbenga S. Challenges Dog The Petroleum Marketing Industry, Frontier Market Intelligence, www.tradeinvestnigeria.com/feature_articles/269171.htm accessed 13th June 2013

e) Others

Ajakaiye, B.A. Combating Oil Spill in Nigeria: Primary role and responsibility of the National Oil Spill Detection and Response Agency (NOSDRA)" Stakeholders' Consultative Workshop. August 4 – 6, Calabar, Nigeria. 2008

Akinbode, A.O. Millennia Safety Concerns"; Being a paper presented at The Safety Week of Total Nigeria

Plc held at Muson Centre, Lagos on August 18, 2009

Akinyele, S.T. — Impact of Strategic Marketing Management on the Performance of Firms in the Downstream Sector of Nigerian Oil and Gas Industry, PhD Thesis postgraduate school, Covenant University, Ota, 2010

Aristobulo, J. — From Good Bankers to Bad Bankers: Ineffective Supervision and Management Deterioration as Major Elements in Banking Crisis, EDI Working Papers, World Bank, Washington, 2010

Atakpu, L. — Resource-based conflicts: Challenges of Oil Extraction in Nigeria; Paper presented at the European Conference hosted by the German EU Council Presidency (March 29 and 30), Berlin, Germany, 2007

Badmus B. — Reps, NNPC and Deregulation, Sunday Tribune, November 29, No. 1710, 2009

Bolaji, K. — Oil and the Politics of Natural Resources Governance in Nigeria, a paper presented at the 14th Biennial Congress of the African Association of Political Science (AAPS) held in Durban, South Africa June 26-28 2009

Chisohlm, Hugh — Encyclopedia Britannica (11th ed.) 1911

Garner, A.G. — Blacks Law Dictionary (8th ed) St Paul's Publishers, Minnesota.

Igbatayo S.O. — Nigeria Petroleum industry and Export Orientation. A paper presented at the Society of Petroleum Engineers program, Abuja, Nigeria 2004

Loretta O.	Deregulation Of The Nigerian Downstream Oil Sector Keeping Faith With A Global Trend, 2004
Lukeman R	Capacity Growth in the Nigeria Petroleum Industry. A Keynote Address Proceedings of the SPC 26th Nigeria Annual International Conference and Exhibition, Lagos, Nigeria, 2003.
Merriam-Webster	Collegiate Dictionary USA 10th Edition, 2000,
Ogbeifun, L.P.	Labour crises in the oil and gas sector; challenges to development: paper presented at workshop organized by NIM, Jos. 2010
Onipede, S.	Towards Creating an Environment for Sustainable Economic Growth in Nigeria. 2003
Williams H.R & Meyer C.J.	Oil and Gas Terms Mathew Sender & co. 1960

APPENDIX A

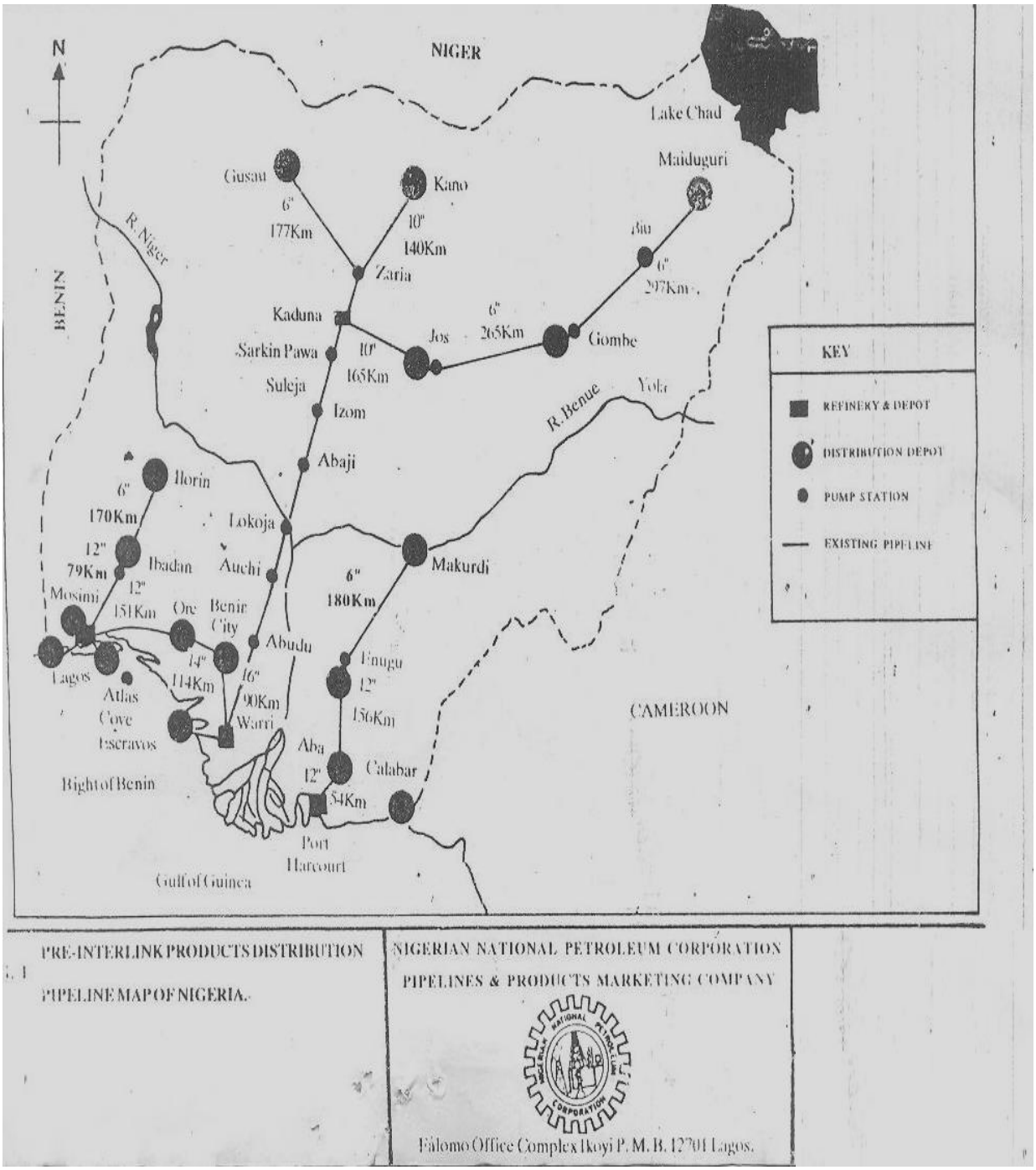
Holding Capacities of NNPC Depots[1]

S/N	DEPOT	PMS	DPK	AGO	ATK	TOTAL
1	Benin	60,700	28,700	*32,000*	-	121,400
2.	Ore	25,700	6,000	*10,600*	-	42,300
3.	Mosimi	163,400	76,000	127,200	57,600	424,200
4.	Atlas Cove	48,000	34,000	*32,300*	-	114,300
5.	Lagos Sat.	10,300	1,900	12,300	1,900	26,400
6.	Ibadan	102,800	28,700	40,590	-	172,000
7.	Ilorin	32,500	6,800	20,000	-	59,500
8.	Suleja	45,000	30,000	30,000	-	105,000
9.	Minna	24,000	15,000	24,000	-	53,000
10.	Kano	60,000	22,500	63,000	-	145,600
11.	Gusau	24,400	9,100	20,000	-	53,500
12.	Jos	72,900	8,700	43,200	-	124,800
13.	Gombe	10,000	2,300	7,200	-	19,500
14.	Maiduguri	20,200	15,900	18,500	-	54,600
15.	Yola	39,900	21,900	24,000	-	84,900
16.	Makurdi	59,300	28,100	34,300	-	121,700
17.	Enugu	99,900	49,000	64500	-	213,400
18.	Aba	56,200	26,000	*29,500*	-	111,700
19.	Calabar	40,200	20,100	40,000	-	103,200
20.	Ikeja	-	-	-	14,500	14,500
21.	Warri	N/A	N/A	N/A	N/A	-
22.	Kaduna	N/A	N/A	N/A	N/A	-
23.	Port Harcourt	N/A	N/A	N/A	N/A	-
	Total	974,500	430,700	673,300	74,000	2,152,500

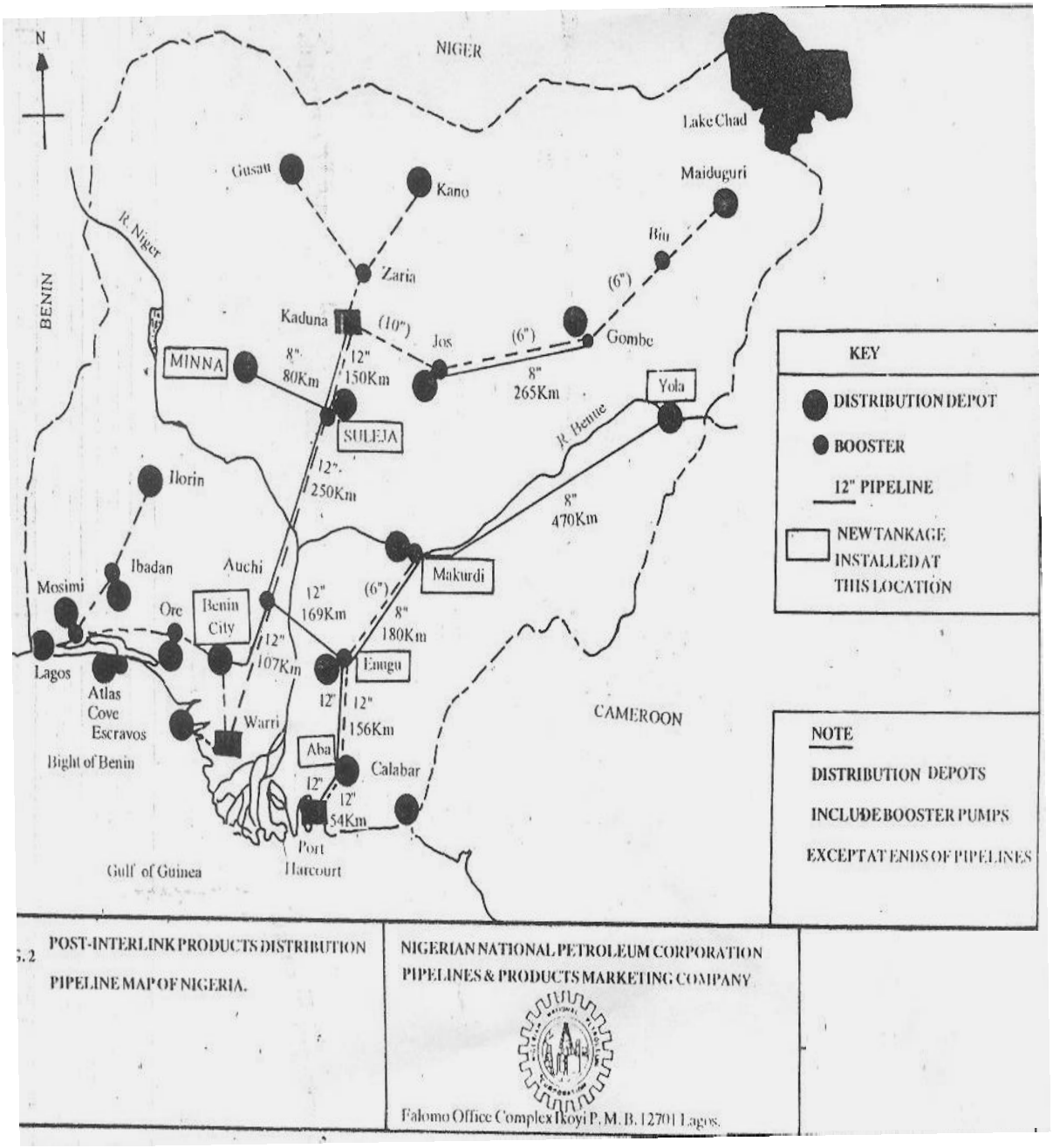
Note: The Warri, Port Harcourt and Kaduna tankage are not totally dedicated to finished products. The Ikeja tank farms are owned by the major marketers, i.e. Mobil, MRS Oil, Total, Forte Oil, etc.

[1] Retrieved June 12 2013 from www.ppmc.gov.ng.

APPENDIX B


N
NIGER
Lake Chad
Maiduguri
Gusau
Kano
6"
177Km
10"
140Km
Zaria
Kaduna
Sarkin Pawa
Suleja
Izom
Abaji
Jos
6"
265Km
Gombe
10"
165Km
6"
207Km
R. Niger
BENIN
R. Benue
Yola
Ilorin
6"
170Km
Lokoja
12"
79Km
Ibadan
Auchi
Makurdi
6"
180Km
Mosimi
12"
151Km
Ore
Benin City
Abudu
Enugu
12"
156Km
Lagos
14"
114Km
16"
90Km
Warri
Atlas Cove
Escravos
Bight of Benin
Aba
12"
54Km
Calabar
CAMEROON
Port Harcourt
Gulf of Guinea
KEY
REFINERY & DEPOT
DISTRIBUTION DEPOT
PUMP STATION
EXISTING PIPELINE
PRE-INTERLINK PRODUCTS DISTRIBUTION
PIPELINE MAP OF NIGERIA.
NIGERIAN NATIONAL PETROLEUM CORPORATION
PIPELINES & PRODUCTS MARKETING COMPANY
Falomo Office Complex Ikoyi P. M. B. 12701 Lagos.

APPENDIX C


N
NIGER
Lake Chad
Gusau
Kano
Maiduguri
Bu
R. Niger
BENIN
Zaria
(6")
Kaduna
(10")
Jos
(6")
Gombe
MINNA
8"
80Km
12"
150Km
8"
265Km
Yola
SULEJA
R. Benue
12"
250Km
8"
470Km
Ilorin
Ibadan
Auchi
Makurdi
Mosimi
Ore
Benin City
12"
169Km
(6")
8"
180Km
12"
107Km
Lagos
Atlas Cove
Escravos
Enugu
12"
12"
156Km
Warri
Aba
Calabar
CAMEROON
Bight of Benin
12"
12"
54Km
Port Harcourt
Gulf of Guinea
KEY
DISTRIBUTION DEPOT
BOOSTER
12" PIPELINE
NEW TANKAGE INSTALLED AT THIS LOCATION
NOTE
DISTRIBUTION DEPOTS INCLUDE BOOSTER PUMPS EXCEPT AT ENDS OF PIPELINES
POST-INTERLINK PRODUCTS DISTRIBUTION
PIPELINE MAP OF NIGERIA.
NIGERIAN NATIONAL PETROLEUM CORPORATION
PIPELINES & PRODUCTS MARKETING COMPANY
Falomo Office Complex Ikoyi P. M. B. 12701 Lagos.

APPENDIX D

Characteristics of the Nigerian Product Pipeline Complex[2]

System	Pipeline Segment	Length Km	Diameter Inch	Linefill (Capacity) M3	Flowrate M3/Hr
2A	Warri – Benin Benin – Ore Ore - Mosimi	90 114 151	16″ 14″ 12″	))32,300)	 300
2AX	Auchi - Benin	107	12″	8,000	380
2B	Atlas Cove - Mosimi Mosimi - Ibadan Ibadan – Ilorin Mosimi -Ikeja (ATK) Mosimi–Lagos Satellite (PMS) Mosimi – Lagos Satellite (AGO) Mosimi – Lagos Satellite (DPK) Mosimi – Lagos Satellite (ATK) Mosimi – Lagos Satellite (PMS)	49 79 170	16″ 12″ 6″ 8″ 12″I10″ 10″/8″ 8″/6″ 6″ 4″	8,800 6,000 3,000 3,000	750 300 60 75 150
2C	Warn – Kaduna (Crude oil)	606	16″	74,000	650
2CX 2CX	Enugu-Auchi Auchi-Suleja Suleja – Minna Suleja - Kaduna	169 250 80 150	12″ - 12″ 8″ 12″	12,500 18,500 3,000 11,000	380 235 80 235
2D	Kaduna-Zaria- Kano Zaria – Gusau Kaduna-Jos Jos – Gombe Gombe – Maiduguri	140 177 165 265 297	10″ 6″ 10″ 6″ 6″	12,000 8,000 9,000))10,900	160 40 90 70
2DX	Jos - Gombe	265	8″	9,000	95
2E	PH - Aba - Enugu Enugu - Makurdi	210 180	12″ 6″	16,000 3,300	280 60
2EX	PH - Aba - Enugu Enugu – Makurdi Makurdi - Yola	210 180 470	12″ 8″ 8″	16,000 6,000 15,500	*320* *155* *70*

[2] Retrieved June 12 2013 from www.ppmc.gov.ng.