Petroleum Regulatory Governance: An Analysis of Nigeria's Petroleum Fiscal Regime and Its Strategic Objectives

by

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Dedication

To Allah and my dear parents, Alhaji Bashir Kaita and Hajia Zainab Kaita and my lovely son Akram for their love and care

Acknowledgement

Abstract

The continuous rise in global demand for non-renewable source of energy has stimulated the mechanisms by which the petrostates govern their natural resources. Petrostates have been mindful to ensure resource-based investment corresponds with optimal economic recovery through adequate regulatory governance, legislative frameworks and policies. The effectiveness of such 'good governance' practices and their implementation requires closer attention and scrutiny. Drawing on a unique empirical analysis of Nigeria's petroleum industry regulatory governance supported by the research design, this study looked into Africa's largest petroleum producing nation and systematically investigates the petrostate's regulatory governance focusing on implementation of its petroleum fiscal regime.

In doing so, a mixed-method (quantitative and qualitative) research design was adopted. The quantitative method collects data via a questionnaire-based survey. Whilst the qualitative method collects data via semi-structured interviews with the aim of having a robust information on the Nigeria's upstream sector practices. The research applies purposive and snowball sampling techniques. The questionnaire-based surveys collect data from a total sample size of 112 respondents. The semi-structured interviews on the other hand collects data from 14 key oil stakeholders in Nigeria. The obtained data were analysed using a Statistical Package for Social Sciences (SPSS) software and NVIVO for the qualitative data.

Guided by literature review, game and stakeholder theories were adopted as the theoretical framework for the study, which underscored the focus of the study using the researcher's terminologies in answering the research questions.

Findings from the empirical data identifies a number of key issues relating to the practices in the Nigeria's petroleum industry, which include.

- confusion around practices (goals, roles and responsibilities) amongst and within regulatory agencies.
- corrupt practices among the regulators within the petroleum value chain.
- lack of full autonomy from the regulatory agency
- lack of good reporting and disclosure
- obsolete existing petroleum legislations

However, this research offers a specific contribution to empirical findings using primary data collection.

Keywords: Petroleum, regulation, governance, fiscal regime, legal framework

Table of Contents

viii

Table of Figures

List of Tables

List of Abbreviations

- AGRA   Association Gas Reinjection Act
- Bcm   Billion cubic metres
- BRRL   Barrel
- BTU   British Thermal Unit
- CEF   Cost Efficiency Factor
- CIT   Company Income Tax
- DM   Decision Making
- DPR   Department of Petroleum Resources
- E&P   Exploration and Production
- EIA   Energy Information Administration
- EITI   Extractive Industry Transparency Initiative
- FIRS   Federal Inland Revenue Service
- FMPR   Federal Ministry of Petroleum Resources
- GDP   Gross Domestic Product
- H0   Null Hypothesis
- IMF   International Monetary Funds
- IOC   Indigenous Oil Company
- JOA   Joint Operating Agreement
- JOPCOM   Joint Operating Committee
- JV   Joint Venture
- LFN   Laws of Federation of Nigeria
- LNG   Liquefied Natural Gas
- MCAR   Missing Completely at Random
- MOC   Multinational Oil Companies
- NAPIMS   Nigeria Petroleum Investment Management Service
- NASS   National Assembly
- NCDMB   Nigerian Content Development and Monitoring Board
- NEITI   Nigerian Extractive Industry Transparency Initiative
- NHT   Nigeria Hydrocarbon Tax
- NLCDB   Nigerian Local Content Development Board
- NNPC   Nigerian National Oil Company
- NOC   National Oil Company
- NPDC   Nigeria Petroleum Development Company
- NRGI   Natural Resource Governance Institute
- NSC   Norwegian Continental Shelf
- NSIA   Nigeria Sovereign Investment Authority
- OECD   Organization of Economic Co-operation and Development
- OEL   Oil Exploration License
- OML   Oil Mining Lease
- OPAGGSA   Offshore Petroleum And Green Gas Storage Administration
- OPEC   Organization of Petroleum Exporting Countries
- OPL   Oil Prospective License
- PAA   Petroleum Activity Act
- PEF   Petroleum Equalization Fund
- PFR   Petroleum Fiscal Regime
- PIAB   Petroleum Industry Administrative Bill
- PIB   Petroleum Industry Bill
- PIFB   Petroleum Industry Fiscal Bill
- PIGB   Petroleum Industry Governance Bill
- PIT   Petroleum Income Tax
- PPPRA   Petroleum Product Price and Regulatory Authority
- PPTA   Petroleum Profit Tax Act
- PR   Petroleum Regulations

- PSC   Production Sharing Contract
- PSCA   Production Sharing Contract Act
- PTDF   Petroleum Technology Development Fund
- RGI   Resource Governance Index
- RIIA   Royal Institute of International Affairs
- RRR   Reserve Replacement Ratio
- RSC   Risk Service Contract
- SC   Service Contract
- SPSS   Statistical Package for Social Science
- SUBCOM   Sub-committee
- TECOM   Technical Committee
- UEL   University of East London
- UK   United Kingdom
- UN   United Nations
- UREC   University Research Ethics Committee
- USD   United States Dollar

Chapter One

General Introduction

1.0 Introduction

This chapter presents an overview of the entire thesis and its structure. The chapter begins with providing an introduction in 1.1 and 1.2 outlines the study's contextual background, problem statement in 1.3 and 1.4 the specific research objectives as well as the research questions in 1.5 and 1.6 the hypotheses. In order to achieve the research aim for the study, the rest of the chapter is structured as follows: 1.7 outlines the theoretical frameworks adopted for the study, 1.8 outlines the methodology and methods employed for the research, as well as an outline of the contributions of the study in 1.9. Finally, in 1.99 the chapter presents the layout for this research.

1.1 Contextual background of the Study

One unique question that remains debatable and continues to resonate within the realms of academia and policymaking is the role of regulatory governance in the upstream sector of the oil and gas industry, underpinned by policy implementation. Regulatory governance refers to the legislative instruments oil rich economies develop through effective regulatory and governance structure with a seeming objective for optimal recovery of their natural resources for a variety of energy-related concerns such as oil security, international and local participation (Martin and Cameron, 2011; Aholu and Wifa, 2020). However, scholars and policymakers tend to have varying standpoints concerning the role of regulatory governance in oil and gas. Yet, the interconnection between oil investors and governments is undoubtedly one which both the scholars and policymakers concurred. Chandler (2020), argues that a critical interconnection between the oil investors and the oil host states lies in the competitive nature of the petroleum industry; oil countries compete to attract and sustain oil investors while oil investors compete for opportunities to maximise their returns (Mansour and Nakhle 2016). These interconnections are mutually executed through a bargaining power whereby the oil investor has the technology, capital, and government has the resources to exploit (Cameron, 2006).

In the present-day, bargaining power relates to how deals are struck between the host government and multinational investors based on the need for and the scarcity of the resources presented between the two parties and possible bargaining skills (Atsegbua, 2012). For instance, a multinational oil company's ability to provide technological skills, capital hub, and

marketing strategies would have a more bargaining stance relative to other companies. Depending on the level of orientation of their policy and institutionalisation (Long term or short), both the host government and investors are more likely to be better off or worse off simultaneously (Raszwski and Gorski, 2014). However, the policy is typically carried out through a petroleum fiscal regime that determines the distribution of oil benefits to both parties.

However, with the rise in global demand for non-renewable sources, particularly from the emerging economies such as China and India, the petroleum-rich countries enjoy the financial opportunities and political power from their oil proceeds (Balouga, 2012; Atsegbua, 2012). Despite oil price volatility, oil exports continue to dominate Nigeria's foreign earnings, contributing up to $64,787 with over 1,770,000 barrels of crude oil traded daily (Dudley 2018). With continued growth in the country's crude oil transactions, more focus and attention are shifted on understanding the regulatory aspect of the existing policies that for a long time, that causes a sizable amount of revenue leakages for government (Kyari 2013).

It has been argued that the petroleum (oil and gas) industry remain one of the leading industries that attract a considerable amount of fortune and power globally (Johnston 1994), which combine unprecedented disparity between reward and risk (Nakhle 2008). Given its strategic importance and prosperity on socio-political and economic realms, the petroleum industry becomes crucial for both advance and emerging economies (Raszweski and Gorski, 2014). The rising demand for energy became a persistent challenge for host governments to effectively and efficiently exploit their petroleum resources in a fair and appropriate means (Kemp and Kasim 2006; Biang, 2010; Daryanto 2017). For instance, challenges relating to fair and efficient management of oil and gas revenues, intense economic pressure, among others (Lahn, ́rie Marcel et al. 2007). One of the primary ways used by the oil host states to overcome such challenges and ensure their petroleum industry's survival and success depends on the regulatory governance through a formulated legal policy known as Petroleum Fiscal Regime (PFR) (Hunter 2015; Manaf, Mas' ud et al. 2016). PFR comprises a set of applicable laws, agreements and regulations in each nation, which govern the economic benefits derived from petroleum exploration and production (Van Alstine 2014). The iconography in figure 1.0 below depicts the petroleum fiscal regime arrangements.

Figure 1.1 *Forms of Fiscal Arrangement*
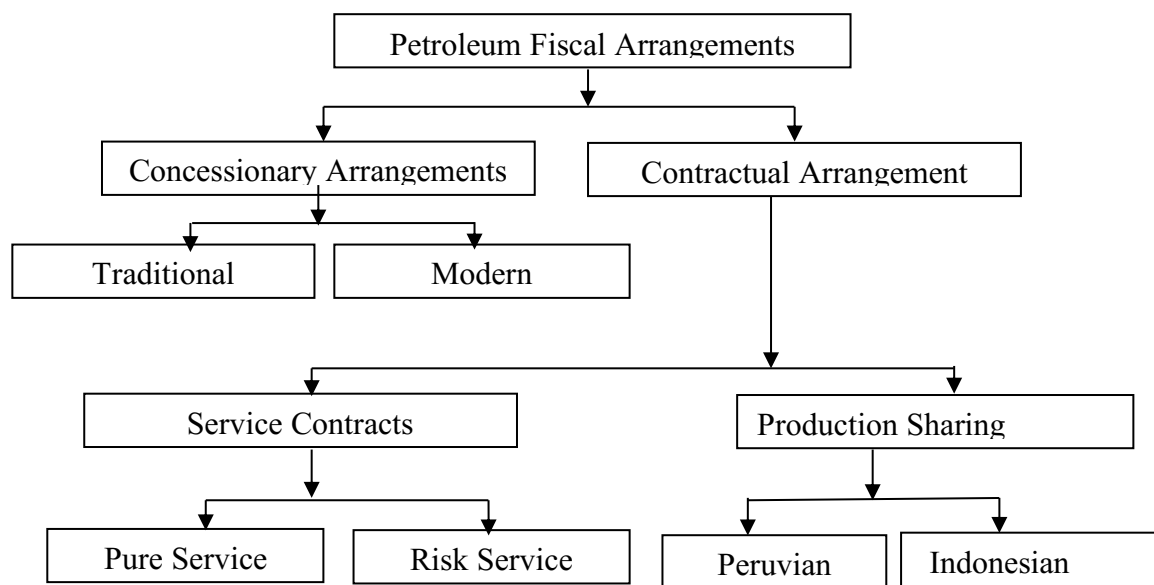
Source: Johnston (2006:60)

The workings of a PFR provides a mechanism for resolving disputes between oil stakeholders. On the one hand, it is also seen as a tool that enhances and attracts investment (Mansour and Nakhle 2016). From an economic standpoint, PFR impacts oil funds investment through its significant role in allocating resources effectively and efficiently between the host government and oil investors (Kondrashov, 2013). Given the relevance of PFR in economic development and potential scope for conflict resolution amongst key oil stakeholders, the oil-producing states review their PFRs periodically to improve their global competitiveness among competing oil-producing states across the globe (Manaf et al., 2016).

To sustain the petroleum industry's competitiveness in a given oil province, policy frameworks and concepts of PFR are expected to be flexible and suitable to the key stakeholders to attract investment into the host country. Abdo (2014) argues that the flexibility of the PFRs lies in the unique way oil-producing states structure their PFRs, with specific attention to taxation and fiscal policies to achieve economic growth. Similarly, Wenar (2015) highlights that the international legal principles empowered the oil-producing states to deploy policy tools and the regulatory measures to implement their petroleum fiscal regime strategic objectives through country-specific legal frameworks. Correspondingly, there are number of formulas structured by petroleum provinces and jurisdictions governing extraction of oil and gas. For instance, in the United States of America (USA), the right to extract petroleum resources under public land is auctioned off to private bidders, the revenue goes to the state treasury (Wenar, 2015). In

contrast, a national oil company reserves the mineral resources' right to disposition in Mexico. While in the United Kingdom, petroleum ownership rights are vested in the Crown with a government ministry regulating petroleum exploration and production (Wenar, 2015).

However, a study by Doric and Dimovski (2018) reveals that formulation of a PFR does not necessarily resolve all challenges or even guarantee success within the petroleum industry. The challenges could emerge from the design of the PFR or possibly due to poor regulatory practices in implementation of a PFR. These failures may contribute to poor regulatory governance which undermine the strategic objectives of PFRs. Evidence from Subai (2016) confirms that some provisions of the PFRs in Nigeria, such as that of deep-water offshore of 1993, that regulates the production sharing contracts (PSCs) - sliding scale royalty and provision of pioneer status has been stagnating or renounced due to obsolete legislation of the PFR that changes with era and context.

Drawing from the Africa's largest petroleum producing nation, the Nigeria's PFR has its own regulatory challenges- a prominent investigation conducted by Nigeria Extractive Industry Transparency Initiative (NEITI) and Energy Information Administration (EIA) in 2015 and 2016, respectively, revealed key challenges that threaten the survival of the petroleum industry. The NEITI audit report investigated an underpayment of NGN317.47 billion to the federation account by the NNPC as domestic oil sales proceeds (NEITI, 2016). Additionally, the report discovered non-segregation of production and lifting profiles (i.e. Oil Mining Lease blocks) relating to the federation from Nigeria Petroleum Development Company (NPDC). Similarly, the investigation report by NEITI further uncovered a sum of $20 billion unremitted revenue into the federation account by the Nigerian National Petroleum Corporation (NNPC), which were inconsistent and failed to meet a minimum acceptable standard of PFR (NEITI, 2016). Finally, the report evaluates numerous management weaknesses and inconsistencies relating to corruption, which resulted in mismanagement of resources and conflict of interest among the regulatory agencies (Ahmad 2016).

The inconsistencies that hinder growth of oil reserves and hinder investments have been identified as an issue. More so, the EIA report's findings discovered the extent to which the intervention of personal interest by influential parties affected the passage of the Petroleum Industry Bill (PIB) by the Senate Chambers. The PIB is a bill that integrates all the petroleum-related fiscal policies from various government agencies such as the Federal Inland Revenue

Service, Department of Petroleum Resources, Nigerian National Petroleum Cooperation, among others and depicts Nigeria's petroleum legal framework. Also, the Nigerian Production Sharing Contract (PSC), which is a product of the current petroleum fiscal regime, funds the problem faced by the Joint Venture arrangements (JVs) instead of meeting its objective (NAPIMS, 2018). The above assentation fosters ethical questioning of the processes and calls for governance efficiency in Nigeria's petroleum industry. Arguably, on the weight of evidence from the reports above, one could presume there are material inconsistencies prevalent in the current Nigeria's regulatory governance practices. Inappropriately, if left unexamined, these inconsistencies may continue to hinder oil reserves growth or in, extremis, renunciation and inadequacy of investment from the oil Multinational Oil Companies.

Consequently, the current study is timely and apt as there appears to be an urgency to look into the Nigeria's regulatory governance and its PFR. In this regard, the current research aims to explore the petroleum regulatory governance in the implementation of Nigeria's PFR towards meeting its strategic objectives. The study deploys game theory and stakeholder theory to explain parties' behaviours with differing interest to achieve this research aim.

1.2 Problem statement

Drawing from the economic viewpoint, mineral resources contribute a large proportion of wealth creation in many petroleum resource-rich nations such as Nigeria. The existing track records of petroleum production in Nigeria suggests that the potential resource exploitation is expected to significantly impact positively on the prosperity and economic development of the citizens through the proceeds of oil (Daniel et al., 2010). However, with up to 37.1 billion barrels of proved oil reserves, Nigeria only produces less than 2 million oil barrels/day (BP, 2020). The petroleum sector in Nigeria can optimally produce much more looking at its size of oil proved reserve compared to other reserves and resource rich African peers, Angola and Algeria, with a production capacity of 1.807 and 1.579 million oil barrels/day relative to their total proved oil reserved of 11.6 and 12.2 billion barrels, respectively (Bp, 2020). The underproduction of Nigeria's petroleum deposit maybe possibly connected to the unsuitability of the petroleum fiscal regime towards MOCs and the inconsistencies workings of the regulatory governance.

On the aspect of the investment into the petroleum sector guaranteed by the legal framework of the Nigeria's petroleum industry, the Petroleum Industry Bill (PIB) has been laying in the

Senate Chambers awaiting passage into law for since 2008 before it can be accent into law by the President. The PIB is a bill that integrates all the petroleum-related fiscal policies and regulations from the key regulatory agencies of government (such as Federal Inland Revenue Service, Department of Petroleum Resources, Nigerian National Petroleum Cooperation among others) and depicts Nigeria's petroleum legal framework. Specifically, the bill seeks to introduce changes to the petroleum governance, regulatory, administrative and fiscal framework of Nigeria's oil and gas industry to ensure transparency and certainty as well as strengthening the governance institution by attracting investors into the petroleum sector among other objectives. The non-passage of the bill into law raises growing concern for uncertainty rate and transparency issues in the petroleum industry and invariably hinders the reserves growth from the investors, which translates to the inadequacy of investment from the oil Multinational Oil Companies (Adam, 2014). By implication, a considerable proportion of investment is been put up on hold and awaiting investment decisions until the PIB passage.

Another concern is on the fiscal policy, the Nigerian Production Sharing Contract (PSC) been the product of the current petroleum fiscal regime was developed to address key issues faced by the Joint Operating Agreement (JOA) such as the government counter funding, by providing appropriate agreement structure to encourage multinational investors in the offshore acreages. However, the inherent problem of the PSC enables a contractor to finance the project with external source loan such as banks, while any accrued interest on the loan is offset as operating cost. The accrued interest on the loan seemingly erodes a large proportion of the government revenue take that is expected to be derived from the petroleum operation. The assertation above fosters ethical questioning of the PSC operation processes and calls for an examination into the PFR policy. Similarly, the current government take (revenue) under this PSC is reported to be the lowest in the global oil-producing states, as Nigeria attract only 42 per cent relative to the global average of 75 per cent (Kyari, 2013). For instance, Angola and Ghana reported having a PSC revenue take of up to 78 and 80 per cent, respectively (Igbikiowubo et al., 2010). Hence, it triggers this study to investigates why Nigeria continued to settle for only 42 per cent?

Accordingly, all the issues stated above raised the call for examining petroleum resource governance's effectiveness in meeting Nigeria's petroleum fiscal regime's strategic objectives.

1.3 Objectives of the Research

1. To evaluate the effectiveness of Nigeria's petroleum regulatory governance in the implementation of the country's petroleum fiscal regime

2. To critically examine the degree of certainty of Nigeria's petroleum industry legal framework.

3. To explore the suitability of Nigeria's petroleum fiscal regime strategic objectives.

1.4 Research Questions

1. How effective is Nigeria's petroleum regulatory governance in implementing the country's petroleum fiscal regime?

2. To what extent does Nigeria's petroleum legal framework create certainty in the operations of the country's petroleum industry?

3. What is the suitability of Nigeria's petroleum fiscal regime strategic objectives both to the Nigerian government and MOCs?

1.5 Research Hypothesis

The hypothesis has been drawn from the literature review in chapter three and offers quantitative data collected through a questionnaire-based survey to accept or reject the null hypothesis.

$H0_1$: The policies under Nigeria's petroleum fiscal regime are not effective in achieving the country's petroleum resources' economic potentials due to the uncertainty of the petroleum legal framework.

$H0_2$: The fiscal allowances contained in Nigeria's petroleum fiscal regime are not attractive to petroleum investors owing to the obsoletion of the policies that somewhat overweight their usefulness.

$H0_3$: Nigeria's petroleum fiscal regime does not have sound administrative regulation relating to reporting and disclosure in the petroleum industry due to lack of political-will.

1.6 Theoretical framework

The framework used in this PhD study is comprised of game theory and stakeholder theory. The application of the concept of game theory in this study espouses the analysis of strategies in dealing with competitive state of affairs of the oil stakeholders. The key significance theme of game theory stalls on how alternative strategies are formulated to compete amongst oil stakeholders, thus a given stakeholder strategy's payoff depends critically on other players' strategy (Easmaeili et al., 2015). The theory is also an essential tool that aid decision-making (DM) process in a dynamic oil and gas industry.

On one side, stakeholder theory has also been employed in this study as a supporting theory to underpin the segment of the study's objectives that the game theory could not cover. The central argument of stakeholder theory is that organisational success depends on the value it can create for its stakeholders, which comprises of governmental agencies, interest groups, creditors, suppliers, customers, given the main objective of an organisation, which is its ability to strike a balance to any conflicting demand that may arise from distinct stakeholders in the organisation (Philips, 2010). Thus, the interest of stakeholder's groups must align in the quest to attain the organisational objectives deprived of trade-off, which is the primary concern of corporate goal.

1.7 Research Methodology and Methods

The research methods for study refer to the techniques and the tools by which the study is conducted, while the research methodology seeks to explains the justification for the techniques and the tools by which the research adopted to conduct the research. Therefore, a mixed-methods research is employed in this study, deploying the quantitative method first through questionnaire-based surveys (Creswell and Clark, 2017). The rational for adopting questionnaire-based surveys is to gain the objective views of the research question and provide a generalisation of the study (Kelley et al., 2003; Ponto, 2015). Specifically, the use of the questionnaire helps in generating the quantitative data relating to the suitability and improvement of PFR strategic objectives.

On one hand, the qualitative method uses a semi-structured interview. The justification for employing the semi-structured interviews is to gain the explanatory, exploratory, descriptive and interpretive objectives conforming with the study's exploratory and interpretive objectives aimed at providing insights relating to governance and the strategies Nigeria's PFR uses.

Guided by the philosophical assumption world views, the current study adopted a pragmatist paradigm. The pragmatism paradigm argues that there is a non-singular approach to undertaking a research or studying a phenomenon. It employs pluralistic and practical way by using mixed methods to understand the truth (Kivunja and Kuyini, 2017). The rationale for employing the pragmatism is that one method offers a limited viewpoint and challenge the objectivity of the data to a greater extent. Notably, the work of Healy and Perry (2000), Denzin and Lincoln (2008) and Kaushik and Walsh (2019) assert that the research paradigm consists of four assumptions: Ontology, epistemology, methodology and axiology.

Accordingly, ontology refers to the reality that the researcher is studying; epistemology is the relationship between the researcher and reality; thus, the processes and procedure and methodology are considered the best approach to gaining the knowledge researcher uses to investigate the phenomenon or reality and axiology refers to a research's morals and values (Bryman, 2016).

The epistemological theme relates to what should be (is) a valid knowledge in a research Bryman (2016). Given the nature of epistemology research that examines the relationships between the researcher and the research subject, the researcher is expected to be independent of his research paradigm (Creswell, 2014). Hence, this study's quantitative method aspect attempts to reduce bias by deploying appropriate sampling technique through questionnaire-based survey and maintained objectivity throughout the research process of data collection and analysis stage.

In contrast, the interpretivist orthodoxy restricts the distance between the researcher and the subject being researched (Kaushik and Walsh, 2019). Therefore, the qualitative study allows closer interaction with the research subject (human beings) within the social context and observation of social phenomena over some time. In this study, the interpretivist paradigm suggests using semi-structured interviews which allow interactions between the researcher and interview participants (oil experts) In evaluating the petroleum industry regulatory governance and examining the petroleum industry legal framework.

a. **Method of data analysis**

Following the data collected from a mixed method this study; primary data (quantitative and qualitative), the data are analysed separately as follows:

b. Quantitative data analysis:

The quantitative data obtained are summarised, patterns designed, relationships and connections analysed with Statistical Package for Social Science (SPSS). The data was initially subjected to Little's MCAR test in order to find out if there's any missing data either at random or non-random for accuracy. Subsequently, a descriptive statistic is utilised using the frequencies, mean, median to cover the personal information of the respondents' groups and their perception on each of the statement. The rationale is to determines the relevance of each participant with regards to years of experience, background knowledge and qualification. On the other hand, the numerical values responses of 1-5 (ranging from strongly agree to strongly disagree) for the Likert-scale questionnaire are converted into ranks that creates ordinal data, which further analyses using non-paramedic statistical techniques (Carifio and Perla 2008; De-Winter and Dodou, 2010). The use of nonparametric test of Mann-Whitney is used to identify and discuss the difference between the respondents' groups. The rationale for adopting nonparametric test is due to the non-distribution of the data gathered for the study. The research findings were then aligned with literature, theory, draw conclusion of the findings on petroleum fiscal regime policies, and strategies in Nigeria.

c. Qualitative data analysis:

The obtained data from semi-structured interview was firstly transcribed and analysed using a thematic technique whereby the common patterns and themes are identified (Burnard et al., 2008; Reichertz 2010). The thematic analysis technique's flexibility makes it one of the most frequent technique in qualitative analysis of social research that includes top-down theory-driven and bottom-up data-driven and accommodates all forms of research questions (Braun and Clarke, 2019). The transcribed data are then keyed into Nvivo qualitative data analysis software analysed as outline in section 5.7.2.

1.8 Research Contributions

1. This research offers a suitable and specific contribution to empirical findings using primary data collection. The use of a mixed-method strategy (questionnaire-based survey and semi-structured interviews) in this study provides a more robust approach to analysing complex and dynamic phenomena regarding the petroleum regulatory framework. Thus, the study also revealed how multiple research approach applies successfully to petroleum studies.

2. The adoption of multiple-theoretical frameworks in this study contributes to the literature towards interpreting and explaining the empirical findings, which underscored the focus of the study using the researcher's terminologies underpinned by a formal theory in answering the research questions. Therefore, the application of Game and Stakeholder theories in this study is the first to adopt multiple theories on Nigeria's upstream regulatory governance and would aid other researchers to apply them to other sectors and different countries to understand the strategies played and the value of stakeholders. More so, the adoption of the multiple-theoretical framework responds to the recent calls for complementary theories in empirical studies.

3. This study's finding contributes to the growing literature on the global petroleum governance debate. Contextually, the study provides evidence from Nigeria regarding the relationship between petroleum regulatory governance, legal framework and petroleum fiscal regime policy.

4. Apart from the academic contributions through the empirical findings mentioned above, the findings of this study contribute to the good regulatory governance practices in the petroleum industry. The application of principles of good governance- Royal Institute of International Affairs (RIIA), Chatham House Principle of Good Governance" across regulatory agencies provides a criterion to synergise and integrates the industry-academic relationship that could ensures quality of knowledge, theory and practice.

1.9 Chapter Outline

This study is organised and structured into eight chapters, as depicts in fig 1.2 below. Also, an outline of the chapters is presented below.

Chapter One outlines the study's background, problem statement and the rationale for the current research. The chapter also outlines the theoretical frameworks adopted, the aims and objectives of the study as well as the significance of the study. Finally, the chapter presents the layout for this research.

Chapter Two overviews the Nigerian petroleum resource governance and its fiscal regime. The chapter begins with a historical overview of Nigeria's petroleum industry, followed by its development of petroleum policy and regulation, the structure and the role of the policies and regulations in Nigeria's petroleum governance. Finally, chapter two outlines the state participation in and the choices of strategies of an effective petroleum governance system.

In **Chapter Three** a systematic literature review is outlined. Using the systematic literature review method – and being driven by the above set of the study's research questions (Fish and Block 2018) – Chapter three examines the relevant bibliographical sources. Of relevance to the review includes an overview of the different petroleum fiscal regime (petroleum arrangements) around the globe, objective and legal framework, other issues discussed in the chapter include role of policies in petroleum governance, the facets for oil and gas policy as well as issues and, what the author of this thesis refers to as controversies (e.g. importance of fiscal regime design and structure, ownership and control, oil price link and lagged effect, Fiscal stability and risk-sharing).

Chapter Four outlines the theoretical framework for the PhD study. In this chapter, game and stakeholder theories underpin the research objectives. The chapter also justifies adopting the theories.

Chapter Five outlines the study's philosophical assumptions, research paradigm, research approach and the research design as well as the research strategy for the study. Also, the chapter outlines the research methodology adopted and method, the instrument used for data collection. Moreover, the chapter outlines the method of data.

Chapter Six outlines the data analysis and findings of questionnaire responses as well as the missing data analysis and response to demographic information.

Chapter Seven outlines the data analysis and the findings of interview responses. The chapter starts by outlining the objective of the method choice and the overview of the thematic framework analysis for the study. An outline of the main findings for the study is also present in the chapter.

Chapter Eight outlines the summary of the thesis, discussion of the mixed method findings, contribution of the study, and a number of recommendations as well as suggestion for further research.

Chapter Nine concludes the study, discusses the limitation of the study and draw some quality recommendations both for further research and also recommendation for policymakers.

Figure 1.2 Thesis Structure

This thesis is organised into nine chapters, as indicated in fig 1.2 below

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                          ┌──────────────────────┐
                          │     Chapter One      │
                          │     Introduction     │
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┌──────────────────────┐                              ┌──────────────────────┐
│     Chapter Two      │                              │    Chapter Three     │
│ Overview of Nigeria's│                              │  Literature Review   │
│  Petroleum Industry  │                              └──────────────────────┘
└──────────────────────┘
                          ┌──────────────────────┐
                          │     Chapter Four     │
                          │ Theoretical Framework│
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│ Chapter Six  Findings│  │     Chapter Five     │  │    Chapter Seven     │
│ of Questionnaire Data│  │      Research        │  │ Findings of Interview│
│       Analysis       │  │     Methodology      │  │    Data Analysis     │
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                          ┌──────────────────────┐
                          │    Chapter Eight     │
                          │   Discussion and     │
                          │    Contributions     │
                          └──────────────────────┘

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                          │    Chapter Nine      │
                          │Conclusion, Limitations│
                          │ and Recommendations  │
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Source: Author

14

CHAPTER TWO

An Overview of Nigeria's Petroleum Industry

2.0 Introduction

In this chapter of the study, an overview of Nigeria's petroleum industry is outlined. The outline provides an introduction to petroleum industry policy and regulation. Specifically, the chapter reviews Nigeria's petroleum industry policy and regulatory framework. The chapter aims at providing a spectrum of the existing petroleum policy approaches and the kind of regulatory governance employed in Nigeria. The chapter is structured into five section and sequenced as follows: 2.1 why petroleum industry regulation, approach to petroleum policy and regulation, 2.3 Development of petroleum policy and regulatory governance in Nigeria, 2.4 The Structure of Nigeria's Petroleum Industry Policy and Regulation and 2.5 Summary.

2.1 Why Petroleum Industry Regulation

Due to the complex nature of petroleum projects with high risk and long-term return on investments, the petroleum industry requires an effective regulatory framework, which combines a sustainable economic development for the resource owner (host state) with guarantee and incentives to oil investors who risk their capital in the exploration and production projects (Extractive Hub, 2021). Regulation has become increasingly significant as the mechanism for governing natural resources. The significance of regulation is also recognised in the "*Best Practice Principles for Regulatory Policy: The Governance for Regulators*" (OECD, 2014). Particularly in offshore petroleum operations originated from concession and private investors' need to explore and produce crude oil (Chandler, 2020). Hunter (2014) describes regulation as the tool that authorises a course for action in the administration of petroleum operations. The concept of regulation is geared towards public interest (Labelle, 2017). More so, a regulatory framework is a mechanism for enforcing compliance towards oil firm investors (White, 2017). However, the legislative structure's significance on a regulatory framework influences a petroleum policy's implementation (Hunter, 2015). A legal framework provides for vibrant regulatory regimes that are said to feature cost-effectiveness, clarity, simplicity, accountability, and transparency (OECD, 2014). Other regulatory operations are enacted for protection. For instance, granting tax relief, tax holidays where applicable or protecting the right of MOCs in transferring funds beyond the border without restriction (Subai, 2014). Given the significance of the regulatory framework, it has attracted international and

scholarly attention to improving the extractive sector's regulatory framework, particularly towards governance improvement. For example, the Extractive Industry Transparency Initiative (EITI) is an international charter for promoting good governance in the extractive industry through reporting and disclosure for transparency purposes. Also, the Resource Governance Index (RGI) measures the quality of resource governance of 81 countries that contributes to 82% of the world's oil (RGI, 2015).

In scholarly literature, Archine (2013) argues that lack of transparency in petroleum arrangements (contracts) and presence of corruption remain two significant challenges impeding the optimal recovery of oil benefits, particularly in developing economies involved in oil production. In contrast, Sejpal et al. (2015) describe the local laws governing mineral resources enacted for regulatory purposes as stringent. Marcel (2016) claims that the establishment of international best practices within the oil-producing states indisputably helped in good governance. On the other hand, Subai (2014) argues that regulations are often either implemented inefficiently or not adhered to in most cases, resulting in the absence of financial and technological competence, lack of jurisdictional power, corruption or simply lack of competence. Thus, it weakens the industries' effective rate performance. Also, the effectiveness of regulation is linked on the failure to account for geographical difference on the universal application of rules and regulations applicable to MOCs in an economic system (LaBelle 2017).

Accordingly, Hunter (2014) posits that the host government's regulatory mechanisms are typically the enabling laws through which either prescriptive (rule-based) or enabling (objective-based) statutes are enacted. The prescriptive statutes regulate the petroleum operations through legislative processes stages and is typically sanctionable to defaulting operators (Black, 2007). Hence, the statutes determine the confines for any operation with regards to oil resource disclosure, environmental protection, government revenue, health and safety, among others (Baldwin et al., 2012). Conversely, an objective-based regulation ensures flexibility in the legislation in responding to prompt issues through a wide-ranging application of circumstances (Black, 2007).

In sum, the petroleum industry regulation aims to attain socially desirable targets and block any manifestation of illegal conduct. To achieve petroleum industry regulation's aims, Baldwin

et al., (2011) highlight the need to employ a single regulatory framework that integrates the legal, policy, and regulation mechanisms dealing with petroleum operations.

2.2 Approach to petroleum industry policy and regulation

Although there is no universal standard approach in the application of legal framework in the petroleum industry, there appears to be a trend whereby legal cultures and political structures of petroleum host countries have historically depicted the disparity in the implementation of industry policies and regulations (Johnston, 2006; Hunter, 2014). The disparity in industry policies and regulations is supported by the principles conferred in international law that empower sovereignty of natural resources to the States that owns the resources (Wenar, 2015). Thus, oil-producing states employ distinct policies and regulatory measures to implement their strategic objectives through specific legal frameworks. However, both advanced economies such as Norway and Australia and emerging economies – such as Nigeria which is the subject of this study – use distinct approaches through either objective-based system or rule-based system in governing their petroleum resources.

2.2.1. Norway

Norway is considered a key player in the international oil arena, consisting of over sixty oil fields with an approximate daily oil production of 2 million barrels and 99.3 billion cubic metres (bcm) of natural gas (Bp, 2019). The entire oil reserves of Norway are located on the Norwegian Continental Shelf (NCS) with eight major oil fields (i.e., Ekofisk, Snorre, Valhall, Heidrun, Grane, Asgard, Alviheim, and Oseberg Sør fields) in the North Sea and two (i.e., Clair and Statfjord fields) in the Norwegian Sea. However, the NCS is featured as a matured oil province with highly developed infrastructures bordering Barent Sea and the UK continental Shelf. Thus, the need for Norway to have a solid regulatory framework aims for sustainable development.

The Norwegian approach to petroleum industry policy and regulation principles are vested in the state control enshrined in the "Ten Oil Commandments[1]. The principles provide an enforceable policy outlook for its petroleum operations. However, the Norwegian government

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[1] The Ten Commandments refer to a policy outlook of the main principles for national oil policy presented by the standing committee of the parliament. Thus, provides a comprehensive foundation for managing the Norwegian petroleum industry.

controls most of its oil interests through the state oil company "Statoil" - now rebranded as Equinor (Nordtveit, 2015). The Norwegian legislative framework is mainly the Petroleum Activities Act 1996 (PAA) and associated with the Act, 1997 Petroleum Regulations (PRs), reflecting an objective-based system, containing only 30 pages of documents. For instance, the brevity arrangement of the Norwegian regulatory framework gives right, and duties related to the participant for exploration and production conferred in the PAA, including the generic provision of state and investors, management of exploration and production operations, health and safety, cessation of oil operation and environmental requirements. The concise license system and third-party exploration and facilities system covered within only four pages portrays an objective-based system.

2.2.2 Australia

Unlike Norway, Australia is not considered a key player in the international oil market as it worth only 2.4 billion oil proven reserves (Dudley 2018). Recent development of Australia's extensive offshore and onshore gas facilities has increasingly played an important role in the Australian economy, ranking it as the fifth largest exporter of LNG globally (Chandler, 2020). Australia's growth in liquified natural gas (LNG) exports results from a combination of the frontier offshore region such as north-western Australia and mature oil fields, mainly located in Gippsland and Otway Southeast Australia. Given the coastal frontier nature of its oil fields, Australia's government needs a petroleum policy approach to resolve jurisdictional issues with Australia's states and territories (Chandler, 2020).

Therefore, Australia's approach to petroleum policy seeks to provide investors with sufficient certainty to ensure effectiveness of the country's legal framework in the promotion of investment into the country's petroleum industry (Department of Resources, Energy and Tourism, 2009). Specifically, the Department of Resources, Energy and Tourism (2009, pg. 2-3) asserts the aim for Australia's petroleum policy:

> 'The Australian government is committed to creating a policy framework to expand Australia's resource base, increase the international competitiveness of [the] resources sector and improve the regulatory regime, consistent with the principles of environmental responsibility and sustainable development.'

However, Australia's legislative framework, particularly petroleum licencing, features a rule-based system and is subjected to criticisms due to its overly detailed and lengthy legislations

(Hunter, 2016). For instance, the Offshore Petroleum and Greenhouse Gas Storage[2] Administration (OPAGGSA) legislative framework incorporates three operational regulations, environmental protection and facilities safety, oil well operations, data and field development strategies. Apart from the been overly detailed and too rigid, the OPAGGSA has also been criticised for creating undue burdensome for participants in the exploration of petroleum resource. The undue burdensome framework produces incremental costs, for instance, by means of an added cost of production of one more unit of a product, and could be avoided with an effective regulatory architecture, implementation and compliance.

2.3 Development of petroleum policy and regulatory governance in Nigeria

Nigeria's Crude oil exploration begun more than a century ago through a German subsidiary company, 'Nigerian Bitumen Corporation' in 1908 (Bello and Butt, 2004). About three decades later, in 1938, during the colonial rule, the British government granted a sole concession to a consortium of Shell-BP and was successful in discovering crude oil at Oloibiri (presently at Bayelsa state) in 1956 (Akinlere, 2003). This development resulted in the commercial production of crude oil in 1958, with up to 5100 barrels exported (Victor et al., 2011).

Although the commercial discovery of crude oil helped Nigeria meet the need for her political and socio-economic aspects, the country was subsequently trailed with challenges such as technological advancement, capital intensive, and regulatory capacity to run the oil industry (Nwokeji, 2007) effectively. The challenges described above negatively impacted Nigeria's bargain capacity, which restricted her to minimum regulatory governance, just collecting royalties and leases only from the oil produced by the MOCs during the concessionary days (UNCTAD 2006).

However, the Geneva convention of 1958 conferred the exclusive right of petroleum resource to the national governments across all the oil wealth states within their jurisdiction (UN, 2006) securely increased the pursuit for the Nigerian government control in the petroleum sector. Besides, the subsequent Resolution XVI of Organization of Petroleum Exporting Countries (OPEC), Article 90 of 1968, directed all OPEC member states to partake in the oil industry

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[2] OPAGGSA refers to the regulations that provides a management scheme for the orderly exploration for and production of petroleum and injection and storage of greenhouse gas substances, and sets out a framework of rights, entitlements and responsibilities of regulators and industry.

operation to have considerable control over their resources deposit (Omorogbe, 2001). Also, to commensurate with the objective of securing control of petroleum resources among its member states, OPEC enacted the Landmark Petroleum Act 1969 and its subsidiary Petroleum Regulation 1969 on drilling and Production (Nwokeji, 2007). The legislations above became the basis of administering petroleum sector regulatory governance in Nigeria.

Notwithstanding, during the enactment of OPEC petroleum legislation, Nigeria was a mere observer at OPEC until 1971, when she became a member. Consequently, this development (Petroleum Act 169) brought about change in the governance of the petroleum sector in Nigeria, from the conventional concessionary system assumed by MOCs to the contractual system where rights to control and ownership of petroleum resources is vested in the Nigerian Government (Hackman, 2009). Accordingly, the focus of the Petroleum Act 1969 is to increase participation of Nigeria's government into the petroleum industry and sub-guarding the interest of Nigeria's citizens through introduction the of fiscal and contractual regimes and new licensing that includes the Oil-Exploration License (OEL), Oil-Prospective License (OPL) and Oil-Mining Lease (OML) (Akinlere, 2003). Nonetheless, other focus areas of the Petroleum Act were environmental protection, technological acquisition, local managerial skills improvement and hydrocarbon maximisation, among other areas. But the most significant development of the Act was managing and regulating the oil industry achieved by creating Nigerian National Oil Company (NNPC) in line with the OPEC mandate Decree 18 of 1971 (Nwokeji, 2007).

2.4 The Structure of Nigeria's Petroleum Industry Policy and Regulation

The Nigerian Petroleum Industry is structured towards a regulatory approach of command and control (Subai, 2014). The command-and-control approach enables the monitoring and compliance agencies a considerable power towards issuance of detailed regulations, and enforcing sanctions (Baldwin et al., 2012). Notwithstanding a number of legislations that established the distinct regulatory agencies in the country's Petroleum Industry such as the Petroleum Price Regulatory Agency (PPRA), Petroleum Products Marketing Company, Nigerian National Petroleum Corporation among others, the Department of Petroleum Resources (DPR) is regarded as the primary regulator of the upstream sector operations. The DPR reserves the statutory power to discharge most of the petroleum minister's duties (Odumosu, 2007). For instance, formulation of policies to stimulate private industry investment and participation in the oil and gas sectors; Administration of government joint

venture interests in the Petroleum sector in order to maximize fully economic benefits derivable from Nigeria's oil and gas resources and ensuring optimization of government interest in all oil and gas arrangements; Licensing of all Petroleum and gas operations and activities; Formulation of policies to ensure increase of natural oil and gas reserve base and Nigeria's increased technical productivity in accordance with appropriate planning and allocation of production quotas to producing companies in line with OPEC quota and maximization of revenue from oil and gas to the Nation and others.

Although there are enough detailed regulations such as the Oil Drilling and Production regulation of 1969 as well as Hydrocarbon Oil Refineries Regulation 1965. discussed in 2.4.1 below, highlighting all phases of Nigeria's petroleum industry, Baldwin et al., (2012) assert that most policies and regulations are obsolete and weak in confronting the challenges and present-day realities. Kyari (2013) articulates the weaknesses of the regulation from the difficulty and confusion to enact exclusive policies and regulations that face the industry and, at the same time, improve technological innovation. For instance, the Petroleum Industry Bill has lingered at the senate chamber for nearly a decade. Baldwin et al., (2012) point out that such rigidity in adapting to changes reflects the downside of top-down command and control system that can be observed in Nigeria.

Correspondingly, the structure of the Nigerian petroleum industry is centred across four significant components comprising (DPR, 2018). namely:
  A. The Legislative Framework considered the main bedrock of the industry
  B. The Administrative and Regulatory Structures.
  C. The oil investors are multinational oil companies (MOCs) and strategic (host communities), non-governmental actors, and local oil operators.
  D. The distinct Petroleum Fiscal Regimes (petroleum arrangements and contracts) that are drawn from the regulatory and legislative regimes, which govern and strengthen the interrelationship of the parties involved and the operation of the petroleum industry.

2.4.1 Legislative framework

A country's petroleum industry's legislative framework comprises of transnational and indigenous bylaws, particularly with recourse to resolution in event of a dispute between MOCs and the host (Udumo, 1998). The Nigerian petroleum legal framework is contained in the main

statutory Act, which includes a collection of contracts arrangements between the MOCs and government and other relevant stakeholders (William, 2001).

More so, a petroleum legal regime of a country contains the policies and regulations, usually through a multi statute framework. A multi statute framework is referred to as a multiple level of government regulatory Acts. The multi stature framework could be found in a separate inclusive law (Subai, 2014). Nigeria as a multi statute, still have a separate principle of petroleum law that typically stipulates fiscal and economic standards, which guides investment in the petroleum industry and the administrative guidelines. Also, sharing of petroleum proceeds amongst the tiers of government and host communities is typically contained in the derivation formula enshrined in the inclusive petroleum law. For example, section 1 of the Nigerian petroleum Act and LFN 2004 (LFN, 2004).

Other Acts that relate to the multi statute legal framework applicable to Nigeria's petroleum industry (Umar, 2014), includes the following Acts:

- Section 44 (3) of the constitution of the Federal Republic of Nigeria 1999.
- Cap 320, LFN 1990 of Nigerian National Petroleum Corporation Act.
- Deep Offshore and Inland Basin Production Sharing Contract Decree (1999).
- Cap 354 LFN 1990 of Petroleum Profits Tax Act (PPTA) as amended.
- Petroleum Act, Cap 350 Laws of the Federal Republic of Nigeria 1990 (LFN), alongside Petroleum (Drilling and Production) Regulations and Petroleum Refining Regulations.

The above legislations were enacted to give legal backing on the strategic/ specific objectives for the government.

2.4.2 Administrative and Regulatory Structures

Governments of the petroleum wealth countries globally continue to exercise a central role towards the affairs of their petroleum industry based on the legislative powers conferred in the Geneva convention 1958. The legislative powers vested an exclusive right of petroleum resource to the national governments of the resource owners (UN, 2006). Pursuant to the Geneva convention, Nigerian government has its own local legislation such as the provision of

section 44(3) of the 1999 Constitution of Federal Republic of Nigeria, Section 1of the Petroleum Act, and the Exclusive Economic Zone Act. These Acts, vested powers to Nigeria government towards controlling and regulating the entire mineral resources under or upon any land in the country and the exclusive economic zone of Nigeria, remains the Federation's property (Umar, 2014).

Nonetheless, the federal government of Nigeria discharges its upstream primary legislative roles in Regulatory, Supervisory and Participatory through its agencies: Federal Ministry of Petroleum Resources, Nigerian National Petroleum Corporation (NNPC) and Department of Petroleum Resources (DPR), as well as its affiliates or subsidiaries as the case, maybe (NNPC, 2016).

a. Federal Ministry of Petroleum Resources

The Ministry of Petroleum was established out of the growing need to formulate and implement sound policies to meet the government objectives in the petroleum industry and serve as the anchor body with international stakeholders such as OPEC (Federal Ministry of Petroleum Resources 2018). Accordingly, the ministry is saddled with regulating, implementing, and articulating policies within the petroleum industry (Umar, 2014). Furthermore, to ensure applicable laws and regulations are conform with, the ministry exerts supervision over stakeholders and international and local oil operators within the petroleum industry under the supervision of the petroleum minister (Federal Ministry of Petroleum Resources 2018). Similarly, the minister is vested with the power of granting distinct licenses- Oil Prospecting License (OPL), oil exploration license (OEL) and Oil Mining License (OML)

b. Nigerian National Petroleum Corporation (NNPC)

Notwithstanding the attainment of political freedom from Britain in 1960, Nigeria's role in the petroleum sector remained elusive regarding policies, regulations, and tax drive until 1969 following the Petroleum 1969 Act (Etikenrentse, 2004). Thus, this development enables the country to participate directly with MOCs operations and was further derived by its 1971 membership of Organization of Petroleum Exporting Countries (OPEC) that fostered the creation of National Oil Companies essential to its member states (Subai, 2014). Consequently, in 1971 a wholly state-owned petroleum company was established known as "Nigerian National Oil Company (NNOC)". Additionally, in 1970 Department of Petroleum Resources (DPR) was correspondingly established to serve as a regulator agency in the petroleum industry

(Subai, 2014). However, both NNOC and DPR were merged pursuance to Decree No 33 of 1977 and formed a new NOC known as today's Nigerian National Petroleum Corporation (NNPC) to increase the then limited workforce and invariably maximise efficiency in the petroleum industry.

The establishment of NNPC as an integrated corporation was to carry out the functions of defunct NNOC, which include petroleum policy implementations and partner with other MOCs operating in Nigeria. The current petroleum operations are undertaken through Contracts-Production Sharing (PSCs) and Risk Service Contracts (RSCs), and Joint Ventures (JVs) (NNPC, 2018). Although some operational variance exists between Contracts (PSCs and RSCs) and JVs, broadly, the PSCs and RSCs arrangements remain exclusively the concession granted to NNPC, which could also be joined between MOCs and NNPC to explore petroleum resources (Gidado 1992). In essence, the production cost and the proceeds under this arrangement are proportionately shared among the whole collaborative parties and according to the sharing formula after tax is deducted respectively (Balouga, 2012). Seemingly, collaboration becomes the most significant means through which Nigeria produce petroleum at present, as it accounts for up to 90 per cent daily production of petroleum (Balouga, 2012).

c. Department of Petroleum Resources (DPR)

Following the establishment of the Federal Ministry of Petroleum in Nigeria as the general overseer of the petroleum industry management, the DPR, however, was developed as an arm of the petroleum industry with the statutory responsibility of ensuring compliance to petroleum laws, regulating, and guidelines in the petroleum industry (DPR, 2018). Hence, these responsibilities include monitoring oil activities at producing wells, drilling spots, flow-stations and production stages. Other duties involve monitoring operation at crude oil export terminals, pump stations, storage deports, refineries, and retail outlets (DPR, 2018). However, other functions and powers of the department include the following:

- Issuance and supervising Licenses and Leases for all operations under the petroleum industry.
- To ensure compliance with health safety and environmental regulations that meets an international and local petroleum industry standard.
- Ensure all payments accruing from petroleum revenue in Royalties, Rents and Bonuses are timely paid to the government.

- To monitor the entire petroleum industry and activities, oil operators meet the policies and goals of the nation.
- Safekeeping records relating to oil reserves, licenses and leases, and production/exports

Despite the number of roles entrusted to Nigeria's DPR, the agency lacks legitimate ground as a regulator as it is not being cited within the constitutional powers of the legislative chamber of Nigeria. Instead, the DPR has been criticised of not effectively regulating the petroleum industry in the country, which has affected the strength of revenue and petroleum resources through inefficient monitoring (Subai, 2014).

2.4.3 Host Communities, Multinational Oil Companies and Indigenous Operators

Although Multinational Oil Companies (MOCs) are usually foreign corporations, evidence revealed how they become the most critical backbone in the petroleum industry globally due to their involvement in E&P contributing to economic development, leading to spontaneous revenue generation (Umar, 2014). However, the host communities represent the key actors who are affected by both the operations of MOCs and indigenous oil operators and have shared interest in the activities MOCs operations in their communities (Wawryk, 2015). Considering the shared characteristics of between the Nigeria's petroleum industry and the communities in exploration and production such as oil piping and gas flaring, investing in host community and multinational relationship is crucial in petroleum development of host state.

2.4.4 Nigeria's Petroleum Fiscal Regimes (petroleum arrangements and contracts)

A petroleum Fiscal Regime (PFR) of a host country comprises a set of applicable laws, agreements and regulations, which govern the economic benefits derived from petroleum exploration and production (Van Alstine 2014). Historically, most developing petroleum wealthier states adopted either a prescribed and inclusive Anglo-American model or, in some cases, a formal Sino-Asian model as a background for setting out rights and obligations towards petroleum development investment among all parties involved in a relatively predictable and regulatory arrangement (Smith, 2000). The two models of the PFRs above are discussed in detailed in the next chapter.

To this end, Nigeria has so far undergone a number petroleum development arrangements since the beginning of petroleum commercialisation in the late1950s. The petroleum arrangements

begin with the erstwhile Concession Arrangement that was in operation during the olden days of the petroleum industry and subsequently replaced through participation arrangements- Joint Venture (JV) and recently Contract (Risk Service and Production Sharing Contracts) (Smith, 2000). These petroleum arrangements are discussed in the subsections below:

I.   Nigerian Concession Arrangement

Under this subsection, the study looks into Nigeria's concessionary arrangement, starting with its historical perspective and its role in the petroleum industry operation. In Nigeria, Concession was first granted to a German corporation around 1908 known as "Nigerian Bitumen Company" until 1937 when Shell-BP took over with exploration rights amid the entire offshore for a period of up to 40 years and 30 years for onshore with optional renewal ability (NNPC, 2017). In reciprocal to the rights for these concessions, it attracts an annual rent payment by the concessionaires to the Nigerian government until the end of the maturity of the concession arrangement. Additionally, local citizens were trained by the oil operators in entrepreneurship, craftsmanship and supervisory functions during the time frame of the concession, pursuance to the Petroleum Act 1969 and Mineral Oil Act 1959 (Oguine, 2011).

Under the then concessionary arrangement, the MOCs held control and operations of the oilfields, but it has since been seized by modern contract-based arrangement with the emergence of OPEC (see 2.1) and decolonisation (Likosky, 2009). Thus, it was necessary by the host states, especially Nigeria, that was extremely at a disadvantage regarding oil proceeds during the colonial concession era. As OPEC member states shift from concessionary-based to contract-based due to the enormous criticism it receives from number of petroleum industry actors as been too exploitative and colonial regarding host state development (Likosky, 2009).

Nonetheless, at present, Nigeria is autonomous as it undertakes direct participation in the upstream operations of its petroleum industry, typically through Joint Venture (JV), PSCs, and other collaborations, holding up to 55 per cent JVs and around 85 per cent of PSCs (NNPC 2017).

II.   Nigerian Joint Venture (JV)

The Joint Venture, also referred to as Joint Operating Agreement (JOA), is the basis for standardised agreement between the government between the State Oil Corporation (NNPC) and the Multinational Oil Companies. The JV designate each party right and obligation upon

such matters regarding the degree and confines of participating interest, managing and regulations, and the sharing formula, including profit or loss and project cost of the scheme (NNPC 2017). An individual partner is entitled to lift and dispose of a share of its production then settle the appropriate taxes (Royalty and Petroleum Profit Tax) discretely (NNPC 2017). Furthermore, under Nigeria's JOA, individual partners can choose and conduct a Sole Risk Operation.

Nonetheless, due to the distinctive nature of the framework for JOA, Wright and Gallun (2008) spelt out five (5) obligatory aspects that serve as consensus amongst the partners, these include:

(I)   Establishment of Operating Committee

(II)   Appointing an Operator, typically

(III)   Project Budget and work programme

(IV)   Abandonment

(V)   Fiduciary, General Provisions and accounting techniques

However, commensurate with the JV operators participating interest, the JV is funded by the partners- the NNPC through its subsidiary National Petroleum Investment Management Services (NAPIMS) and the interested MOCs (Victor et al.., 2010). Nonetheless, the Nigerian government as the host state attracts some form of taxes that include income tax, royalty as well as other fiscal call obligation on gross petroleum production under relevant legislation such as the Petroleum Profit Tax (PPT) and Company Income Taxes (CIT) (Victor et al.., 2010). Accordingly, an assessment and concurrence are undertaken by NAPIMS with regards to budget and annual work plan proposals submitted by the JV operators (NNPC 2017). Also, a proposal of a JV project is carried out by the Sub Committee (SUBCOM) alongside a Technical Committee (TECOM) who gives the expertise on the project. A review would then be carried out on the whole work plan, then packet and treated during the Joint Operating Committee (JOPCOM) session chaired by NAPIMS (NNPC 2017). To understand how the JV arrangement works, joint partners, and participating interest by each joint partner. Table 2.1 below highlights Nigeria's current joint petroleum arrangements, participating/operating interest and oil production lift in barrels/day.

Table 2.1 List of Nigeria's Joint Venture Arrangements

S/N	Operator	Joint Partners	NNPC	Oil production bbl/days
1	Shell (30%)	ELF (10%) Agip (5%)	55%	899,000 in 1997
2	ExxonMobil (40%)	None	60%	632,000 in 1997
3	Chevron Texaco (40%)	None	60%	400,000 approx
4	Agip (20%)	Phillips 20%	60%	150,000
5	Elf (40%)	None	60%	125,000
6	Texaco (20%)	Chevron 20%	60%	60,000

Source: NNPC (2017)

Table 2.1 shows the current number of JV in Nigeria, having NNPC as a major shareholder with an average working interest of 57 per cent, while at the same time serves as funding obligator through JV operation that accounts for up to 70 per cent of Nigeria's oil production (NNPC 2017). The NAPIMS reserves the right to function as the operator, with a number of multidisciplinary project teams and multidisciplinary audit team that all together set up for monitoring functions to ensure the effectiveness of the project through; project control and delivery, improvement of local content, and compliance with status-quo. However, other tasks from audit teams are carrying out periodic audits across the upstream projects to ensure internal control and verify expenditure by creating a data bank to benchmark for estimating costs (NAPIMS 2018).

In addition to the sharing formula for the JVs above in table 2, all JV partners are governed by the fiscal provision tax royal/taxes that include the following:

I. Royalty: This is a revenue accrued to the government at a fixed rate of 20 per cent for onshore fields, while for the offshore areas, it ranges between 18.5 to 20 per cent. The royalty calculation is done based on the price established by the Federal Minister of Finance periodically that accounts for Nigeria's crude oil. price

II. Petroleum Profit Tax (PPT); the tax imposed by the government on proceeds of petroleum for JV contracts at a fixed rate of 65.75 per cent for the companies yet to recover their preproduction expenses and 85 per cent for the JV companies that recovered their preproduction costs.

III. Ring fence: to prevent firms from transferring losses from upstream operations to downstream operations and vice-versa, the whole of the exploration and production (E&P) undertakings of the JV contract is governed by ring-fencing.

IV. Additional taxes: JV contracts are also liable to some other taxes such as Value Added Tax, Import Duties, Educational Tax etc.

V. Income Tax Allowance: notwithstanding the taxes suffered for the JVs above, all MOCs involved in JV operations are also at liberty to enjoy additional allowance. Firstly, capital allowance for all qualifying capital expenditure is granted to the MOCs. At the same time, a carry forward of any capital allowance not sufficient to be utilised in a given period is allowed until it is fully used.

Table 2.2: Capital Allowance Rates

Year	Percentage %
1	20
2	20
3	20
4	20
5	19

Source: Compendium of Nigerian Taxes, 2015

Secondly, to encourage the JV contractors, a relief called an Investment Tax Credit Allowance is also granted to all MOCs engaged in JV contracts to offset their qualifying capital expenditure. See rates below according to locations.

Table 2.3 Rates of Investment Tax Credit

Location		Rate (%)
	Onshore oil	5
Offshore oil		
Up to 100mtrs		10
101 – 200mtrs		15
Over 200mtrs		20

Source: Compendium of Nigerian Taxes, 2015

Lastly, any losses incurred by the companies engaged in JV contracts in an accounting period are allowed to continue indefinitely (PPTA, 1990). That is to say, to arrive at an assessable profit of a company's turnover, losses brought forward from prior accounting periods have to be deducted from the total profit of the current year.

Notwithstanding the mandate and the relative success achieved by Nigeria's JV, Umar (2005) argues that the JV was almost ceased to exist. Umar posits that the continuous government default in meeting its part towards cash call obligation to the JV partners and funding deficit for investment from the corporation. Blake and Robert (2006) associated the payment default

by the NNPC with two significant effects. First, it would result in a long delay towards timely execution of projects, causing deferment to all benefits associated with the project, such as taxes and royalties. Secondly, it could account for accruing interest cost in the event partners carry out the project through funding the NNPC's deficit by a loan from banks as stipulated in the JOA.

However, a sequel to the threats poses by continuous default of NNPC in meeting up with its cash-call obligation to its partners and the goal to secure funds that could finance the scope of E&P activities within the deep offshore and inland basin frontiers zone. The Federal Government has, over the years, obliged to explore other options of oil development, consequently, leads to the adoption of PSCs as the desired alternative.

III.   Nigeria's Production Sharing Contracts (PSC)

Further to the adoption of JV, government participation in the upstream sector also adopted additional contracts, also referred to as production sharing arrangement. The Production Sharing Arrangement, otherwise described as Deep Offshore and Inland Basin Production Sharing Contract Act (PSCA) 1999 as amended, is the contractual arrangement or agreement between the Corporation (NNPC) and Multinational Oil Companies. Under the PSCA, the MOCs are termed contractors, utilised through their technical expertise and financial reserves to explore and produce petroleum resources until oil is discovered, typically in commercial quantity (Adam, 2014). Once discovery is reached, the MOCs production cost is recovered through reimbursement as cost oil on an annual basis from the oil produced until a prescribed period. The remaining crude oil produced, termed as "profit oil", is shared according to the profit royalty ratio, and after that, appropriate taxes are applied (Johnston, 2007). Nonetheless, Nigeria's Production Sharing Contract (PSC) was introduced in 1993, mainly to tackle some specific concerns (cash call obligation) faced by the JOA as well as providing a more appropriate agreement structure to encourage foreign investment in offshore acreage (Adam, 2014).

Under the PSCA Act 1999 as amended, entire Nigeria's PSCs operates on Deep Offshore and Inland Basin contracting zones, accounting for over 40% of Nigeria's total daily oil production (Dpr 2019). More so, PSCs are typically governed through a statutory and contractual term of negotiation between the NNPC as a government representation and the MOCs (NNPC, 2017).

Some of the statutory parts covered by the PSCs comprises health and environmental Safety (HSC), host state participation, ownership of oil resources, petroleum reserves commercialisation, taxation, among other statutory concerns. At the same time, the contractual terms are usually subjected to negotiations such as contract terms and duration, obligation and right of the partners involved, powers and management functions, among others (NNPC, 2017).

Figure 2.1 The Structure of Nigeria's PSC
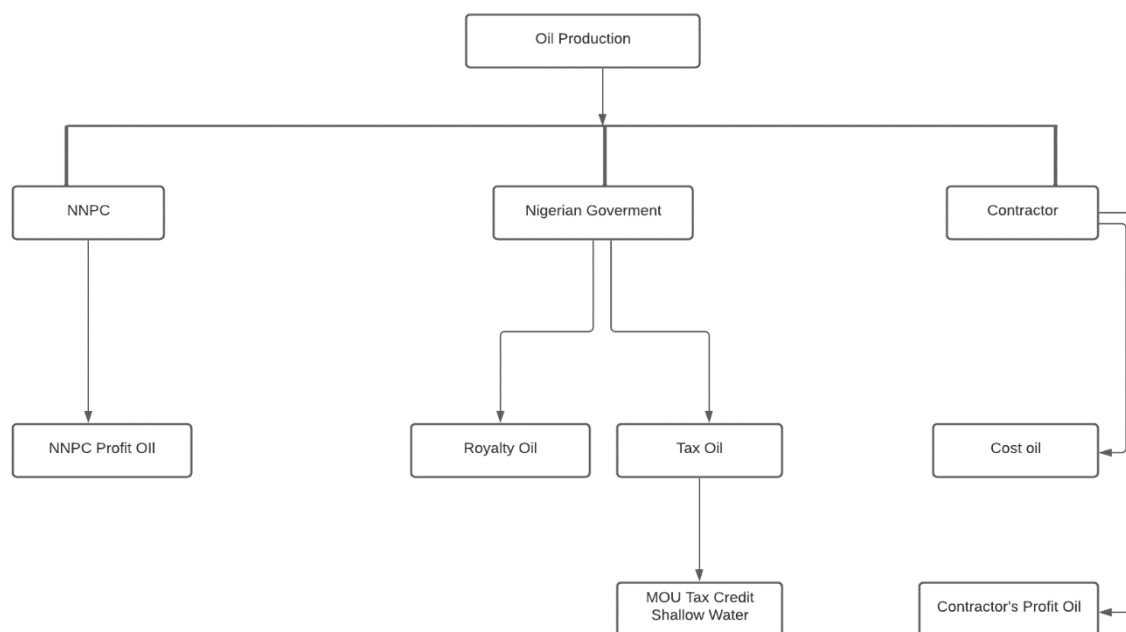
Source: NNPC, 2017

Although contracts have different forms and structures regarding their fiscal terms, the characteristics described above are typically evident in Nigeria's PSCs due to the bargaining power exercised by NNPC in determining contract terms. While issues relating to cost oil, royalty oil, profit and tax oil becomes applicable as stipulated in the terms of contract as well as the Laws of the Federal Government of Nigeria (LFGN).

    a. Royalty: under the PSC, the royalty is to be allocated to the host state through its NOC (NNPC) in such quantity that it will generate an amount of Proceeds equal to the actual royalty payable monthly and concession Rentals payable annually.

b. Cost Oil: is to be allocated to the MOC termed as a contractor in such quantum as will generate an amount of Proceeds sufficient for recovery of Operating Costs.

c. Tax Oil: is to be allocated to the host state through its NOC (NNPC) in such quantum that will generate an amount of Proceeds equals to the PPT liability payable during each month.

d. Profit Oil: this represents the balance of available crude oil after deducting Royalty Oil, Tax Oil, and Cost Oil; it should be allocated to each party based on the sharing formula.

Table 2.4 Profit Oil Percentages split between NNPC and MOCs

Cumulative production (barrels) from Oil Block	Profit Split Percentage	
	Host State (NNPC)	MOC (Contractor)
0 - 250	35	65
251- 500	45	55
501 - 750	55	46
751 – 1000	60	40
1001 - 1500	65	35
over 1500 or 2000	Negotiable	

Source: Compendium of Nigerian Taxes, 2015

Fiscal provisions of PSC

The PSC in Nigeria is governed by both the provisions of Petroleum Profit Tax Act (PPTA) as amended as well as Deep Offshore and Inland Basin PSC Act 1999 as amended, includes the following tax provisions:

a. The determinant factor for royalty payment under PSCs is enshrined within the relevant clauses; Deep Offshore and Inland Basin Act, 1999 as amended, and the provisions of Petroleum (D&E) Regulations, 1990 as amended. On the basis that any offshore block deeper than 1000 meters, the royalty payable is reduced to 0%. Therefore, it is logical to conclude that almost all the PSCs on deep offshore contracting areas in Nigeria are deeper than 1000 meters. Hence, royalties are not paid in effect.

b. Petroleum Profit Tax (PPT): a flat rate of 50% PPT is charged on chargeable profits of MOCs engaged in PSC. Thus, the ratio of the tax liability (50%) is to be split amongst the parties involved (i.e. the MOC and NNPC) under section 3 of the deep-offshore and inland basin act.

c. Investment tax allowance/credit:

TABLE 2.5:   LIST OF PRODUCING PSCs COMPANIES IN NIGERIA

S/n	Corporation/ Holder	Operators	Parties
1	NNPC	Addax Petroleum Development (Nig). Ltd	Addax Petroleum Development (Nig). Limited (APDNL) & Nigeria National Petroleum Corporation (NNPC)
2	NNPC	Addax Petroleum Exploration (Nig). Ltd	Addax Petroleum Exploration (Nig). Limited (APENL) & Nigeria National Petroleum Corporation (NNPC)
3	NNPC	Shell Nigeria Exploration & Prod. Company	Shell Nigeria Exploration & Production Company (SNEPCO); Esso Exploration & Production Nig. (Deepwater) Limited (ESSO), Nigeria Agip Exploration Ltd (NAE); Total E&P Nigeria Ltd (TEPNG) & Nigeria National Petroleum Corporation (NNPC)
4	NNPC	Esso Exploration & Prod. Co. Ltd	Esso Exploration & Production Company Ltd (ESSO) & Nigerian National Petroleum Corporation (NNPC)
5	NNPC	Nigeria Agip Exploration	Nigeria Agip Exploration Ltd (NAE) & Nigerian National Petroleum Corporation (NNPC)
6	NNPC	Total Upstream Petroleum Nigeria Ltd	Total Upstream Petroleum Nigeria Ltd (TUPNI); CNOOC Exploration & Production Nig. Ltd (CNOOC); South Atlantic Petroleum Ltd (SAPETRO) & Nigerian National Petroleum Corporation (NNPC).
7	NNPC	Statoil Nigeria Limited	Statoil Nig. Limited (STATOIL); Texaco Outershelf Nig. Ltd (TEXACO); Nigerian National Petroleum Corporation (NNPC)
8	NNPC	Sterling Oil Exploration & Energy Prod. Co	Sterling Oil Exploration & Energy Production Company Ltd (SEEPCO) & Nigerian National Petroleum Corporation (NNPC)
9	NNPC	Esso E&P Nig. Offshore East Limited	ESSO E&P Nig. Offshore East Limited (ESSO EOE); Total E&P Nigeria Ltd (TEPNG); Chevron Nigeria Limited (CNL); Nexen Petroleum Limited (NEXEN) & Nigerian National Petroleum Corporation (NNPC)
10	NNPC	Agip Energy & Natural Resources Ltd	Agip Energy & Natural Resources (AENR) & Nigeria National Petroleum Corporation (NNPC)
11	NNPC	Enageed Resources Ltd	Enageed Resources Ltd & Nigerian National Petroleum Corporation (NNCP)

Source: FIRS, (2019)

Notwithstanding the distinction between the PSC and the JV arrangements, they exhibit the same management committee composed of 5 members drawn from each respective contractual partner and NAPIMS (NNPC, 2017). The design of this committee that includes different sub-committees is to adhere to all matters related to petroleum activities strictly. At the same time, monitoring and regulations lie in the hands of NNPC through its designated agency NAPIMS as the chair of the Management Committee (NNPC, 2017).

However, to meet up with the current national objective, Nigeria's PSCs relative to JV arrangement, reliefs the federal government from meeting up with cash-call obligation on petroleum production. The pursuit of technology acquisition is also relieved to the government. Other aspects of relief include investment in offshore acreage, employment of Nigeria's citizens, and training and development into the petroleum industry (Umar, 2005).

Table 2.6Comparison Between Nigeria Dynamic Fiscal Regime JV & PSC rrangements

Features	PSC	JV
Title to crude oil	The contractor is entitled to cost oil & profit	JV partner is entitled to the equity portion of JV production
Concession	Wholly owned by NNPC	Owned on participating equity basis
Cash-call Payment	Payable in arrears through crude lifting.	Payable upfront in cash, although payment by crude is possible
Cost monitoring	Has the higher risk of After event proposal as contractor funds the budget 100% from his account	Better controlled under JV arrangement and has a lower risk of after event approval
Margin	Govt is entitled to up to 30% of the profit on every barrel of oil produced	Govt is entitled to 100%margin on every equity barrel of oil lifted
Typical cash inflow to govt & NNPC from a barrel of oil ($18/bbl)	PPT & Royalty— $4,00 Max Profit -- $1.80 Total =. $5.80	PPT & Royalty -- $11,30 Equity Margin -- $ 1.42 Total -- $12.72

Source: Umar (2005)

IV.   Nigeria's Service Contracts

As highlighted in 2.2.2, the Service Contract is a strategic contractual arrangement between the host state and MOCs where the MOCs render all the technical expertise and materials. Still, equity interest and operation of the venture remain with the host state; invariably, the host state through the NOC reserves the right for both the ownership and control in the project (Smith, 2000; Blake and Robert, 2006). Nonetheless, to avoid the previous problem of funding faced by the JV arrangement, Adam (2014) suggested that it is not feasible in reality because of the financial inability of NOC to carry out sole ventures; therefore, the services rendered are recouped either in cash or with oil. However, SC can either be Risk Service or Pure Service contracts, as the case in Nigeria.

Service Contract was developed as an improvement of PSC and was first signed in Brazil SC (Nierum,2010). Accordingly, the Service Contract in Nigeria is relatively new as this type of arrangement was first signed in the year 2000 compared with Concession, JV and PSC. However, under Nigeria's SC arrangement, the Oil Prospective Licensee is the NOC (NNPC). The operator designates the Service Contractor and supplies the entire funds necessary for E&P operations, similar to the PSC arrangement. However, in line with procedures articulated in the contract, contractors' cost is only recouped when the commercial discovery is reached, whilst the contract terminates automatically in the event of no oil discovery (NAPIMS, 2018).

Furthermore, the SC has a five-year duration. At the same time, E&P costs are paid on an instalment basis over time depending on the contract agreement, and the contractor is not entitled to the crude oil produced. However, he may be allowed the option to accept

reimbursement and remuneration with oil (DPR, 2019). Thus, as an incentive for the risk taken, the contractor has the first option to purchase a certain fixed quantity of crude oil produced from the SC area (NAPIMS, 2018). Ado (2016) argues that it is apparent the enormous risk associated with SC resulted in having only surviving SC, which is currently the SC between NNPC and Agip (AENR), despite the eleven SCs that were entered into ELF, Nigus Petroleum and Agip. This development has so far made SC arrangement account for only 0.48 per cent (8,398 barrels/day) of the oil produced in Nigeria during 2012 (NNPC,2013).

2.5 Summary

The above review provides the existing structure, approaches and distinct regulations within Nigeria's petroleum industry. Also, a review outlines the sharing formulas for the contractual frameworks employed by Nigeria's government.

However, the review revealed a number of key issues; firstly, the reveal shows how Nigeria's government undergone a series of policy and regulatory reforms geared towards meeting its strategic objectives in maximising its revenue and governing the oil resources. Similarly, the review outlines how Nigeria employs a multi-statue framework arrangement with a view to make its framework flexible for investors and broaden her revenue base. Thirdly, as a part of the multi-agency approach in the administration of petroleum policies and regulations, various legislations are conflicting in their regulatory aspect.

Finally, despite its acceptance in the upstream sector, the relevance of JVs is becoming obsolete because of the growing concern of continuous government default in meeting her cash-call obligations. Emphasis is now shifted to PSCs and RCSs instead of JVs, which has more clear terms of operations. The next chapter review the petroleum regulatory governance in the petroleum industry.

Chapter Three
Literature Review

3.0 Introduction

This chapter aims to review the literature on regulatory governance, giving rise to the theoretical lens for this research. To achieve the aim of this chapter, the chapter is systemically divided into five sections. Section 3.1 reviews the concept of petroleum regulatory governance, section 3.2 the petroleum fiscal regime's concepts, and section 3.3 the assessment criteria for the petroleum fiscal regime. The strategic objectives of the petroleum fiscal regime for developing the research hypothesis is the subject of section 3.4, and the chapter concludes in 3.5.

3.1 The Concept of Petroleum Regulatory Governance

Regulatory institutions have been established worldwide to tackle social and economic activities (Barth et al., 2006). One of the key objectives of the regulatory agencies is to ensure regulatory governance serves the public interest either locally or transnationally (Ahunwan, 2002). In countries worth billions of dollars of oil and gas beneath the ground, it would be expected that their citizens are well off (Warner, 2015). The petroleum sector is regarded as a significant source of wealth, economic sustainability and human capital development for the producing countries (Lahn et al. 2007). Over the years, slow growth has been witnessed among resource-rich nations compared to resource-poor ones (Warner, 2015), mostly connected to poor governance in the petroleum resource sector (Humphreys, Sachs & Stiglitz, 2007). Zhang (2010) argues that a primary key to a 'good regulatory governance' (GRG) system is credible regulatory agencies that effectively shape the fundamental relationship between the state, citizens, and businesses through a regulatory mechanism that is effectively designed, implemented, and managed for efficient qualitaty service delivery. The central issue is that the petroleum sector's governance, particularly in developing countries, are hampered by several forms of threats, including corruption, weak institution, and government monopoly (Ahmed, 2016). Accordingly, Lahn et al. (2007) relate the poor governance concerns in developing economies with improper and inefficient management of oil and gas revenues, intense economic pressure and the desire for economic liberalisation. Statistically, about 80 per cent of the 52 participating countries in the Resource Governance Index (RGI) failed in good governance based on a 2015 survey in their extractive sector (Ahmed, 2016).

Nonetheless, the petroleum regulatory governance covers a spectrum of mechanisms that begin with designing and implementing techniques and principles, codes, indices, and standards to guide good governance in extractive industry (OECD, 2004; Lahn et al., 2007; Baker, 2012). In support of the principles, the Royal Institute of International Affairs, Chatham House titled "good governance of the national petroleum sector" report outlined five principles of good governance of the national petroleum sector which covers; 1) clarity of goals, roles and responsibility, 2) sustainable development for the benefit of future generations, 3) enablement to carry out the assigned role, 4) accountability of decision-making & performance, and 5) transparency and accuracy of information (Lahn et al., 2007). Subsequent studies on good regulatory governance in the petroleum sector support the view of Lahn et al., especially on clarity of roles (Heller, Mahdavi, & Schreuder, 2014; Marcel, 2016).

Concerning the code of good practices on fiscal transparency, International Monetary Fund-IMF (2007) issued four essential criteria for evaluation of good regulatory governance practices about fiscal transparency in the public sector covering; clarity of roles and responsibilities; open budget processes, public availability of information and assurances of integrity. Although the IMF article was not specifically designed for the petroleum sector, these codes for good regulatory governance directly fit into the operations of petroleum sector governance. For example, the clarity of role and responsibility about a fiscal regime of a given host government could shape the outlook of MOCs appetite for investment. Hence, reporting and disclosing petroleum operations by the regulatory agencies of the host government can reassure confidence to the MOCs in making informed investment decisions, thus, are considered good governance initiatives that spelt out fiscal processes for petroleum sector governance (Lahn et al., 2009).

More so, with regards to the governance indices in the petroleum sector, the Natural Resource Governance Institute (NRGI), established through the merger of the Revenue Watch Institute and the Natural Resource Charter in 2013 (NRGI, 2018), issued two sets of Resource Governance Index (RGI) in 2013 and 2017 (NRGI, 2020). These indices have three components; the first component is called value realization; it measures governance in resource allocation rights, exploration, production, environmental protection, revenue collection and state-owned enterprises. The second component is about revenue management which includes resource revenue sharing, national budget and sovereign wealth funds—the last element in the index measures enabling environment. The enabling environment consists of public

governance indicators consistent with the Kaufman et al. (2010) measurement of public governance quality regarding voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, the rule of law and control of corruption.

Also, concerning the standards on the petroleum sector governance, the effort of Extractive Industry Transparency Initiative (EITI), as a global standard in promoting good governance in the extractive industry, issued a standard with eight essential requirements; 1) sign-up and governance, 2) legal framework, contracts and licenses including the fiscal regime, 3) exploration and production, 4) revenue collection, 5) revenue allocation, 6) social and economic spending including quasi-fiscal expenditure, 7) communicating outcomes and impact, and 8) validation and reporting deadlines (EITI, 2019). These requirements serve as an essential guideline for ensuring good governance in the petroleum sector.

Notwithstanding the usefulness of the principles above, codes indices and standards for evaluation of good governance in the petroleum resources sector, the five principles of good governance of the national petroleum sector outlined by Lahn et al. are considered more appropriate in this study for discussion on petroleum sector governance relative to IMF codes, NRGI index, and EITI standards. The justification for consideration of Lahn et al., principles of good governance is threefold. Firstly, Lahn et al.'s principles of governance and governance functions have a broader scope than the rest mentioned. Secondly, the principles spelt out good governance in the petroleum resources sector and key functionaries in government to ensure effective implementation. Thirdly, the principles are specifically petroleum industry driven.

In contrast, the IMF code is not specifically for the petroleum industry. Also, both the NRGI index and EITI standards are generally focused on the resource and extractive sector. Lastly, the classification of critical functions in the petroleum sector outlined in Lahn et al. are consistent with the functional classification of the petroleum industry in Nigeria based on the key stakeholders outlined by Kyari (2013) in terms of policymaking, operations and enforcement, and also consistent with the structure of petroleum sector governance discussed by Ajayi, Anyanechi, and Salaudeen, (2017) in terms of policy, regulation and commercial operations. Based on the rationale discussed above, the principles for the good governance of the petroleum resources sector outlined by Lahn et al. serve as the basis of discussion for the good governance of the petroleum sector in Nigeria. Other pieces of literature, such as IMF

(2007) governance codes, EITI (2019) standards and RGI (2017), complements the comprehensive review of good governance of the petroleum sector.

3.1.1 Principles of Good Governance

Under this section, the five principles of good regulatory governance are reviewed, which include 1) clarity of goals, roles and responsibility, 2) sustainable development for the benefit of future generations, 3) enablement to carry out the assigned role, 4) accountability of decision-making & performance, 5) transparency and accuracy of information. The discussion begins with a generic aspect for each principle and later narrowed down to the Nigerian context to analyse the extent to which the governance practice in the Nigerian petroleum sector is in alignment with the recommended best practice.

3.1.1.2 Clarity of goals, roles and responsibility

The first principle is clarity of goals, roles and responsibility, which has been considered as a critical factor in the governance of the petroleum sector among the producing countries (Lahn et al., 2007); this is also consistent with the first code of good governance practices of IMF (2007). The role and responsibilities among the agencies should be clear to avoid conflict of interest and duplication of effort; the issues of policy, strategy, operations, monitoring and enforcement should be apparent among the government functionaries within the sector (Sundrarajan et al., 2003; Lahn et al., 2007). In that, clarity in terms of agencies that provided input in the decision-making process to those agencies recommending the course of action and approved the policy and responsible for implementing and monitoring the policy. Mas'ud (2010) suggests that such policy should consider the national context relative to firm-specific policy. Seeming concerns regarding conflict and confusion between the Ministry of Petroleum Resources (MPR) and the National Oil Company (NOC) have been raised on the role of policy and strategy making and the demarcation between the two (Lahn et al., 2007). Focusing on the petroleum fiscal regime, clarity of role and responsibilities on the agency that proposed the fiscal regime, the agency recommends the course of action for approval and the agency that enforce the implementation and monitoring. This process is also consistent with the first code of good practices on the fiscal transparency of the IMF (2007), which spelt out the need for clarity of roles and responsibilities as the criteria for good governance practice and fiscal transparency.

Although, Lahn et al. classifies the clarity of roles into four separate functions, recent literature showed that in some developed countries, specifically, Norway the functions are classified into three; policy, regulation and commercial functions (Thurber, Hults, & Heller, 2011; Doric & Dimovski, 2018). The Norwegian regulatory framework gives right, and duties related to the participant for exploration and production conferred in the PAA, including the generic provision of state and investors, management of exploration and production operations, health and safety, cessation of oil operation and environmental requirements (Nordtveit, 2015).

However, the introduction of Nigeria's Petroleum Industry Bill (PIB) in 2008 was seen as a new beginning for the petroleum sector as it clearly outlines the legal and regulatory framework, institutions and regulatory authorities and their respective functions and goals in the industry (Wahab & Diji, 2017). Subsequently, its introduction in 2008, the PIB experienced numerous revisions on account of its contents that spark intense debate by the stakeholders in the industry. Eventually, the single and comprehensive bill proposed in 2008 was divided into four separate Bills in 2016: The Petroleum Industry Governance Bill, the Fiscal Regime Bill, the Upstream and Midstream Administration Bill, and the Petroleum Revenue Bill (Wahab & Diji, 2017). Furthermore, some changes were made in 2018 to these Bills giving birth to; Petroleum Industry Governance Bill, Petroleum Industry Fiscal Bill, Petroleum Industry Administration Bill 2018, and Petroleum Host and Impacted Communities Development Bill 2018.

The Petroleum Industry Governance Bill (PIGB) proposed a clear regulatory governance structure of the petroleum sector in Nigeria by separating policy and sector strategy functions from the regulatory functions and operational or commercial function (Ajayi et al., 2017). The Bill recognized the Minister of Petroleum Resources as the policy and general strategy formulator responsible for setting the overall sector policy and strategy (Ajayi et al., 2017). However, this is somewhat different from the proposal of Lahn et al. (2007), in which policymaking and strategy-making were considered as two separate roles. Still, it is consistent with the good governance structure of well-managed petroleum sectors such as Norway, which does not separate policy and strategy into differing functions (Doric & Dimovski, 2018). Also, the billing task to establish a commission, "Nigerian Petroleum Regulatory Commission", that serves as a general regulator of the petroleum industry. The commission aims to replace or harmonizes the operations of the Petroleum Product Price and Regulatory Authority (PPPRA), Department of Petroleum Resources (DPR), Petroleum Equalization Fund (PEF) (Ajayi et al.,

2017; Biobaku & Gini, 2018). The regulatory functions of the Commission are expected to cover upstream, midstream and downstream sectors of the industry as proposed by the bill (Ajayi et al., 2017). Lastly, the bill proposed for commercial institutions to serve as the operational role through the split of NNPC into two companies; National Petroleum Company and the Nigerian Petroleum Assets Management Company (Ajayi et al., 2017; Biobaku & Gini, 2018). Hence, the bill's content is consistent with global best practice, as highlighted in the recent literature (Doric & Dimovski, 2018).

Also, a policy issue in the petroleum industry that ensures good regulatory governance is an appropriate petroleum fiscal regime design that encourages investor participation in the oil industry (Swe & Emodi, 2018). Because a stiff petroleum fiscal regime has the potential of chasing away investors from the oil sector (Manaf et al., 2016). Similarly, the Petroleum Industry Fiscal Bill (PIFB) of 2018 addressed the stiffness concern. Specifically, the bill proposed replacing the existing petroleum profit tax with a unified tax system through Petroleum Income Tax and additional petroleum income tax to take care of windfalls gains and oil production based on water depth (Nyoor, Oyebimpe & Iledare, 2019). The comprehensive PIB earlier made a different proposal on the fiscal regime. Oyedele (2018) stated that the initial PIB proposed the payment of Companies Income Tax (CIT) at 30% by all the upstream operating companies. Additionally, the Nigerian Hydrocarbon Tax (NHT) was proposed at 50%, while for offshore above 200 metres depth, the NHT of 25% was proposed by the bill. The new PIFB is expected to enhance the fiscal regime of the industry, thereby improving the international competitiveness of the sector to make Nigeria a preferred destination for oil and gas investors (Saraki, 2018).

Additionally, to ensure more clarity of role, the Petroleum Industry Administration Bill 2018 was also proposed to transform administrative processes of the three sectors of the petroleum industry, including upstream, midstream and downstream sectors. Saraki (2018) highlights that the bill is expected to achieve three strategic administrative goals. Firstly, the bill proposed a framework that will free up undeveloped acreages. The current license and leaseholders are yet to be developed; the essence is to create opportunities for new entrants or investors, thereby boosting investment into the oil and gas industry. Secondly, the bill also proposed a good environmental administrative and management process to be applied by the operators and administrators in the petroleum operators. The bill also offered a good framework that will unleash the operation of midstream activities to open up the market for gas supply and other

downstream products, which will eventually enhance economic growth. Lastly, but not least, the bill provides much-desired legal support for the deregulation of the downstream sector of the Nigerian petroleum industry.

Olawoyin (2018) opined that the proposed bills would empower the petroleum governance institutions and curb bad governance that resulted in inefficiency, ineffectiveness, inequity, corruption, and secrecy in the petroleum industry. Consequently, the proposed bills are expected to provide a legal framework for the activities and operations of the petroleum sector and the clarity of roles among the stakeholders. Unfortunately, the absence of assenting these bills into law has caused Nigeria to lose about N1.74 trillion in 2013, as reported by the Nigeria Extractive Industries Transparency Initiative (Olawoyin, 2018). Lack of transparency in the sector due to the absence of a clear governance framework has resulted in a loss of over $10.4 billion and N378.7 billion resulting from inefficiencies, under-remittances and theft (Olawoyin, 2018). On the scale of the poor governance in the Nigerian petroleum sector, the country was ranked 55th out of 89 countries in terms of resource governance scoring only 42 out of 100 considered poor (NRGI, 2017). In RGI standard rating, only countries that scored 75-100 are believed to have good governance, 60-74 as satisfactory, 45-59 as weak, 30-44 as poor, while 0-30 as failing. Poor performance means a country only established minor procedures and practices for the governance of resources, while significant elements desired for the societal benefit of the sector are missing (NRGI, 2017).

Considering that these bills are yet to be passed into law, the existing practice gives NNPC overbearing influence in the overall activities of the industry, which results in inefficiencies and fraud in the sector due to the opaque nature of the sector activities (Ikeanyibe, 2015). The only regulatory governance aspect that has some clarity of roles in the industry is revenue collection. NNPC is responsible for collecting the government share of crude oil from MOCs and the share of local refining operations as provided in the fiscal arrangement; the FIRS is saddled with collecting petroleum profits tax from oil companies. At the same time, the responsibility of DPR is the collection of royalties, penalties for gas flaring, rents, and other levies (Gboyega et al., 2011). Despite this clarity of role, these institutions were alleged for a persistent lack of coordination in handling the revenue collection activities (Gboyega et al., 2011). It was also opined that the involvement of various agencies (NNPC, DPR, and Federal Inland Revenue Service) in revenue collection adds to the lack of clarity in revenue management in the sector (IMF, 2019).

Regarding clarity of role concerning regulation, Gboyega et al. (2011) noted that while DPR supposed to be an independent regulator but that has not been in practice, the DPR ended up being treated like an arm of the NNPC and receiving directives from it alongside other directives from the MPR. However, the National Oil Companies (NOCs) around the globe are found wanton in the petroleum industry operations. The NOCs expansive and poorly defined roles and, in some instances, undertaking monitoring role instead of commercial operations raises a number of questions on transparency (Heller, Mahdavi, & Schreuder, 2014).

3.1.1.2 Sustainable development for the benefit of future generations

Good regulatory governance of the petroleum resource sector should ensure Sustainable development for the benefit of future generations (Lahn et al., 2007; 2009). Consistent with the second component of RGI, which requires countries with petroleum resources to set up sovereign wealth funds to cater to future generations' needs (NRGI, 2017). It also agrees with requirement 6 of the EITI standards on social and economic spending for sustainable development (EITI, 2019). The fact is that the petroleum sector produces resource, which is finite; thus, the government needs to prioritise sustainability in the industry's policymaking issues to ensure that no compromise is made to the need of the future generation while meeting that of the present generation. Sustainability could be achieved through revenue management, setting up sovereign wealth fund, supporting the non-oil economy to achieve diversification and ensuring local content development through human capital development via education and training. Lahn et al. (2007) further assert that NOC needs to develop strategies to reduce its environmental impacts. That of the Multinational Oil Companies (MOCs) this is to ensure that the future generation's life is not hampered by the environmental behaviors of the current generation. In line with the second component of RGI, a country with oil and gas resources are required to ensure efficient revenue management, including resource revenue sharing, national budget and sovereign wealth funds (NRGI, 2017). Furthermore, requirement 6 of the EITI standards requires an expenditure on social and economic spending, including quasi-fiscal expenditure for sustainable development. By implication, the effective petroleum sector governance should enable a fiscal regime that will promise quasi-fiscal expenditure by MOCs such as social share development costs in local communities and environmental restoration expenditure to enhance environmental sustainability.

Nonetheless, the recent development in Nigeria's petroleum industry implied that the Petroleum Host and Impacted Communities Development Bill 2018 would ensure sustainable

development for the benefit of a future generation when adequately implemented. Because it will have direct economic and social benefits to host and impacted communities from the petroleum operations in their regions (Saraki, 2018). The objective could be achieved by incorporating the Petroleum Host and Impacted Communities Development Trust by every company or companies operating in oil-producing communities (Oke & Oshodi, 2018). More so, the Trust will fund and undertake projects that will benefit host communities and ensure sustainable development through healthcare development, economic empowerment programs, and infrastructural development (Oke & Oshodi, 2018). The bill has been the first-ever legislation specifically designed to protect the host communities since the initial discovery and crude oil exploration in Nigeria (Oke & Oshodi, 2018).

It is important to note that even before introducing the bill, there are several efforts to ensure sustainable development in Nigeria's petroleum sector governance structure. For example, Nigeria has established Sovereign Wealth Fund (Ojibara, 2017) through the Nigeria Sovereign Investment Authority (NSIA) Act 2011 (CBN, 2012). The essence of the fund is to save for future generation and make the country prepare for the eventual depletion of Nigeria's oil resources. The fund also builds savings for Nigerian citizens, enhances infrastructure, and provides stabilisation support in times of economic stress (CBN, 2012). In addition to the Sovereign Wealth Fund, designed to ensure sustainable development for the benefit of the future generation, the Petroleum Technology Development Fund (PTDF) is established to provide training for developing the indigenous workforce of the petroleum sector (Mas'ud, 2011). Also, the Nigerian Content Development and Monitoring Board (NCDMB) founded with the sole aim to build local capacity in the oil and gas industry. The establishment of these agencies is in line with RGI (NRGI, 2017) and principles of good governance of the petroleum sector (Lahn et al., 2007)

3.1.1.3 Enablement to carry out the role assigned

The third principle of good regulatory governance within the petroleum resource sector is to carry out the assigned role (Lahn et al., 2007). Similarly, IMF's (2007) codes have also made similar good practices that recommend a realistic annual budget to support the relevant agencies to carry out their assigned responsibilities. The major challenge in the oil and gas industry is the inability of NOC to meet the obligations under their participation interest, including cash calls and also a mismatch of skills and its concentration between the operator and policymaking arm of the oil-producing countries (Lassourd, 2015). Lahn et al. (2007)

asserted that one of the significant problems of petroleum sector governance is the concentration of skilled personnel in the operating companies (i.e., NOCs and MOCs) at the expense of policymaking arms (i.e., ministry, regulatory agencies and lawmakers). Ultimately, the concentration of skilled personnel in the operating companies makes the policy and regulatory function fragile compared to operational decision-making, making the policy and regulatory arms weaker in carrying out their assigned role due to the shortage of skilled workforce. In addition, issue such as the inability of the NOC to meet its financial obligations in the Joint Ventures (JV), several NOCs have been unable to meet the cash calls in the JVs (Lassourd, 2015). The default financial obligation makes NOC ineffective in executing its mandate due to a lack of funding resulting from budgetary inefficiencies and the inability to hire highly competent personnel (Lassourd, 2015). To address this financial bottleneck that hampers carrying out government operational function, code number two of good practices on fiscal transparency recommends a realistic annual budget. The budget should be prepared and presented within a broad medium-term fiscal policy, and microeconomic framework rules and targets spelt out. The budget would equip the NOC with nontolerance to inefficient remittance of its fiscal share from the JVs and competent enough to handle its fiscal and personnel obligations in every fiscal arrangement with MOCs operating in its petroleum resources sector. Therefore, Lahn et al. concluded that when monetary allocation is made to NOCs year by year through the government budget, its long-term planning and investment would be difficult. However, Lahn et al. recommended a sound regulatory/legal framework, possession of knowledge, skills and experience to enable the regulators to carry out their duties because these have been the significant challenges affecting petroleum sector governance over the years.

In Nigeria, one of the significant issues in enablement to carry out assigned role is the lack of autonomy of regulator function. Gboyega et al. (2011) asserted that DPR, which supposed to carry out its regulatory function independently without interference, ended off being an arm of MPR and NNPC from which it receives directives. Moreover, NNPC that supposed to be an operator or commercial entity ended off having an overbearing influence in the overall operations of the industry, which results in inefficiencies and fraud in the sector due to the opaque nature of NNPC (Ikeanyibe, 2015). Moreover, there are have been a lack of requisite skills in the National Assembly and MFR, which negatively affect the undertaking of desired legislative and policy roles in the sector (IMF, 2019).

3.1.1.4 Accountability of decision-making and performance

The fourth principle of good petroleum regulatory governance is the accountability of decision-making and performance (Lahn et al., 2007). Consistent with this principle, the IMF's (2007) code of good practices on fiscal transparency requires that a provision be made to the public for comprehensive information encompassing past, present and anticipated fiscal activities and their associated fiscal risks. The information provides some assurance to the citizens that the decision-makers, both individuals and institutions, are accountable to higher authorities and the public. An objective assessment of their performance can be easily made. The fact is that the absence of accountability enables the flourishment of corruption and malpractice (Lahn et al., 2007). In NOCs, its officials must be accountable to the government, which the public entrusts its natural resources. Eventually, the government is responsible for a society based on the revenue received from natural resources. To achieve this, there should be mechanisms that will hold policymakers accountable to the public, benchmark NOC performance, provide incentives for better accountability, and promote the role of parliament and civil society in ensuring accountability. In support of this, IMF's (2007) code of good practices on fiscal transparency provides for the presentation of fiscal information in such a way to enable policy analysis and facilitates accountability. Lahn et al. (2007) concluded that where parliament exists, it can play a critical role in enhancing accountability because their involvement can assist the public and society understand the benefits of oil and gas companies through improved checks and balances. Thus, the participation of parliament in the passing of the appropriate fiscal regulations can boost public confidence in the accountability of the policymakers in the petroleum industry.

In Nigeria, the National Assembly is always expected to ensure check and balances in the activities of the executive and hold them accountable for their decisions and performance. In support of this point, Kyari (2013) stressed that Nigerian National Assembly is the parliament and representative of the people and communities that received a share of the blame if there are inefficiencies within the operational side of the economic importance oil and gas sector. While this is the expectation, however, Okafor (2018) reported that National Assembly failed to utilize its constitutional power to ensure sustained transparency in the oil industry. These legislative inefficiencies have made it enormously difficult for the Nigerian legislators and their relevant committees to ensure accountability through reforms that could clean up sharp practices in the oil and gas sector (Okafor, 2018). In Nigeria, a report by IMF (2019) suggested the need to strengthen the relationship between the Office of the Auditor General of the

Federation and the relevant committees of the National Assembly to enhance the effectiveness of legislative oversights over the operations of NNPC.

3.1.1.4 Transparency and accuracy of information

Transparency and accuracy of information is the last principle of good governance of the petroleum sector identified by Lahn et al. (2007; 2009). The current study adopted the Royal Institute of International Affairs (RIIA), Chatham House Principle of Good Governance. The principle is consistent with requirement 7 of EITI's (2019) standard of good governance, which requires communication of outcomes and impact to ensure transparency. It also agrees with IMF's (2007) codes which require commitment towards the publication of timely fiscal information to ensure transparency in governance. The effectiveness of transparency and accuracy of information depends on relevant, reliable and timely information (EITI, 2019). The fact is that transparency uncovers corrupt practices, enables earlier identification and ratification of problems and builds trust in the system. To achieve this, Lah et al. (2007) stressed the need for transparency of data between government and the operator, transparency in licensing, procurements in fiscal contracts, and incentives for the effectiveness of transparency initiatives. There should also be transparency in all financial scale arrangements between the ministry, the treasury and the NOC. Also, where MOCs serves as operators in JVs, especially n community project, the information must be made available to the government to enable policy coordination (Manaf et al. al 2016). Specifically, transparency is also in the financial arrangement between government and investors as it has been seen as one of the theoretical criteria for assessing the attractiveness of fiscal regime e in the petroleum industry (Treasure, 2012; Manaf, Mas' up, Ishak, Saad, & Russell, 2016). Therefore, Lahn et al. concluded that publication of the criteria for bids assessments, openness in bidding processes for both exploration license and tendering and publishing the petroleum fiscal agreements would likely improve public confidence in the fiscal system of the petroleum industry.

Transparency and accuracy of the information in Nigeria are achieved through oversight of NEITI, which issues standards to ensure government transparency in all the fiscal arrangements between the ministry, the treasury, and the NOC. NEITI is a Nigerian chapter of EITI which provides standards for international best practices in the good governance of oil, gas and mineral resources in the entire value chain of the petroleum sector (IMF, 2019). NEITI being an institution that ensures transparency and accuracy of the Nigerian petroleum sector information, has severally highlighted essential concerns relating to accountability and

transparency due to increased deductions from revenue over the years (IMF, 2019). Through the NEITI's efforts, recently, NNPC has been publishing monthly operational and financial reports and petroleum statistics and annual statistical bulletins. Eventually, the board of EITI (the global body) noted that Nigeria is the first Anglophone African country that reached a 'satisfactory level of progress in implementing its governance standards. Hence, it implied that NEITI had played a vital role in the oil and gas industry by improving financial disclosure standards, which eventually enhance the transparency and accuracy of the information in the petroleum sector in Nigeria.

Despite the evidence on the impact of regulatory governance in the petroleum industry globally (Lahn et al., (2007); Kaufman et al. (2010); Hunter, (2015); Chandler, (2018)), few studies (Tijjani, 2014; Amauobogha, 2015) have considered Nigeria. However, the focus of studies was mainly on the downstream and or license governance. The available literature has not focus on good regulatory governance towards the implementation process of petroleum fiscal regime in the upstream sector. Hence, highlight the need for a study to fill gab this gab.

It is important to note that in addition to the overall petroleum sector governance discussed in line with Lahn et al. with support of other literature such as IMF governance codes, EITI standards and RGI, different tools and approaches govern the extraction of petroleum resources (Abdo, 2014). Two governance approaches for mineral resources extraction have been identified as the Proprietorial Regime and Non-Proprietorial Regime. A proprietorial regime is a form of mineral governance in which the mineral resource owner does not participate in the governance activities of the sector, only receives royalty and taxes to avoid free access to the resources (Abdo, 2014). The proprietorial regime otherwise called the concessionary system (Johnson 1994).

In contrast, a non-proprietorial regime is a form of mineral resources governance in which the mineral resource owner controls the ownership of the oil industry through participation and a fiscal regime based on the taxation of excess profit (Abdo, 2014). The non-proprietorial otherwise called contractual arrangement (Nakhle & Lassourd, 2019). The development of these governance tools and approaches to mineral resources extraction results in various petroleum fiscal regimes worldwide (Kaiser & Pulsipher, 2004). These fiscal regimes are discussed in the following subsection.

3.2 Petroleum Fiscal Regime

In this section, the concept of the petroleum fiscal regime in terms of its definition and considerations for selecting the appropriate fiscal tool has been discussed. Furthermore, the section also discussed different forms of these regimes, followed by the fiscal regimes in Nigeria, including both proposed and implemented from the commercial discovery of oil in 1958 to the present.

3.2.1 Concept of Petroleum Fiscal Regime (PFR)

Scholars and institutions have defined a petroleum fiscal regime in different forms. Russell and Bertrand (2012) described a petroleum fiscal regime as a total sum of imposition made by the state on an investor in line with a specific fiscal arrangement (e.g., concessionary arrangement, production sharing arrangement or service contract arrangement) between the government and the investor supported by relevant legislation. In another study, the petroleum fiscal regime has been defined as a set of fiscal tools or instruments (taxes, royalties, dividends, etc.) that determine the allocation of revenues from oil and gas projects between governments and private oil companies (NRGI, 2015). Furthermore, it was elaborated as the fiscal tools applied in designing petroleum fiscal regime should be within the country's legal framework for the oil and gas sector, including laws, regulations and contracts (NRGI, 2015). Similarly, the PFRs are always designed by the state to get a fair share of the wealth that accrues from its petroleum sector without discouraging investors from making the desired investment for optimal exploration of such natural endowments (Ripley 2011). Nakhle (2010) defined an attractive petroleum fiscal regime as the tool that ensures fair and equitable allocation of oil and gas wealth between the host government and investors.

NRGI (2015) suggested that the state should make many considerations in selecting an appropriate fiscal tool in designing a good fiscal regime for the benefits of both the states and the participating private companies. Furthermore, the investors' concern should be taken into consideration in choosing the fiscal tools to attract the desired investment that will boost the productivity and attractiveness of its petroleum sector (NRGI, 2015). Accordingly, the NRGI (2015) suggests the considerations expected by the state; first, an understanding of the variety of fiscal tools used to create a fiscal regime that governs the oil and gas sector (i.e. royalties, taxes, production sharing, and bonuses) and selects the most appropriate. Second, in choosing the suitable fiscal tools, the state needs to choose an appropriate fiscal tool depends on crucial

factors such as the timing of receiving revenues by the state, the expected share of investment risks, the ability to respond to changes in profitability resulting from oil prices volatility and the potentials to promote new investment (NRGI, 2015). In case of timing for receiving revenue, royalty as a fiscal tool gives the state the potential to earn revenue even at early years of exploration and, of course, in loss-making years (McPhail et al., 2009). In case of prospects to promote new investment, a highly stiff fiscal regime can chase away investors and reduction potentials for new investment (Manaf et al., 2016). Lastly, the state needs to consider designing a robust fiscal regime that can avoid loopholes used by investors to lessen their financial obligations within a fiscal arrangement or reduce the amount they are supposed to pay to the government (NRGI, 2015).

Furthermore, Smith (2012) outlined additional considerations to be made by the state in improving the performance of its selected fiscal arrangement. Firstly, the state should ensure that such an arrangement can raise revenue for the host country and investor in choosing a fiscal arrangement. Secondly, it should select a fiscal regime with no potential distortions effects on private sector investment, which means that the fiscal regime should have the potential to attract future investment. Lastly, the fiscal arrangement should ensure equitable risk-sharing between the government and investors. Following the divergent considerations that the state needs to make in selecting fiscal tools for designing better fiscal regimes, it has resulted in many forms of fiscal regimes globally (Kaiser & Pulsipher, 2004).

3.2.2 Forms of Petroleum Fiscal Arrangements

There are different forms of fiscal regimes around the world, the reasons for having divergent forms of fiscal arrangements have been outlined by Kaiser and Pulsipher (2004). Firstly, a single country can simultaneously have different forms of fiscal arrangements. Secondly, each fiscal arrangement designed by the state has its specific fiscal provisions, even when the name is somewhat similar. Finally, negotiation and renegotiation following changing political and economic situations that alter the profitability of a project mainly result in creating different types of fiscal arrangements. Regardless of the numerous forms, a fiscal regime typically falls under one of two fiscal arrangements, as shown in Figure 3.1. The fiscal arrangement can be either concessionary or contractual.
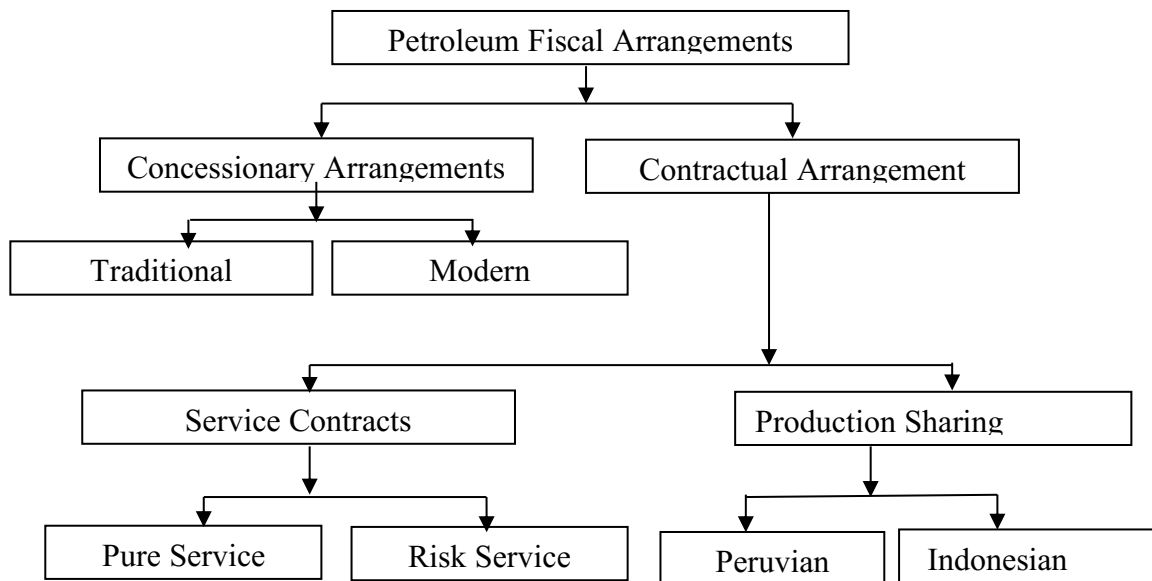
Fig. 3.1 Forms of Fiscal Arrangement (Johnston, 2006:60).

3.2.2.1 Concessionary Arrangement

A concessionary system is a form of fiscal arrangement that uses only royalty and tax (Swe & Emodi, 2018). Nakhle (2008) described a concessionary system as a form of fiscal arrangement a host country (represented by NOC) grant an exclusive exploration right to the private oil and gas companies by solely taking the expenses and the risks within a specified area for an agreed period. The concessionary arrangement has been the oldest and major fiscal arrangement practised worldwide (Likosky 2009). According to (Johnston 2006), before the 1960s, the only fiscal arrangement been practised globally is a concessionary system. He argues that one of the critical features of the concessionary system is that the resource owner or the state is not attached to any form of financial obligations by this form of arrangement. In essence, the state grants exclusive rights to private oil and gas companies for the exploration, development and production, and sales of natural resources in the international market, whereby the private oil and gas company pays royalty and taxes to the resource's owner (Johnston, 2006).

However, in Its traditional form, the concessionary arrangement is designed in such a way that the host country granted an exclusive right to private oil companies to explore and extract oil and gas resources. Thus, upon discovering commercial quantity, the private oil company can develop and produce oil and pay a royalty based on oil produced. The percentage and mode of payment of royalty vary; for instance, where the royalty is paid in cash, the private oil company take the title of the whole 100% of the production. However, if the royalty is paid in oil, and assuming the percentage is 10%, the private oil company takes the title of 90% of the

production (Johnston, 2006). Moreover, the private oil company also need to pay taxes on the profit of oil and gas sold (Johnston, 2006). Additionally, the state also benefits from the concessionary system through fiscal charges and obligation imposed on private oil companies, such as signature bonuses, import and export duties, and market obligations (Kyari 2013).

Development in petroleum regulatory governance and its fiscal system has resulted in some criticisms of traditional concessionary arrangement for some reasons. Firstly, the concessionary arrangement is characterized by long-term durations of approximately 50 years and up to 75 years in some cases. Secondly, after granting the exclusive right to private oil companies has weaker control over the resources. Thirdly, the state over derives lower benefits from the production activities, covering royalty and taxes (Likosky 2009). Lastly, it offers extensive geographical area coverage to the private oil companies while the financial compensation from investors to host countries and communities resulting from environmental damages is lacking. Among other factors, these criticisms are responsible for the emergence of modern concessionary systems and, ultimately, the contractual arrangements (Likosky 2009).

To address the criticism of traditional concessions such as the high level of control by the private oil companies and less control by the state, the modern concessionary arrangements reduces the control of the private oil companies from more prominent geographical location to the wellhead level (Likosky 2009, Kyari 2013). Moreover, the modern concessions offer room for participation by the state via NOC as its representative. Also, it places additional obligations upon private oil companies (Hackman, (2009). Furthermore, Hackman (2009) asserted that in addition to royalty and taxes, the modern concessions provide flexibility to the host countries to collect additional taxes, especially when resource windfall gains. Despite its attempt to address the challenges of traditional concessionary arrangement, the modern concessionary also has peculiar challenges. The challenges of modern concessionary include lengthy and resources consuming licensing rounds and the absence of flexibility in the location of resources extraction area (Hackman 2009). Countries such as United Kingdom, Norway, and countries in the former Soviet Union, still practice concessionary fiscal arrangements (Mas'ud, 2016).

3.2.2.2 Contractual Arrangements

The schematic presentation of fiscal arrangements in Figure 2.1 above showed that contractual agreements are of two categories; these are Production Sharing Contract (PSC) and Service Contract (SC). The first category, the PSC, is of two types; the Indonesian and Peruvian types,

so the second category SC, is also of two types; Pure Service Contract and the Risk Service Contract. These types of contractual arrangements are discussed in the following subheadings.

3.2.2.2.1 Production Sharing Contract

The PSC was first introduced in 1966 by Indonesia (Fabrikant 1975, Machmud 2000). It was introduced in response to the shortcomings of the concessionary system. Roach and Dunstan (2018) defined PSC as a contractual arrangement that allows host countries to maintain sovereignty over their oil and gas resources, while private oil companies and NOC (as a representative of host government) serve as contractors host government. The contractors assume exploration and production risks, where oil and gas are produced in commercial quantity, the contractor recovers their costs from the share of production. After that, they get profit oil after the cost recovery. Pongsiri (2004) considered PSC a contractual arrangement in which the state maintains the ownership of resources while a private oil company is contracted to provide technical and financial services. The contractor assumes the entire exploration and development risks for which a specified share of production is received as compensation for such technical and financial commitments. In its original form as designed by Indonesia, the PSC has the following features as highlighted by Johnston (1994):

- The state maintains the ownership of the resources.
- The NOC maintains management of the contracts
- Private oil companies serve as contractors, which submits work program, plans, and budget approved by the state.
- The contractors assume the entire risks.
- The state receives a royalty based on production.
- A limit of 40% is typically fixed for cost recovery, which can run for many years until fully recovered.
- The remaining oil, called profit oil, proceeds after deduction of the royalty and cost recovery oil and is shared between a private oil company and NOC at the ratio of 65%:35% in favour of the NOC.
- Private oil companies pay tax on their profit oil through the NOC.
- Properties procured through the project remains that of NOC after the project completion; and
- The total entitlement of the private oil companies is cost oil plus profit oil (net of tax).

From the above features of PSC, as outlined by Johnston (1994), it can be said that PSC has four main components, royalty oil, the cost oil, the profit oil and the tax, which is mainly paid in cash.

As earlier mentioned in *3.2.2.2*, there are two types of PSC: Indonesian and Peruvian. The PSC requires private oil companies to pay royalty and taxes to the government while receiving cost oil and profit oil in its Indonesian form. While the royalty oil is paid based on production, the tax oil is paid based on profit oil (Machmud, 2000). The introduction of the PSC regime in Indonesia has yielded significant results in its initial ten years of introduction, and the country became investment destinations for multinationals despite that the model was seen as favourable to the government as it conferred more control to it over the sovereign resources (Machmud, 2000). Notwithstanding, the private oil companies also consider the system favourable due to guaranteed share of production and reasonable control over resources. In fact, in the mid-1970s, the Indonesian type of PSV was seen as a significant and leading framework for cooperation between private oil companies and the state. However, considering the changes in its attractiveness to international investors and competitiveness compared to other countries, the Indonesian model is no longer favourable to foreign investors (Machmud 2000). Eventually, in 2016 introduced Gross-Split PSC Regulation replaced the Cost Recovery PSC Regulation earlier introduced in 1966 (Roach & Dunstan, 2018). The new system by the Indonesian model abolished the cost recovery principle, whereby the split of cost is made at the gross level of oil and gas produced, then unrecovered exploration, development, and production costs are tax-deductible from the perspectives of the contractor from its share of gross revenue (Giranza & Bergmann, 2018; Nugroho, 2019; Roach & Dunstan, 2018).

The Peru PSC was introduced around 1971, 1978 and 1980 (Johnston 1994). The key difference between the Indonesian and Peruvian model is royalty provision. In contrast, the royalty is provided in the former such as has not been provided in the latter. Also, the profit oil differs; private oil companies take between 40% to 50% depending on the risks assessment in the Peruvian model while only 35% in the Indonesian model (Johnston 1994). It was argued that the workability of this model depends on whether the petroleum sector is well-developed, that is if there is good knowledge about the geological structure of the country which will give some reasonable assurance for the success of the project (Bindemann, 1999). This model faced some challenges, mainly resulting from tax changes in the US giving the fact that most of the oil firms in Peru are US firms. To address this, the Peruvian government enact a law in the

1980s requiring all the operating firms to pay tax on their net revenue to attract investment (Johnston 1994, Bindemann 1999). This contractual arrangement is no longer practicable even in Peru (Johnston, 2017).

3.2.2.2.2 Service Contract

Service Contracts have been defined as a form of the contractual agreement through which a private oil company is contracted as a service provider to explore, develop, and produce oil using its own technical and financial resources. At the same time, the ownership of the project remains with the NOC. However, when the discovery of oil is made in commercial quantity, reimbursement is made to a contractor through oil and gas together with a fee for oil for the services rendered based predetermined rate (Johnston 2006). While PSC has remained the primary contractual arrangement practised worldwide, only a few countries commonly practised SC (Johnston 2006). Though there are two forms of SC, however, regardless of their structure, the following are standard features of SCs (Bogdanich *et al.*, 2013):

- Private oil companies undertake the development, operation, and maintenance of oil and gas fields, while NOC retains the ownership and control of the reserves.
- While private oil companies incurred the upfront capital investment and initial cost, such is wholly reimbursed as at agreed period mainly after the first oil.
- In addition to the cost reimbursement, private oil companies also receive a remuneration fee; the payment of this fee is mainly made in oil rather than cash, and fee payment is commonly made on a performance basis.
- Private oil companies pay tax based on the fee received.
- Decommissioning of oil and gas installations remain the responsibility of the Government or its NOC.

As noted in Figure 2.1, there are two common types of SC: Pure Service Contract and Risk Service Contract (RSC). Pure Service Contract is a form of SC in which a fixed remuneration attached to profitability is given to the service provider. Where remuneration payment is based on profit but not on a flat rate, such SC is called risk service contract (Johnston 2006). A pure service contract is simpler than a risk service contract. Under a pure service arrangement, a private oil company is contracted to perform on a fee basis. It would be reimbursed for all financial commitment incurred irrespective of whether a commercial discovery is made. By

Implication, the government bears the entire risk of the project, not the private oil company (Omorogbe, 2001; Smith, 1991). Differently, Omorogbe (2001) and Smith (1991) defined a risk service contract as a form of SC in which the government contracted a private oil company to explore oil at its own risk. In this, two situations could emerge; where the discovery is made in commercial quantity, the private oil company can recover its exploration, development and operational cost and receive payment for the services rendered. On the contrary, where the discovery is not commercial, the company can only recover its operating cost (Faizli, 2012).

It is important to note that apart from these two forms of SC, Ghandi and Lin (2013) reported that countries modified the SC to suit their need and the concerns and negotiations with private oil companies. Based on these modernisations and reformation of SC, Ghandi and Lin (2013) and Ghandi and Lin (2014) provide the summary of the forms of SC being practised among some countries around the world today is contained in Table 3.1 below.

Table 3.1: Illustration of Countries with Service Contracts

Country	Nature of the Service Contract		
Iran	Buy-Back Service Contract First Generation (Signed 1995)	Buy-Back Service contract second-generation (announced 2004)	Buy-Back Service Contract Third Generation (Signed 2009)
Kuwait	Service contract (Signed 1992)	Operating Service Contract (Announced 1999)	Enhanced Technical Service Agreement (Signed, 2010)
Venezuela	Operational Service Agreement (First Round Auction 1991)	Operational Service Agreements (Second Round Auction)	Operational Service Agreements (Third Round Auction 1997)
Mexico	Multiple Service Contract (Announced 2001)	Incentive-based Multiple Service Contract (Announced 2009)	Incentive-based the Multiple Service Contract (Second Round Auction Announced 2012)
Bolivia	Operation Contract (First Announced in 2006)		
Ecuador	Service Contract (Announced 2007)	Incremental Production Contract (Signed 2012)	
Iraq	Producing Field Technical Service (2009)	Development and Production Technical Service Contract (2009)	Third (2010) and Fourth (May 2012) Rounds Auctioning Technical Service

Source: Ghandi & Lin, (2014)

It is evident that most of the countries that practice SC are highly resource-rich, where the government is willing to take a risk-based on the high potential for oil and gas project success.

3.2.3 Petroleum Fiscal Regime in Nigeria

Since the first discovery of oil in Nigeria in 1956, the country has experienced different forms of petroleum fiscal arrangements, which give birth to various fiscal regimes (Wahab & Diji, 2017). Ranges from the concessionary system before 1973, to Joint Operation Agreement (JOA) effective from 1973 and PSC effective from 1999 (Edward, 2015), with some of these having different regimes as discussed below.

3.2.3.1 Regime under the Concessionary System

The concessionary system was the first fiscal arrangement to be practised in Nigeria since the oil discovery in the onshore basin of Oliobiri in 1956 (Edward, 2015). Like any other concessionary arrangement, the Nigerian system also requires private oil companies to pay royalty on production and taxes based on profits. This fiscal regime had been in practice until 1969 when Joint Operating Arrangement, otherwise called JV, was introduced through the petroleum Act 1969 (Mmakwe & Ajienka, 2009). While the regime guarantees revenue to the government via royalty and taxes, it was criticized for lack of control of sovereignty of national resources, which permit joint participation arrangement (Edward, 2015).

3.2.3.2 Joint Venture (JV) Regime

The promulgation of the petroleum Act 1969 gave birth to the participation arrangement through JVs within the Nigerian oil and gas industry (Edward, 2015; Mmakwe & Ajienka, 2009). This development brought some changes to the concessionary systems regarding granting oil prospecting license, oil exploration license and oil mining lease (Edward, 2015). The new regimes' implications are to earn additional revenue for these licenses and leases and exercise control over its resources since these licenses and leases are time-based. Some of the provision under the new regime is a royalty of 20%, government participating through the controlling interest of mostly 60% and tax based on the profit of the private oil companies (Babajide et al., 2014). While some JVs are still in operation in Nigeria, the issuance of new JVs ceased in 1973 when PSC was introduced (Edward, 2015; Babajide et al., 2014). However, 70 per cent of oil and gas production in Nigeria is achieved through JV (Gboyega et al., 2011). Although JVs enable the government to exercise control and participate in the extraction governance of the petroleum sector (Edward, 2015; Ifesinachi & Aniche, 2014), there are still challenges relating to the government's failure to meet the cash calls when required (IMF, 2019). Specifically, Ifesinachi and Aniche (2014) asserted budget delays and cuts has made

NNPC unable to fund its participating interests, which remains a significant challenge for JVs in Nigeria.

3.2.3.3 PSC Regime under Deep Offshore and Inland Basin Act 1999 and Earlier

Another form of Joint Participation Arrangement is PSC. This contractual arrangement accounted for 25 per cent of oil and gas production in Nigeria (Gboyega et al., 2011). It was first signed in 1973 between NNPC and Ashland in July 1973. Ashland (MOC) was required under the agreement to provide the finances and expertise necessary for the exploration activities (Edward, 2015). The PSC of 1973 offered some benefit to the government such as a duration of 20 years with five years extension, which was not available in JVs, title to the petroleum is at well-head unlike acreages in JVs, risks and revenue sharing as well as recruitment and training of Nigerians by the contractor (Ogunleye, 2015). However, despite these benefits, 1973 experienced some changes such as lack of experience from part of NNPC, lack of management committee, title to oil that was supposed to be at well-head passes at the point of export, and the contract lopsided in favour of Ashland.

Following the identification of the above lapses, other PSCs were signed in 1993 licensing rounds through the first set of deep offshore and inland basin acreages (Ogunleye, 2015). Despite this shift to PSC since 1973 and the first deep offshore and inland basin licensing round, there had been no law that regulates the new regime until 1999 when Deep Offshore and Inland Basin Production Sharing Contracts Act No. 9, Laws of the Federation of Nigeria, 1999 was promulgated (Ameh, 2006; Babajide, et al., 2014). Other PSCs were signed through numbers of licencing rounds, including 2000, 2005, 2006 Mini, and 2007 (Ogunleye, 2015).

One of the key provisions of this PSC regime was a signature bonus of USD10 million to USD25 million based on land space measured square metres. It also provides for a production bonus of 0.1 to 0.2% based on barrels of oil produced. There is also a provision for royal of 20% for onshore and 0% to 18.5% based on water depth of above 1,000 metres and less than 100 metres, respectively (Babajide et al., 2014). Like any other PSC, this regime also provides for cost oil recovery and profit oil and taxes by private oil companies based on their profit (Wahab & Diji, 2017). The current tax rates for these PSCs are based on Petroleum Profit Tax Act 2004 (as amended), which provides for the payment of 65.75 for the first five years for new companies and 85% for companies that are in operations for more than five years (Wahab & Diji, 2017).

58

However, despite its benefits, the regime is also associated with some drawbacks; there has been a lack of flexibility of the fiscal terms because every review of fiscal provision must pass through the legislative process when the oil price exceeds USD20, which is time-consuming. Also, the regime has not made it clear how to review fiscal terms when the oil price exceeds the threshold of USD20, which created ambiguity and a lacuna in the regime (Ogunleye, 2015). Due to these issues mentioned, there has been no review of the fiscal terms of 1993 PSC which resulted in outstanding debts from the contractors in those periods where oil price exceeds USD20; this was estimated at USD 62.1 billion (Bala-Gbogbo, 2019). There are also lack provisions in 1993, 1999 and 2000s PSCs on charging tax and royalties on contractors based on windfall profits (Ogunleye, 2015); this is usually made by contractors when oil price soared (Omorogbe, 2001) These weaknesses have been addressed in the subsequent PSCs discussed below.

3.2.3.4 PSC Regime under Petroleum Industry Bill (PIB) 2008

The PIB was first introduced in 2008 to provide a well encompassing and comprehensive governance framework for the Nigerian oil and gas industry. However, it was later dismantled into four bills (Wahab & Diji, 2017) as discussed under 3.1.3. This bill provided important fiscal changes that would have given a new regime in the petroleum industry. Some of the fiscal changes under this regime are production-based sliding scale royalty based on daily production of $\leq 25,000$ barrels per day at 5%, $25,000 - 50,000$ barrels per day at 12.5%, while $> 50,000$ at 25% (Saidu & Mohammed, 2014). It also provides for price-based sliding scale royalty; $\leq \$60$ at 0.0%, $\$60 - \$100$ at 0.4%, $ \$100 - \$140$ at 16% + 0.2%, $\$140 - \$170$ at 22% + 0.1% and $> \$170$ 25% (Saidu & Mohammed, 2014). The regime also adjusted the cost recovery based on; (a) it is limited to a maximum 80% or such lesser amount as determined by the NNPC, and, b) sliding scale may be applied to such percentage based on volume, price or other variables as provided in the contract (Saidu & Mohammed, 2014). Also, the regime provided a 50% assessable tax for onshore and shallow waters and a 30% assessable tax on the frontier and deep waters. Lastly, the regime provided company income tax paid by all companies, contractors, concessionaires, subcontractors, licensees, and lessees pursuant under the Companies Income Tax Act.

Though the PSC regime under PIB tried to address the challenges of prior PSCs such as getting additional revenue by the government from windfall gains of the investors (Ogunleye, 2015),

in this, the regime introduced a price-based sliding scale royalty system in which royalty charges increase as price goes upwards, despite this developed, the regime has been seen as less neutral. It could have a lack of stability (Saidu & Mohammed, 2014).

3.2.3.5 PSC Regime under Petroleum Industry Fiscal Bill (PIFB) 2018

The PSC regime under PIFB changed the Nigerian Hydrocarbon Tax provisions (Saidu & Mohammed, 2014) to Petroleum Income Tax (PIT) provisions (Nyoor et al., 2019). It provides for the assessable tax to be charged onshore and offshore and differently for oil and gas. For onshore crude oil, 65%, shallow water crude oil, 50%, while 40% for deep offshore upstream operations. For natural gas, the regime provided for 30% across the board for onshore, offshore shallow waters and deepwater offshore. These rates are based on the average official selling price of USD60 per barrel or USD6 per Mbtu of gas. Additional petroleum income tax is charged at 0.5% of every USD1 increase in oil and gas price. The maximum additional tax should not exceed 60% for crude oil and 5% for gas. For frontier basins, the bill provides a petroleum income tax of 30%. The PSC regime under PIFB also provides for production allowance of USD 3 per barrel or 30% of official selling price for onshore, shallow waters offshore as well as deep-water offshore es for oil while USD1.5 per Btu or 50% of the value of production for natural gas fields, US $ 1.5 per million Btu or 100% of the value of the natural gas production for dry gas fields and the US $ 3 per barrel or 30% of the official selling price for condensate production from gas fields. It also provided for production allowance based on Cost Efficiency Factor (CEF) of; ≤ 0.5 at 50%, $0.5 < CEF < 1.2$ at 50% to 120% and $CEF \geq 1.2$ at 120%. There is also additional production allowance based on Reserve Replacement Ratio (RRR) of; RRR = 1 at 50%, $1 < RRR < 1.25$ at 75%, $1.25 < RRR < 1.5$ at 100% and RRR ≥ 1.5 at 125%. Lastly, sliding scale royalty was also provided based on the volume of production for crude oil differently for onshore, shallow water, and deep offshore waters. Sliding scale royalty is also applied for natural gas based on the geographical area for onshore, shallow waters and deep offshore waters. Likewise, royalty rates for condensates are also on a sliding scale based on geographical area for onshore, shallow waters and deep offshore waters.

Beyond the use of a price-based sliding scale royalty system for charging the windfall profit of investors, the PSC regime under PIFB extends this gesture by introducing a price-based sliding scale profit tax. Also, production allowances were proposed based on CEF and RRR as additional incentives to ensure incremental investment by private oil companies (PIFB, 2018). Nevertheless, the regime was criticized for the lack of explicit provisions for cost recovery

limit and profit-sharing, creating concerns among investors and possibly jeopardising investment (Nyoor et al., 2019).

3.2.3.6 PSC Regime under Deep Offshore and Inland Basin (Amendment) Act 2019

The PSC regime under the amended Deep Offshore and Inland Basin Act 2019 is like that of 1999, with the exceptions of two significant changes. Firstly, it abolished the sliding scale royalty rate provision based on water depth and introduced a flat-rate royalty regime of 10% for all offshore operations above 200 meters depth and a 7.5% flat rate for all onshore inland basin and frontier operations (Atake, Okusami, Atitebi, & Igwe, 2019). Secondly, it introduces a sliding scale royalty regime based on oil prices of; (a) oil prices of ≥USD20 and up to USD60/barrel at 2.5%, (b) oil prices ≥ USD60 and up to USD100/barrel at 4%, (c) oil prices of ≥ USD100 and up to USD150/barrel, and lastly (d) oil prices above USD150/barrel at 10% (Atake, Okusami, Atitebi, & Igwe, 2019). It can be seen from the significant changes brought by this PSC regime that its fiscal terms are similar to those proposed under PIB and PIFB, especially with regards to price-based sliding scale royalty rates.

The above review shows that the Nigerian petroleum sector has experienced a series of petroleum fiscal regimes, ranging from the concessionary system, JVs, and various forms of PSC regimes. Even though a specific part of the reviews are yet to be implemented, specifically the PSC fiscal regimes under the PIB of 2008 and PIFB of 2018. The divergent and ever-changing fiscal regime in Nigeria petroleum sector implied the need to understand the global criteria for assessing the petroleum fiscal regime to analyse the extent to which its strategic objectives have been achieved.

Also, it is evident that even within a single country, various forms of fiscal regimes exist (Kaiser & Pulsipher, 2004). The preceding review of multiple forms of petroleum fiscal regimes in Nigeria confirmed that the country is not an exception. Thus, scholars mainly undertake studies to assess which fiscal regime is more competitive either through intra-assessment using various fiscal regime within a particular country (see, for example, Mas'ud, Manaf, & Saad, 2014; Saidu & Mohammed, 2014; Wahab & Diji, 2017) or inter-assessment by comparing fiscal regimes of various countries (see for example Agalliu, 2011; Babajide et al., 2014; Layungasri, 2010). In undertaking this, several criteria are used in assessing the competitiveness of the petroleum fiscal regime. Therefore, in the next section, a thorough

review has been conducted on various criteria used for evaluating the attractiveness of petroleum fiscal regimes.

3.3 Assessment of Criteria for Petroleum Fiscal Regime

Miller and Alalade (2003) argued that the initial criteria for defining the competitiveness of PFRs were first derived from the classical principles of assessing the efficiency of a tax system outlined by Adam Smith in 1776. Although in designing such classical principles, Adam Smith might have had no petroleum taxation principles in the uppermost of his mind, the canons that emerged from his classical work could help assess the competitiveness of PFRs (Manaf et al., 2016). The initial criteria that emerged from Smith's work, popularly known as the four canons of the efficient tax system, covers equity, certainty, convenience and economy (Miller and Alalade 2003). Equity means that the effectiveness of collecting taxes by the government should be based on the affordability of the payers (Miller and Alalade 2003). In contrast to petroleum operation, equity means charging tax on the net profit of oil and gas companies rather than on their gross income (Manaf et al., 2016). Because charging tax on their gross income could mean overcharging their income which could affect their perception of fairness and equity of the fiscal regime. Certainty of PRF implies that oil and gas companies should have reasonable confidence about estimated tax fiscal obligations and the time of settling such debt to make the suitable investment to enable them to get the required returns in meeting their fiscal obligations (Miller and Alalade 2003). The convenience of PRFs means that the method of paying the fiscal charges should be made either especially with the advent of information and communication technologies which will enhance the efficiency of the PFRs (Miller and Alalade 2003). The last criterion based on Smith's canons is economy, which in the context of PFR has been considered a principle that ensures that the design of PFR should be made so that it does not distort the investors' investment decisions.

Following these canons, several authors have tried in identifying various criteria for better and enhance assessment of the attractiveness of the country's petroleum fiscal regime. Oldianosen (2004) evaluates the competitiveness of the fiscal regime using government take, stability of the regime, and its ability to ensure incremental investment from private oil companies, while Menezes (2005) assesses the fiscal regime competitiveness using neutrality equity and stability. Akigbe (2007) evaluate fiscal regime competitiveness using neutrality, stability, equity in risk and reward sharing between the participants in a contract. On the contrary, Tordo (2007) deployed the use of neutrality, stability and flexibility. Ajayi (2008) utilized the extent of state

participation, pre-emptive state right, neutrality, and stability neutrality in assessing the petroleum fiscal regime. In other studies, Oyinlola (2008) assesses the fiscal regime attractiveness using neutrality and stability of the regime. Also, Onyeukwu (2008) used closely similar criteria, including the level of economic rent imposition on the investor, efficiency as well as neutrality, while Okobi (2009) undertook the assessment using efficiency and neutrality; stability and flexibility; certainty and predictability; government take, as well as imposition and administration.

Scholars within the petroleum fiscal regime and natural resources taxation have continued their efforts in assessing the attractiveness of petroleum fiscal regime in different contexts where oil and gas are produced. In their study, Ambakederemo (2010) considers the fiscal regime competitiveness by evaluating its effect on both government and investor in terms of their takes, while Ogunlade (2010) undertook his assessment using efficiency, neutrality, equity, risk-sharing, stability, clarity and simplicity of the regime, a similar approach was followed by Amoako-Tuffour and Owusu-Ayim (2010), evaluates the fiscal regime using progressivity, flexibility, neutrality, stability, risk-sharing. A number of studies were conducted with similar criteria for assessing the competitiveness of fiscal regime such as that Sarsenbayev (2010), who deployed neutrality and stability, Shimutwikeni (2011), employed economic rent assessment, discount rent, stability and neutrality, Mohammed (2012) used neutrality, revenue rising potentials, progressivity and adaptability, risk-sharing while Treasure (2012) that utilized neutrality, clarity and transparency, stability, equity, government take in assessing the competitiveness of petroleum fiscal regime.

Based on the studies mentioned above, Manaf et al. (2016) identified 16 criteria for assessing petroleum fiscal regime, including administrative framework, certainty, clarity, efficiency, equity, flexibility, incremental investment, neutrality predictability, progressivity, risk and revenue sharing potentials, simplicity, stability and transparency. Beyond, Manaf et al. (2016), other studies have been undertaken using various criteria for assessing the competitiveness of the petroleum fiscal regime. However, the criteria used were not out of the 16 criteria identified by Manaf et al. (2016). For example, Saidu and Muhammed (2014) used fiscal neutrality, stability, flexibility, and the take by participating parties to evaluate the Nigerian fiscal regime's competitiveness for PSC under PIB 2008. Wahab and Diji (2017) deployed four criteria for stability, flexibility, neutrality, and risk distribution between government and investors in assessing the petroleum fiscal regime under PIB in Nigeria. In Myanmar, Swe and

Emodi (2018) used government take, risk and experience in evaluating petroleum fiscal regime. Nyoor et al. (2019) utilized profitability and government took as criteria for assessing the competitiveness of Nigerian petroleum fiscal regime under PIFB 2018 and questioned the clarity of bill in terms of cost recovery limit and profit splits. Likewise, Nakhle and Lassourd (2019) evaluate the petroleum fiscal regime in Tunisia under criteria covering simplicity, neutrality, progressivity, and stability. Following this review, this study updates the criteria outlined by Manaf et al. (2016) and expands the review to accommodate the studies that emerged after 2016, as shown in Table 3.2.

Table 3.2: Criteria for Assessing Competitiveness of Petroleum Fiscal Regime

Authors	Criteria Used	Title Given to the Criteria
Oldianosen (2004)	Government Take, Stability and Incremental Investment	Criteria for Evaluation of Fiscal Regime
Menezes (2005)	Neutrality, Equity and Stability	Fiscal Regime Evaluation Criteria
Akigbe (2007)	Neutrality, Stability, Risk Sharing and Profit Sharing.	Requisite Fiscal Attributes
Tordo (2007)	Neutrality, Stability and Flexibility	Designing Efficient Fiscal System
Ajayi (2008)	State Participation, State Pre-emptive Right, Neutrality, Stability	Evaluating the Changing Fiscal Terms
Oyinlola (2008)	Neutrality and Stability	Fiscal Issues Determining Investment
Onyeukwu (2008)	Economic Rent, Efficiency, Neutrality	Concepts of Resource Taxation Design
Okobi (2009)	Efficiency and Neutrality, Stability and Flexibility, Certainty and Predictability, Government Take, Imposition and Administration	Features of Desirable Tax System
Ambakederemo (2010)	Effect on Government, Effect on Investor	Analysis of Resource Rent Tax
Ogunlade (2010)	Efficiency, Neutrality, Equity, Risk Sharing, Stability, Clarity and Simplicity	Characteristic of good tax
Amoako-Tuffour and Owusu-Ayim (2010)	Progressivity, Flexibility, Neutrality, Stability, Risk Sharing.	Evaluation Criteria of Ghana Petroleum Fiscal Regime
Sarsenbayev (2010)	Neutrality and Stability	Fiscal Regime for Subsoil Users in Kazakhstan
Shimutwikeni (2011)	Economic Rent, Discount Rent, Stability and Neutrality	Competitive Fiscal Regime
Mohammed (2012)	Neutrality, Revenue Rising Potentials, Progressivity and Adaptability, Risk Sharing	Criteria for Evaluating Fiscal Regime
Treasure (2012)	Neutrality, Clarity and Transparency, Stability, Equity, Government Take	Ideal Fiscal Regime To Support Mining

Saidu and Muhammed (2014)	Fiscal Neutrality, Stability, Flexibility and the Take	Qualities of Fiscal System
Wahab and Diji (2017)	Stability, Flexibility, Neutrality and Risk Sharing	Key Features Fiscal Regime
Swe and Emodi (2018)	Government Take, Risk (using Front Loading Index - FLI) and Comprehensiveness (using Composite Score - (CS)	Quantitative Method for Petroleum Fiscal Regimes Assessment
Nyoor, Oyebimpe, and Iledare (2019)	Profitability and Government Take	Fiscal Regime Indicators
Nakhle and Lassourd (2019)	Simplicity, Neutrality, Progressivity, and Stability	Desirable Characteristics

Source: Expanded from Manaf et al. (2016)

It is important to note that countries develop the strategic objectives of their petroleum fiscal regime in line with the above criteria for assessing the competitiveness of the petroleum fiscal regime. The criteria can be confirmed from the strategic objective of the petroleum fiscal regime of host oil-producing countries. For instance, it was made in the revised UK petroleum fiscal regime under the 2014 budget that the regime wanted to achieve stability and increase government revenue from every drop of oil (Deloitte, 2014). By implication, the strategic objective of the UK fiscal regime under 2014 is to achieve stability and government take through every drop of oil. In Romania, the strategic objective is to get a more significant share of economic rent, ensure socio-economic development through job creation and technology transfer, and support new hydrocarbon sources through incentives to oil and gas companies (Dudău, 2015). Implying that the strategic objectives are to increase government take through economic rent, ensure incremental investment through incentives and improve state participation through technology transfer which are consistent with the criteria for assessing the competitiveness of petroleum fiscal regime. In Ghana, following the strategic objectives of its petroleum fiscal regime, Amoako-Tuffour and Owusu-Ayim (2010) evaluate those objectives, which include progressivity, stability, flexibility, neutrality and how the regime distribute the burden of risk between the government and investors. Undoubtedly, these are among the criteria for assessing the attractiveness of the petroleum fiscal regime.

Nonetheless, consistent with other petrostates, Nigeria's petroleum fiscal regime strategic objective under PIFB aims to achieve the following: substantial and progressive investment, principles of clarity, dynamism, neutrality, open access, expand the revenue base for the government while ensuring a fair return for the investors, simplify the administration and promote equity and transparency in the fiscal system (PIFB, 2018). All these strategic

objectives align with the criteria for assessing the competitiveness of the petroleum fiscal regime discussed above.

However, there are insufficient empirical evidence from the view of the oil industry stakeholders as to whether the petroleum fiscal regime meets the need for the government. Hence poses gab in the literature. The gap in the literature highlight the need for the current study to investigate whether the existing petroleum fiscal regime meets the need for the Nigerian government.

Therefore, in the next section, hypotheses are developed in line with the general strategic objectives of petroleum fiscal regimes. The purpose is to test those hypotheses and evaluate whether or not such strategic objectives fiscal regime has been achieved in the Nigerian oil and gas industry. This evaluation would be made through the opinions of stakeholders in the industry.

3.4 Strategic Objectives of Petroleum Fiscal Regime -Developing the Research Hypotheses

In this section, three hypotheses are developed in line with the strategic objectives of the petroleum fiscal regime. In this, an effort is made to ensure that the development of three hypotheses captures the strategic objectives of the petroleum fiscal regime in a broader sense. The first hypothesis will test the existence of an effective policy to assist in achieving the economic potentials of the country's petroleum resources in terms of resource control, development of domestic expertise as well enhancement of production and revenues. The second hypothesis will examine the availability of fiscal allowances within the fiscal regime in such a way as to attract investors. In contrast, the last hypothesis will test the existence of sound administrative and regulatory frameworks within Nigeria's petroleum fiscal regime concerning industry reporting and disclosure. These hypotheses are developed based on support from the literature, as discussed below.

3.4.1 Effective policy for achieving the economic potentials of the country's petroleum resources

Countries design a PFR to achieve some noble objectives, one of which is designing an effective policy that enables a country to achieve critical economic potentials from the

petroleum resources, such as improving revenue potentials, developing national expertise, and addressing adverse environmental impacts. Firstly, one of the economic potentials that a country would like to achieve is improved revenue potentials or what is otherwise referred to as Government Take. Cottarelli (2012) argued that other economic prospects such as employment generation and addressing adverse environmental impacts. Nevertheless, it has been complexing for countries to achieve trade-offs, which implied that countries designed a fiscal regime to make the industry a potential source of government revenue. For instance, Ogunleye (2015) asserted that one of the objectives for introducing PSCs in Nigeria is to get additional revenue for the government from the investors' windfall gains. Also, one of the objectives under PIFB (2018) is to expand the country's revenue base while ensuring a fair return for investors. The PSC objective is also consistent with the PFR objectives of developed countries such as the UK, in which the government seeks to increased revenue from every drop of oil under its 2014 budget (Deloitte, 2014). Moreover, several other studies such as Oldianosen (2004), Okobi (2009), Onyeukwu (2008), Mohammed (2012), Treasure (2012), Swe and Emodi (2018) and Nyoor, Oyebimpe, and Iledare (2019) highlighted that Government Take and incremental government revenue are what countries desire to achieve from their petroleum industry.

Arguably, countries designed PFR to increase local expertise through skills development, generating employment and supply chain activities in the industry (Cottarelli, 2012; Dudău, 2015; HM Treasury, 2014). Similarly, Cottarelli (2012) argue that employment creation in the related field is one of the shared priorities and economic objectives that have implications in the PFR design for both onshore and offshore activities. Consistent with this assertion, Dudău (2015) argued that one of the objectives of PFR in Romania is job creation and technology transfer. Doric (2018) also argued that as part of the UK binding laws, the PFR model insisted on using local industry, services and infrastructure, leading to a solid petroleum industry. It can be reduced from this assertion that the use of local industry, services, and infrastructure has the potential to develop local expertise and provides employment. It is consistent with the earlier highlight given by HM Treasury (2014) concerning the review of the oil and gas fiscal regime in which it was considered that the design of oil and gas taxation should look beyond the future flow of tax receipts but broader economic benefits such as employment and skills. Thus, even in the context of uncertain and declining tax revenues, the more comprehensive economic benefits of oil and gas production to the UK, such as employment and exportable skills, will potentially become relatively more important (HM Treasury, 2014). A good PFR objective

should arguably look beyond improving potential economic benefit from revenue and employment and skills generation. Consistent with other countries, in Nigeria, Ogunleye (2015) argued that one of the main objectives for introducing the JVs as a fiscal regime is recruitment and training of Nigerians by the contractors for the development of national expertise. Several other studies such as Johnston (2003); Ekern (2005), Miller & Alalade (2003), Abdulkarim (2009) have highlighted the importance of employment quota/hiring obligation as a crypto tax that should be looked into in the design of PFR for the achievement of government objectives.

Lastly, the PFR design should put as part of its economic potentials to curb environmental damages. Johnston (1994; 2003) highlighted that as part of PFR design, the government uses crypto taxes such as environmental taxes to achieve economic potentials for environmental restoration and address adverse environmental impacts. Consistent with this, Cottarelli (2012) posits that managing environmental consequence is among the common priorities for the design of PFR not only for onshore but also for offshore activities. On this basis, Nigeria introduced Petroleum Host and Impacted Communities Development Bill 2018 within its petroleum sector to address the environmental concern of the host communities the operators (Saraki, 2018). The economic benefit of the government PHICD Bill is shifting the burden for environmental restoration to operators.

From the preceding review, it is apparent that one of the key objectives of the petroleum fiscal regime is to achieve economic potentials from many aspects, including increasing revenue generations, expertise and skills, employment value chain, and environmental concern. Interestingly, like many other countries, these have been critical objectives of the petroleum fiscal regime in Nigeria, as discussed above. The central argument is whether the objective state above has been achieved in Nigeria in line with the PFR objective. In fact, despite several studies in Nigeria on PFR, evidence is lacking from the perspectives of expert opinions from different stakeholder groups on the extent to which petroleum fiscal objective with regards to the economic potentials has been achieved. Many earlier studies, such as Saidu and Muhammed (2014), Wahab and Diji (2017), Nyoor, Oyebimpe, and Iledare (2019), were based on simulations or scenario analysis. They are limited to some criteria such as neutrality, stability, flexibility, government take and profitability, without assessing the employment, skills and expertise, value chain and environmental issues. The fact is that these economic

potentials cannot be evaluated through perceptions but expert opinions (Manaf et al., 2016). Based on the arguments above, the following hypotheses are developed:

H01:   The policies under Nigeria's petroleum fiscal regime are not effective in achieving the country's petroleum resources' economic potentials due to the uncertainty of the petroleum legal framework.

3.4.2 Attractiveness of fiscal allowances within petroleum fiscal regime to attract investors

Attracting investors into the petroleum sector is another objective of the petroleum fiscal regime. HM Treasury (2014) reported that in an attempt to attract investment into economically viable fields but commercially marginal, the government had doubled the value of the small field allowance and an allowance for incremental investment in older areas. So also, in Nigeria, under the 1999 PSC, there was a provision for sliding scale royalty based on water depth which serves as an incentive for deeper drilling to attract investment into deep water (Nwete, 2005), meaning the deeper the water, the lower the royalty payment. However, although the fiscal regime under 2019 PSC seeks to achieve substantial and progressive investment, it replaced the sliding scale royalty rate based on water depth with a sliding scale based on oil price (Atake et al., 2019). While the former can be seen as an allowance that can attract investment into deep water, the latter is meant for improved government revenue. Interestingly, the PIFB (2018), which is yet to be passed into law, introduced production allowance based on the Cost Efficiency Factor (CEF) and Reserve Replacement Ratio (RRR).

Moreover, to ensure investors are attracted to the petroleum industry, oil-producing countries offer additional fiscal allowances and incentives (Manaf et al., 2015; Mas'ud, 2016). Countries offer some fiscal incentives such as carry forward, investment tax credit, accelerated capital allowance, tax holidays and tax guarantees to influence investment location decisions of companies (Buss, 2001), including oil and gas companies (Manaf et al., 2015). The application of sliding scale royalty rate as a fiscal allowance to promote investment into the petroleum industry has been witnessed in producing countries (Manaf et al., 2015; Mas'ud, 2016), including Nigeria (Nwete, 2005). Moreover, tax surcharge in UK and investment tax credit under Indonesia's PSC have been witnessed in their petroleum industry (Cottarelli, 2012).

While several fiscal allowances are offered in the petroleum industry to attract investors, the central question is whether the available fiscal allowances within the Nigerian fiscal regime are attractive to investors. This means whether the fiscal allowances are attractive enough to ensure incremental investment (Oldianosen, 2004). Earlier studies on PFR did not address this concern in Nigeria due to the nature of their research design, mainly using simulation and scenario analyses. The approach is challenging to evaluate the attractiveness of fiscal allowances such as sliding scale royalty rate, loss carries forward, investment tax credit, accelerated capital allowance, tax holidays and tax guarantees in a single analysis. Because no single fiscal regime can have all these allowances, however, assessing the attractiveness of this fiscal allowance can be achieved through expert opinions as suggested by Smith (2012, 2013) and confirmed by Manaf et al. (2016) through expert perception to evaluate the attractiveness of PFR for a marginal oil field in Malaysia. Therefore, this study proposed to assess whether the fiscal allowances in Nigeria's PFR are attractive to the investors. Thus, the following hypothesis is developed.

H02: The fiscal allowances contained in Nigeria's petroleum fiscal regime are not attractive to petroleum investors owing to the obsoletion of the policies that somewhat overweight their usefulness.

3.4.3 Existence of sound administrative and regulatory frameworks within Nigeria's petroleum fiscal regime concerning industry reporting and disclosure

A clear, simple and non-discretionary legal and regulatory framework is an essential factor for attracting foreign investment (Tordo, 2007). In his study of PFR, Okobi (2009) identified the administrative framework as a crucial feature of a sound fiscal system. Consistent with this, the study of Manaf et al. (2016) recognized the administrative framework as one of the criteria for assessing the attractiveness of PFR. It was also asserted that attracting the most qualified investors into the petroleum sector while maintaining maximum government take and meeting other national objectives requires a regulatory framework that should be designed to achieve a trade-off between government and investors, and this can only possibly be achieved through fiscal policy, a legal and contractual framework in the petroleum industry (Huurdeman & Rozhkova, 2019). However, sound administrative and regulatory frameworks that will ensure reporting and disclosure are objectives countries always strive to achieve through PFR.

In line with the above pieces of literature highlighting the importance of administration and regulation about PFR, the PFR in Nigeria under PIFB seeks to simplify the administration and promote equity and transparency in the fiscal system as part of its objective (PIFB, 2018). However, this regime is yet to pass into law. Hence, the fundamental question is whether or not the existing fiscal regime in Nigeria has a sound administrative and regulatory framework within the petroleum fiscal regime concerning industry reporting and disclosure to ensure transparency. Huurdeman and Rozhkova (2019) argued that though fiscal regime design should be simple but should not be weak and oversimplified to enable leakages and give investors an advantage to gain undue benefits. Thus, based on this argument, the following hypothesis is developed.

H03: Nigeria's petroleum fiscal regime does not have sound administrative regulation relating to reporting and disclosure in the petroleum industry due to lack of political will.

Therefore, testing these hypotheses would offer essential insights to the policymakers regarding whether or not the petroleum fiscal regime design in Nigeria has achieved its objectives and whether or not there is scope for improvement in the fiscal regime for optimal benefits to the government without chasing away investors.

3.5 Summary

This chapter reviewed the literature on regulatory governance within the petroleum industry relating to principles, codes, indices, and standards to understand the application of good regulatory governance in the petroleum sector. It was subsequently narrowed down to the tool (PFR) used in different oil-producing countries in governing the petroleum resource. Specifically, it discusses the various regimes employed in Nigeria and the strategies used. Lastly, based on the strategic objectives of the PFR, the three hypotheses were developed to test the workings of those strategies in Nigeria's petroleum industry.

Chapter Four
Theoretical Framework

4.1 Introduction

In the preceding chapter, literature was reviewed relating to the Nigeria's upstream sector and its governance. Consequently, a relevant theoretical lens needs to be established within the context of every piece of empirical research (Abdel-Khalil and Ajinkya, 1979). Hence, a theoretical framework provides a vision and structure of a study, which gives a research an organized flow from preceding chapter to the subsequent chapter (Lysaght, 2011). Grant and Osanloo, (2014) defined a theoretical framework as the blueprint that gives a researcher the direction on which to construct and support a research inquiry and furthermore, gives a defined structure that characterizes the paradigm and explain the whole thesis systematically, using the researcher's terminology that underscores a formal theory. McLaughlin (2006) asserts the necessity to incorporates a broad theoretical framework in a research project due to the fact that, finding and conclusions of a research would be difficult to be justified without adequate use of a theoretical underpinnings (Sarter, 2005).

Grant and Osanloo (2014), argue that, for a research to have a sound representation of theoretical framework, it has to be laid upon two exclusive blueprints; firstly, a good choice of theory by the researcher, which represents the structure and window (i.e elevation drawing to display the exterior) to the whole study that backs the thought regarding problem and data analysis. The other blueprint is the Floor plan, which details the construction of assumptions and its applicability to the study.

Therefore, the focus of this chapter is to discuss the theoretical framework, which underpins the current research objectives. To achieve the objective of this chapter, the chapter has been organised into four different sections and subsections.

4.2 The Concept of Game theory

With the conceptualisation of game theory in 1944 by John Von Neumann and Oskar Morgenstern, many academic disciplines and business-related fields has since adopted the theory to suits their interests. Thus, game theory is about multiple players interaction, with each player having a different strategy chosen from a combination of strategies by specified probabilities that result to payoff (Willigers et al., 2009). Since then, attempt has been made by

several scholars to define the game theory and its application in interrelated fields. Accordingly, a game comprises of two or multiple set of players whose choice of strategies conflicts rather than complimentary. The choice of the players strategies leads to consequences that determines the payoffs to individual player (Camerer, 1991). Esmaeili et al, (2015) defined game theory as that branch of mathematics, economics and business research that is used to study behaviours of set of players in conflict resolution. The central theme of game theory arises from the doctrine that players can make optimal choices based on the preferences drawn from the entire aspects that can influence their behaviours (Stirling and Felin, 2013).

However, petroleum operations are characterized with enormous risks and uncertainties, also, complexities within decision-making processes due to the huge investments that is put into the petroleum projects through joint venture operations – either state and private investors or private to private investors (Castillo and Dorao, 2012). It is therefore implying that oil players would have conflicting interest that influences complexity in the decision-making processes given both the project phases and the players choices are executed at the same time. In this vein, the Nigeria's petroleum fiscal regime has been developed with the objective for revenue generation and attracting investors. Therefore, the game theory adopted in this study, seek to investigate whether the strategies formulated by the Nigerian upstream regulatory agencies adequately achieve its strategic objectives and fit for purpose. Hence, Nigerian upstream petroleum industry been regarded as the game, on the other side the government regulatory agencies, Nigerian National Petroleum Corporation (NNPC), Multinational Oil Companies and the Local Oil Companies among other stakeholders are as players of the game.

According to Castillo and Dorao (2012), the fundamental goal in decision making (DM) development is to syndicate multiple set of objectives at multiple decision levels within a single framework. Indeed, the concept of game theory replicate the DM as it appears in the work of scholars such as (Ordeshook 1986; Raiffa, 1994; Xia et al, 1996; Kelly, 2003; Lee, 2008;). Consequently, government strategies and the frameworks of gaming theory are frequently in practice within the petroleum industry (Stirling and Felin, 2013).

Willigers et al, (2009) argue that classical decision analysis falls short to capture the way in which payoff for one player can affect the action made by other stakeholders, hence the framework of game theory specifically tackles the interactions between various stakeholders as well as the consequences the interaction assumes on the possible payoff for the entire

stakeholders. This is evident where unstable fiscal regimes exist, in countries such as United Kingdom: strategies would be adopted by the MOCs in anticipation for tax changes in the future (Willigers and Hausken, 2013). It was asserted that, for the game theoretical framework to become applicable; three conditions must be satisfied; firstly, the game should consist at least two players with each player maximising its objective. Secondly, at least an individual player has a different strategy chosen from a combination of strategies. Lastly, the specified probabilities that result to payoff to every player is consistent with the choice of the entire players, hence, almost every E&P project in the petroleum sector conforms to these situations (Willigers et al, 2009).

According to Van-Binsbergen and Marx (2007), high risk oil exploration and production industry, which is mainly governed by strict legislative guidelines and joint operating agreement/joint venture requires an understanding of the impact of participant's interest. Because the complexities in the economic models can affect the decision of participants on what is to be invested, the strategy to be used regarding what choice of decision to be made among other participants, which choices of decision would be appropriate before or after technical and industry risks are determined.

Similarly, the problem of conflict of interest, together with the common need for reporting and disclosure among government agencies as well as in inter-oil companies, make government regulation critical towards effective implementation of petroleum regulatory governance (Sundrarajan et al., 2003). In this vein, policy and strategy, results from the need to have balance of objectives between the host government and the investors (Lahn, et al., 2007).

4.3 Assumption of Game Theory within the Petroleum Industry

Bratvold and Koch (2011), asserts that game theory in the context of petroleum industry draws from three broad perspectives.

1. Competitive bidding- a situation where companies compete amid limited opportunities.

2. Joint venture/partnership and strategy and decision making, in this circumstances, multiple companies have to come together to execute a project.

3. Negotiations between the partners, governments, suppliers and customers with a bid to maximise the largest share.

4.3.1 Competitive Bidding Between Host Government and Oil Companies

Bidding is typically the major avenue a host country presents new opportunities (projects) in petroleum industry via what is termed as "Sealed Bid Process" (Harrington, 2009). Hence, the prospective profitability of the projects determines the bidding process to the entire participants (Oil companies). The host government may have differing interest against that of the oil company, for instance the host government that seek technical expertise from the oil company would increase the revenue take of the company (Hausken, 2002.). On the other hand, the oil companies compete among themselves in a project opening especially when they establish and understand the profitability of the project given a defined host government expectations and goals (Willigers et al., 2009). United States offshore, can be a typical example of the simple bidding process where the oil companies offer a cash upfront bonus to secure the bidding and the highest offer wins the bid (Bratvold and Koch, 2011). Other complex bidding could be associated with work commitment bid- in order to participate in the development of new oil reserves, oil companies bid to execute certain volume of work before considered for the project (Willigers et al., 2009). In general, participants must understand the trade-offs and the objectives by the entire operators to enable each of them take a position in the bidding process. Hence, the bidding process can be simply explicated in the classic game theory, through design of an attractive and suitable petroleum fiscal regime that can balance both the strategic objectives of the government and that of the MOCs.

4.3.2 Joint Venture /Strategy and Decision making

According to the Game theory, strategy of efficiencies promotes decision making, which leads to firms' successes (Camerer, 1991). A conflict in petroleum operations occurs distinctly both within oil and gas companies and or between oil countries (Amorelli and Carpio, 2016). When game is not coordinated it is assumed that it will account to the least optimal payoff, often as result of potential crisis of confidence by the other oil companies and creates fear to invest as well as hinderance of unitisation negotiation in the future (Araujo and Leoneti, 2018). Decision making processes may be affected since the oil companies are uncertain about the outcome of a specific petroleum policy, or ambiguity in the policy implementation. This situation would not only affect the oil game investment, also it would lead to divestment of resources to other oil provinces. (Castillo and Dorao, 2012). Hence, this situation can have a negativity on future unitisation negotiations and would make it difficult for the oil companies to re-invest, because the oil companies are in dilemma (Amorelli and Carpio, 2016). This situation contributes to inefficiency and ineffectiveness both on consumers and producer's decision-making processes

(Castillo and Dorao, 2012). Therefore, a design of strategic petroleum fiscal regime is necessary to protect the oil investment.

4.3.3 Negotiation/ Nash Equilibrium

The game theory argues that the success of a project depends on the ability of the partners to find a mutual ground and proceed with the operation (Willigers et al., 2009). Most of the major oil and gas projects and opportunities particularly the upstream operations could not be executed without proper joint ventures structure between oil players (Bratvold and Koch, 2011). For instance, a typical joint venture is established through partnership, which consist of Multinational Oil Companies (MOCs), the host-government, National Oil Companies (NOCs) among other investors. Hence, meeting an equilibrium (Nash Equilibrium) may encourage more efficiency towards allocation of resources that leads to optimal oil production and invariably upsurge revenue generation as well as the profitability of the investors. Nash Equilibrium is the situation where a player opts for a strategy within set of strategies in which none of the players would want to change their strategy without the other players changing theirs (Amorelli and Carpio, 2016). However, the game theory further argues that a conflict may arise among the participating parties within the joint ventures due to their differing priorities, values and objectives (Amorelli and Carpio, 2016). This conflict can be resolved through analysis of the project decisions described as allocation formula in determining what portion of the oil every stakeholder gets. On the other hand, excessive negotiations to determine the allocation formula would also sparks another conflict (Schitka, 2014). This situation creates an ideal setting for the host government through its regulatory agencies and parliament to act in the interest of the country and the investors. Hence, game theory establishes an evaluation mechanism and develop strategies for a 'win' 'win' otherwise achieve a realistic attainable outcome (Schitka, 2014).

4.4 Application of game theory in a petroleum fiscal regime strategic objective

Game Theory is renown among the theories that can be applied in the study of strategies, bargain, negotiation and disputes. This section discusses the rationale for adopting the Game Theory as a theoretical framework for designing Nigeria's petroleum fiscal regime strategic objectives.

Firstly, a competitive petroleum fiscal regime is the one which ensure fair and equitable allocation of oil and gas wealth between host government and investors (Nakhle, 2010); by

76

ensuring fair share of oil and gas proceeds without discouraging investors in making desired investment for optimal exploration of such petroleum resources (Ripley, 2011). These objectives are also conforming with the essential requirements of the Nigeria's petroleum fiscal regime strategic objectives. Hence, Nigeria as the host government is expected to understand variety of fiscal tools which are used to create fiscal regime that govern the petroleum sector such as royalties, taxes, bonuses and production sharing and choose the most appropriate among these fiscal tools. Thus, the application of game theory within this research will contribute to ascertain whether the strategies being practiced in the Nigeria's upstream petroleum sector is able to enhance the suitability of the petroleum fiscal regime.

Secondly, petroleum operations and projects are usually undertaken through joint ventures agreements for allocation of risks and rewards. By implication, at different stages, the interests of shareholders would differ. Hence, influences complexity in the decision-making processes when the whole oil and gas project phases and the entire stakeholders are considered at the same time. Therefore, Game Theory can easily ascertain and explicate the behaviours of the shareholders or parties involved with conflicting interests (Eamaeili et al, 2015). Thus, the crucial aspect to stimulate effectiveness (cost and time) as well as efficiency of a petroleum industry project is based on real time decisions through available information (Castillo and Dorao, 2013). Indeed, the Nigeria's upstream regimes such as Joint Venture Regime was established for the purpose of ensuring effective policy for achieving economic potential (increase revenue) of the country's petroleum resources through licenses and leases. The application of game theory is logical with a view to ascertain whether the choice of strategies made by Nigerian government leads to consequences that determines the payoffs in relation to revenue/economic growth without compromising the interest of the investors.

Thirdly, one of the fundamental goals of game theory is to promote Decision Making (DM) process by combining multiple set of objectives at multiple decision levels within single framework. The Nigeria's petroleum fiscal regimes are designed to attract increased revenue to the government and at the same time guarantee investor's revenue rising potentials by striking a balance between government and investors. This assumption also informs the adoption of game theory in this research.

Fourthly, the National oil company (NNPC) representing the interest of the government and the oil investors of Nigeria's upstream petroleum sector usually disagree on who ought to

expend and regulate cost, risk and reward on JV or contractual arrangement and they may take advantage of the investment decisions at the expense of other stakeholders. This results in disputes that leads to reaction and counter-reaction by the stakeholders, which affects the individual stakeholder and the whole project payoffs. Hence, the application of game theory brings about solution model using Nash equilibrium, which stress the conditions that no stakeholder desires to deviate separately.

Fifthly, for a game theory to be applicable, three requirements must be satisfied; firstly, the presence of at least two players with every player maximizes an objective. Secondly, a minimum of one of the players must have opportunity to choose among a minimum of two strategies. thirdly, the payoff of every player should be subject to the combinations of strategies selected by the entire players (Willigers et al., 2009). Having the content of Nigeria's petroleum fiscal regime that stipulates the strategic interaction of government, MOCs, service company, regulatory agencies amid the opportunities that each player strive to achieve its payoff. In this, the gaming theoretical framework logically proven and provide the insight that meets the three criteria listed.

The enumerated explanations above justify the rationale for adopting the game theory as the theoretical framework for this research. Figure 4.1 illustrates the relationship between the game theory and Nigeria's petroleum fiscal regime.

Figure 4.1. Strategic objectives of Nigeria's petroleum fiscal regime relationship underpinned by game model
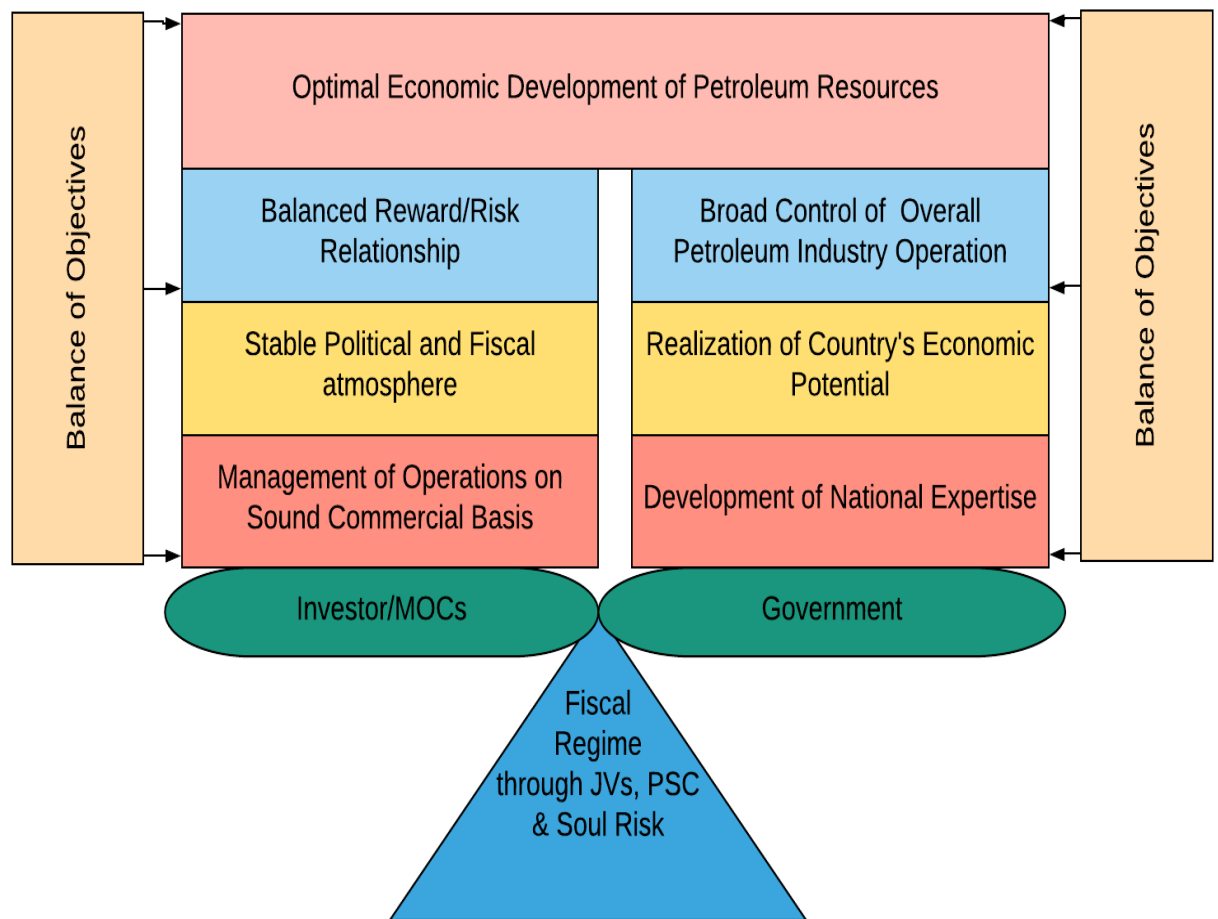
Source: Author

4.5 Supporting Theory- Stakeholder Theory

It is evident from the above discussions that Game Theory explains the strategic interaction of government, MOCs, service company, regulatory agencies amid the opportunities that each player strive to achieve its payoff with respect to the Nigeria's petroleum fiscal regime. However, not much could be gained from the theory on effective policies such as government regulation (reporting and disclosure) fiscal allowances which echoes vital insights in the stakeholder relationship. This reason brings about the need for a supporting theory. In this, stakeholder theory is proposed. The stakeholder theory postulates that attention and analysis should be identified for every stakeholder drawing from various standpoint such as power

dependencies, exchange transaction among others, within the framework of stakeholder value chain that includes the government, Investor, consumer advocates as well as other related pressure and interest groups. The central theme of the stakeholder's approach is led upon the survival of the firm (ie. The Petroleum industry) objectives. Therefore, in the seemingly endless quest for the survival and success of a petroleum industry, the support of stakeholders is needed. Hence, a sound management of the stakeholder's relationship determines how well an industry achieve its objectives and consequently remain sustainable. For instance, the introduction of fiscal allowance can support the stakeholder from the investor perspective, which enhances its profitability and encourage investment in the industry. Another underlaying core theme of the stakeholder theory is accountability. Accordingly, Harrison and Van der Laan Smith (2015) contend that, accounting professionals ought to extend their obligations to other stakeholders outside the regulators and investors through a development of standard of reporting and disclosure of information, which is relevant to other related stakeholders. Similar sentiment was also echoed by Mitchel et al, (2015), he argues that, in order to have inclusive of risk-sharing and value creation with an industry, accounting for stakeholders reporting and disclosure must be established. Thus, stakeholder theory can explain these variables and their dynamic interactions in the activities of the state and the investors relationship within the context of Nigerian's petroleum industry.

4.5.1 Concept of Stakeholder's Theory

In today's business settings, the boardroom of business executives needs different forms of strategies geared towards making their businesses competitive across the global economies through maximisation of stakeholder's value and balancing the numerous shareholder's competing interests (Freeman, 1984; Bowie, 1999; Jensen, 2002; Ekpobomene, 2012).

Since the seminal work of Freeman in 1984, the stakeholder theory becomes widely adopted and applicable in different fields. The central argument of Freeman's on stakeholder theory is that an organisational success depends on the value is able to create for its stakeholders, that comprises of governmental agencies, interest groups, creditors, suppliers, customers. Given the main objective of an organisation, which is its ability to strike a balance to any conflicting demand that may arise from different stakeholders in the organization (Philips, 2010). Thus, the interest of various stakeholder's groups must align in the quest for attainment of the organizational objectives deprived of trade-off, which is the major concern of organizational goal. Accordingly, Freeman (1984), posited that stakeholder framework is a strategic

management process that enable firms to figure out related to nonmarket environment and other business environmental elements that can create market behavior by their actions.

Similarly, Frooman (1999), describes the working of the stakeholder's theory as the one that identifies and manage any potential clash on account of differing interests, which could lead to conflicts of such interests and the chaos that can be manifested. On the other hand, Post et al (2002), view an organization as a vehicle for wealth-generation for entire the stakeholders of the organization

Although, stakeholder theory explicitly deals with organizational ethics and management. Philips et al (2003) stressed that, management of stakeholder is a holistic process, which captures not just the shareholder's wealth, but also giving due attention to the wellbeing and interest of the organizational constituents' objectives. Hence, the admonition of the stakeholder theory further extended to other non-shareholder's wellbeing and interest beyond the material and prudent goals of equity and wealth of shareholders (Pfeffer and Salancik 1978; Frooman 1999). Accordingly, the laid down assumptions of the stakeholder theory is that values are explicit and crucial in an organizational set-up.

4.5.2 Trajectory of Stakeholder theory

Any individual or group that can affect or that can be affected by the success achieved by of an organization objective is said to be a stakeholder (Freeman, 1984). Given the focus of the current research, which is to examine how the Nigerian government manage its relationship with the MOCs operating in the country's petroleum industry in relation to whose action has affected the achievement of their strategic objectives and who in reciprocal have been affected by the objective of the industry. In view of this strategic objectives, the conceptualization of this discussion would be analyzed in twofold- nonmarket and market environment.

4.5.2.1 Nonmarket stakeholders

Nonmarket stakeholders otherwise known as secondary stakeholders are referred to those groups or any individual that have indirect connection towards the economic operations with the organization and invariably affect or can becomes affected regarding its strategic objectives (Clarkson 1995; Lawrence and Weber, 2011). These groups or individuals includes nongovernmental organizations, various agencies of government, communities, general public,

media and interest groups. Although, in some instances, communities and various levels of government can be classified as primary stakeholders (Freeman 1984). For instance, where a particular agency of government engaged into Joint Operating Agreement (JOA) with a firm.

4.5.2.2 Market Stakeholders

The market stakeholder is referred to as the primary stakeholder who invested directly or indirectly in an organization with soul goal of receiving a form of return of investment (Freeman et al 2004). For instance, stakeholder invest in a given organization in return for capital gains, profit or dividends. Thus, the market stakeholders include the following: suppliers, creditors, employees, Distributors/wholesales/retailers, stockholder among others.

Table: 4.2 Characteristics of the stakeholder theory

Main Objective	Stakeholder-firm relationship concerns the survival of the firm and portrays wealth-creation for the firm and the entire stakeholders
Unit of analysis	Stakeholder management for firm success
Organizational assumptions	Ongoing task of maintaining balance and incorporating multiple relationships as well as multiple of objectives that guarantees long-term success.
Individual assumptions	Conflict of interest
Information assumption	Ongoing dialogue
Contracting issues	Single strategic framework designed
Problem statement	The framework approach focuses on strategic management development as supposed to a strategic planning development. Instead of prediction of future plans processes which gives the firm a position to exploit, contrastingly, the management focuses what environment affects the firm and how the firm affects the environment.

Source: Author

4.5.3 The Assumptions of Stakeholder Theory

The stakeholder theory can be viewed into three different areas (Donaldson and Preston,1995): Normative/prescriptive, Descriptive and instrumental

4.5.3.1 The Normative Assumption

The Normative otherwise called prescriptive stakeholder theory is built based on a definite philosophical/ethical consideration that entire stakeholder's interest are of intrinsic value to the organization (Donald and Preston, 1995; Wood, 2010). In essence, stakeholders should not be considered as means to end rather, they should be regarded and treated as an end.

4.5.3.2 Instrumental Assumption

The instrumental assumption on the other side supports the connection between corporate stakeholder operation and corporate objectives within the business environment (Lawrence and Weber, 2011). The core assumption here is that the organization that adopted the core principle

of stakeholder have the tendency of performing better in terms of the corporate objective (profitability, growth and stability) relative to those organization that doesn't.

4.5.3.3 Descriptive Assumption

Descriptive assumption is based on the basic characteristics of the organization behavior. In essence, the descriptive assumption describes the state of affairs of stakeholders and corporation in relation to the past, present and future of the organization (Baron, 2003). Thus, the working of the stakeholder theory reflects how stakeholder management is been practice by organizations. Accordingly, the descriptive assumption drawn base on the empirical framework relationship of the whole concept of stakeholder approach. Hence, cut across three key ideas; (1) stakeholder analysis (type of stakeholder) (2) the impact of stakeholders on organizational decisions and activities (3) the adopted strategies used by the organization on its stakeholders.

4.5.4 Application of Stakeholder Theory in Nigeria's Petroleum Fiscal Regime

Firstly, the stakeholder theory under the normative assumption espouses the intrinsic value of the stakeholder to be considered. In essence, stakeholders should not be considered as means to end, rather, a stakeholder should be regarded and treated as an end. This assumption portrays the petroleum industry been the business entity managed and control by the host government, which means the intrinsic value of the MOCs as its major market stakeholder should not be compromised. The normative stakeholder perspective also, places much emphasis on the significance of investing towards the relationship with those individuals or groups that have a stake in the organization. Therefore, for the MOCs to affect the petroleum industry towards incremental investment, introduction of generous fiscal allowances needs to be considered. In addition, the host government through its designated agencies should periodically utilize reporting and disclosure culture of the petroleum industry annual report to reassure confidence both to the market stakeholders (MOCs) as well nonmarket stakeholders.

Similarly, the instrumental perspective of the stakeholder theory, seeks to make link concerning the achievement of commercial objective such as growth and stability as well as profitability with the stakeholder approach. The instrumental assumption underscores the strategic objective of corporate pursuit of every business growth and success, which also underlined with both the objectives of Nigerian government towards the realization of the country economic potential in terms of revenue drive and also rising the profitability of the MOCs. These objectives can

be achieved through introduction of suitable fiscal allowance that can attract and motivates the investors in their oil operations within the petroleum industry and also improve the transparency image through improving the disclosure and reporting of annual reports periodically.

However, the descriptive assumption of stakeholder theory explains the state of affairs in relation to past, present and future for the stakeholders and their organizations. The descriptive assumption highlights the policies and regulatory governance that bounds the MOCs and the Nigeria government (host government). The transition of distinct contracts such as PSCs, RSCs and JVs from the past, there current state and other amendments that on the way forward as in the Petroleum Industry Bill.

The enumerated assumptions of the stakeholder theory can be conceptualized in a model in relation to the Nigeria's petroleum industry policies in the figure below.

Figure 4.2 Strategic Objectives of Nigeria's Petroleum Fiscal Regime Underpinned by Stakeholder model
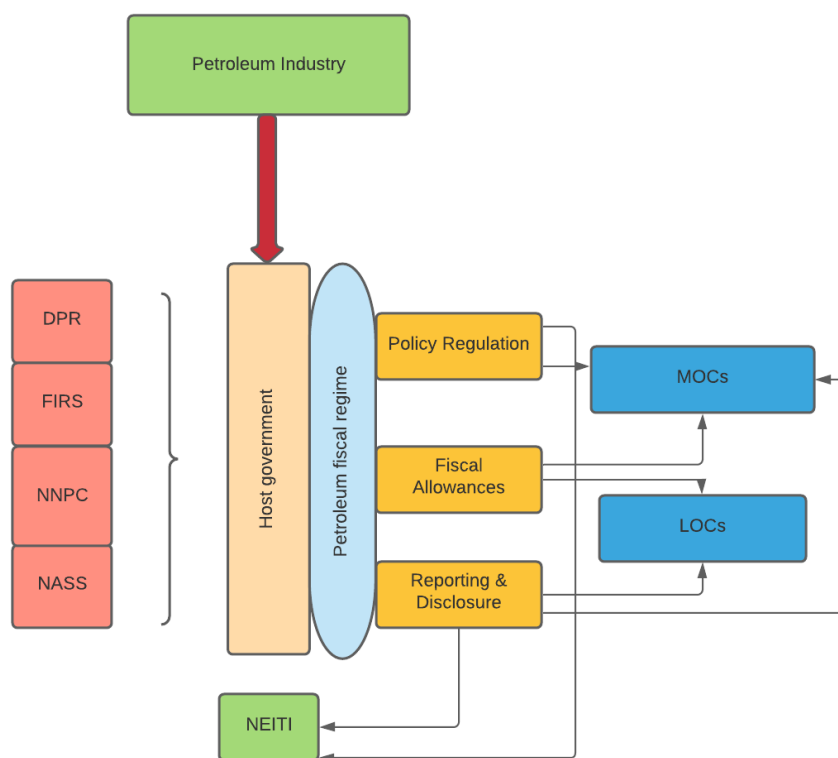
Source: Author

4.6 Other theories that can be applicable in the study (JUSTIFICATION)

Apart of the two theories (Game and stakeholder's theories) adopted for this study, there are other two theories which could also be applied in the framework of this study, namely, Agency Theory and the Capture Theory of Regulation.

4.6.1 Agency Theory

The concept of Agency Theory is concerned with the issues surrounding the delegation of responsibility between agent and principal. This is one of the major theories used in social science research (Dunne, 2003). Agency Theory is concerned with offering a solution to the problems that arise in the principal– agency relationship (Dunne, 2003). Eisenhardt (1989) believes that these problems occur as a result of (a) a conflict of interest between the principal and the agent, and (b) the difficulty, or cost implication, for the principal to monitor the activities of the agent. Indeed, the problem here is for the principal to somehow have reassurance that the agent is acting in the principal's interest rather than for personal gain. The main features of an Agency Theory model are presented in table 4.1.

Table 4.1: Main features of Agency Theory

Key idea	Principal-agent relationship should reflect efficient organisation of information and risk bearing costs
Unit of analysis	Contract between principal and agent
Human assumptions	Self-interest, bounded rationality, risk aversion
Organisational assumptions	Partial goal conflict among participants, efficiency as the effectiveness criteria, information asymmetry between principal and agent
Information assumption	Information as a purchasable commodity
Contracting problems	Agency (moral hazard and adverse selection)
Problem domain	Relationship in which the principal and agent have partly differing goals and risk preferences (e.g. compensation, regulation, leadership, impression, management, whistle- blowing, vertical integration, transfer pricing)

Source: Kyari, 2013, p. 120.

In the context of Nigeria's upstream regulatory agencies, the legislature is the principal, and the regulatory agencies are the agents. The legislature represents the general public and delegates the responsibility to the regulatory agencies to regulate the downstream activities. However, the regulatory agencies could possibly pursue their own interests instead of the interests of the principal. When the regulatory agencies start acting in their own interest, the legislature may find it difficult to monitor their activities and adverse consequences might occur.

Although, Agency Theory is suitable for application to the upstream petroleum sector, it was not adopted in this research because the aim of this empirical study is not to investigate the relationship between the legislature (principal) and regulatory agencies (agent). This thesis is concerned with general regulatory governance practice in relation with petroleum fiscal regime strategic objectives and as such places less emphasis on the relationship that exists between the legislature and the regulatory agencies. Consequently, the scope of this thesis is broader than the arguments associated with the Agency Theory model.

Agency theory arises because of goal divergence and information asymmetries between the principal and the agent. Due to these differences, the principal ensures that the agent employed is adequately monitored to ensure the principal's investment is protected from exploitation (Bogatova,2019). This theory postulates that humans are naturally selfish, and there will always be differences between the principal and the agent because of the conflict of interest between both parties (Maximilian, 2019).

The agency theory is premised on interest divergence between the principal and agent, primarily due to the information asymmetries. The agent possesses superior information and expertise about the firm than the principal. The information asymmetries provide the agent with the outlet to pursue self-enriching practices at the expense of increasing the shareholders' return on their investment. To prevent this, the principal ensures that the agent is monitored to avoid their investment depletion (A.L. Azeez et al., 2019).

In the context of upstream oil and gas in Nigeria, the Nigerian National Petroleum Corporation (NNPC) is charged with regulating the sector (Olujobi,2020). The legislative arm of governments acts as an oversight to ensure the country's interests are protected from exploitation. The agent (NNPC) is monitored to avoid capture by the multinationals and other major players in the upstream sector. The agency theory postulates an incentive for the regulatory authorities to conceal information from the government and engage in opportunistic activities such as bribery, graft and embezzlement that will be adverse to the country's interests (Mahdavi, 2020). Although this theory is considered suitable, it was not adopted for this study because of the broader objectives.

4.6.2 Capture Theory of regulation

McMahon (2002, p. 1) defines regulatory Capture Theory as 'meant behaviors, active and passive, by responsible authorities, which behavior acts to protect the same illegal, unethical, immoral or anti-public interest practices that those authorities are charged of policing'. Leading industry players are granted unjustifiable special consideration from the state (McChesney and Shughart, 1995).

The regulatory Capture Theory applies when the regulatory agencies, established to act in the public's interest, instead move away from the commercial or special concerns of interest groups that dominate the industry or sector it is charged with regulating (Huntington, 1952). According to Levine and Forrence (1990), regulatory capture happens as a result of government or regulatory agency failure, which encourages regulated firms to create harmful externalities. Laffont and Tirole (1991) add that regulatory capture occurs because groups or individuals with significant interest, influence the outcome of regulatory decisions or policies. It is possible that these powerful interests focus on their resources and energies in order to achieve the policy outcome they desire (Levi-Faur and Jordana, 2006).

In the context of Nigeria's upstream petroleum sector, the regulatory agencies could be captured by regulated companies or powerful interests. Instead of the regulatory agencies discharging their responsibilities in the interest of the general public, they may end up serving the interests of regulated companies. Thus, the regulatory Capture Theory might have been appropriately employed in the study of regulatory governance. However, the main reason for not adopting this theory here is because the aim of this study is wider than investigating whether Nigeria's upstream regulatory agencies serve a special interest group, and the focus is on determining if the regulatory governance practice in the sector is fit for purpose.

Regulatory Capture

Regulatory capture takes place when the regulator becomes susceptible to the influence and dictates of the regulated entity. It is commonly found in the energy sector, as it is common to discover the big players of the industry influencing the agencies' decision-making (Portman,2014). The influence of the regulated entities on the regulators' policies and decision-making is adverse to the interests of the general public. It is only designed to protect the interest of the entities at the expense of the myriad of stakeholders affected by the decisions made by the regulator (Cortese,2011).

Regulations or decisions reached by the regulators influenced by the regulated entities/corporations will help maximise their returns and protect their vested interest in the sector. The weakness of the regulator is exploited by the regulated corporation, thereby making the regulator become their means of enrichment at the expense of the general public (Noah et al.,2020). It is seen as a governance failure for the corporation to exercise considerable control over the regulator. Due to the significant resources available to these corporations, they can exert control over regulators and, in extension, the government through lobbying. The use of lobbying by these influential players in the sector allows them to influence the regulators by ensuring their interests are well protected (Sadiq & Mack, 2015).

Apart from lobbying, regulatory capture can also arise from the movement of regulators into the private sector and vice versa. This movement is also known as a revolving door. The regulators will be very careful not to destroy their chances of securing employment with the regulated firms, after the expiration of their tenure as a regulator, by being very lenient to the sector while in public service. This will ensure they are in the good books of the regulated entities and help secure appointment after leaving public service. Also, those coming from the firms into regulatory positions will tend to sympathise with the positions of the regulated corporations and thereby see things from the sector's viewpoints (Cortese,2011).

The close interaction between regulators and the industry also provides the outlet for capture. The industry would have perfected well thought out plans to influence regulations or policies rolled out by the regulatory authorities (Sadiq &Mack,2015). Considering the nature of the oil and gas sector, many big players in the industry would actively look for ways to influence regulators. The economic and market implications would provide the big players with the incentive to want to influence regulators. It is also essential to add that due to the uncertainty involved in upstream activities, such as spending considerable resources only to discover dry wells, long-duration between resources discovery and extractive activities and volatility in the selling prices. Large corporations in the industry want to cut down their potential losses by getting good regulatory bargains from the regulators (Cortese,2011).

Getting good bargains can also mean that the regulators cannot make sure the companies fully implement policies spelt out by regulators. The deep-water oil spillage of 2010 in the USA was a clear example of regulators not insisting on big players, like British Petroleum (B.P.),

following set rules persistently. The Mineral Mining Service failed to prevent the spill by turning blind eyes to the safety standards adopted by the petroleum giant, which led to an environmental mishap and the demise of eleven staffs of the oil and gas giant (Shapiro,2012).

Finally, looking closely at Nigeria's petroleum industry, it appears inevitable that regulatory capture will be prevalent in the upstream oil and gas sector. Primarily due to the capital-intensive nature of the industry, foreign multinationals are the leading players in this sector and would do everything within their remit to protect their vested interests by using their considerable wealth to largely influence the state regulators. Also, due to the institutional factors prevalent in the country, such as corruption, corporation playing in this market will use resources available to them to influence policies in their favour (Oluwasanmi,2018). However, this study has not adopted this theory because the study's objective is broader than trying to establish if the upstream sector regulatory apparatus favours private interest to the detriment of the public.

4.7 Summary

This discourse theories above within the content of this chapter underpinned the framework of this study. The chapter also established the application of the framework which suits the objective of this study and justification was also provided that support the choice of these theories together.

The attributes of these theories- Game and Stakeholder theories were carefully chosen as they deemed fit to boost the accomplishment of this research's aim and objectives, hence, giving the research a defined structure through systematic technique of explaining the whole focus using the researcher's terminology that underscores a formal theory in answering the research questions in chapter one.

Chapter Five

Research Methodology and Methods for the Study

5.0 Introduction

This chapter contains a review of the methodological approach adopted for the study and justification for the chosen method. The research methodology is defined as how facts are shaped and translated into a meaningful and clear picture through a systematic framework using a specific method (Mackenzie and Knipe, 2006). Hence, the adoption of research methodology depends on the researcher's assumptions in the conduct of the research, using logic in solving the research problem (Snape and Spence, 2003). The rest of the chapter is structured into eight sections: philosophical stance, research design and approach, strategy, data collection, anticipated challenges, ethical consideration, analytical procedure, and data analysis methods.

5.1 Research questions and analysis overview

To facilitate the aim of this study, this study attempts to answer the following research questions (RQ):

> (RQ I) How effective is Nigeria's petroleum regulatory governance in the implementation of the country's petroleum fiscal regime?
>
> (RQ II) To what extent does Nigeria's petroleum legal framework create certainty in the operations of the country's petroleum industry?
>
> (RQIII) What is the suitability of Nigeria's petroleum fiscal regime strategic objectives?

Fostering a robust petroleum fiscal regime require that agreements, regulations and rules governing the petroleum industry are efficient and effective (Cottarelli, 2012; Swe and Emodi, 2018). However, being efficient and effective means that both the two legal entities (that is the host government and MOCs) are getting sufficient and beneficial rewards from petroleum exploration and production (Swe and Emodi, 2018). In other words, government revenue take is well-captured and the petroleum fiscal regimes are attractive to existing and new petroleum investors and MOCs.

A mixed-method research approach is employed in this study. The Operationalisation of the mixed-method approach in this study follow's Creswell and Clark (2017) assertion that it is inadequate to equip researchers with one research approach (i.e., quantitative or qualitative) due to the rising complexities of research problems particularly in social sciences. Therefore,

the researcher first deployed a quantitative research approach as the primary data to answer the research questions of this study via questionnaire-based survey (Creswell and Poth, 2016). The questionnaire survey helps the researcher to generate quantitative data on suitability and improvement petroleum fiscal regime strategies for a robust petroleum industry legal framework. The rationale for adopting the questionnaire-based surveys in this study is to gain an objective view of the research questions and helps to provide a generalisation of the study (Kelley *et al.,* 2003; Ponto, 2015). Subsequently, the quantitative data obtained are summarised, patterns designed, relationships and connections analysed with Statistical Package for Social Science (SPSS). The SPSS is a digital software application that easily perform complex data manipulation with a great potential of gathering data from a number of file types such as text, pictures, audios among others and utilised the data to produce tabulated reports, charts, descriptive statistics and others (Verma, 2012). Hence, with the increasing computational advancement in the recent years, the statistical analysis of data for a research such as the current study found the SPSS to be more time efficient in generating multiple tests (i.e. nonparametric tests) and also accuracy by minimising the possibility of errors. Consequently, the research findings aligned with literature, theory, and available measures to improve petroleum fiscal regime governance, policies, and strategies in Nigeria.

Additionally, The qualitative research approach for this study uses semi-structured interviewing. The qualitative research approach has explanatory, exploratory, descriptive and interpretive objectives (ibid). Hence, conforms with this study's exploratory and interpretive objectives; the use of semi-structured interviews provides exploratory insights relating to what governance and strategies Nigeria's petroleum fiscal regime uses. Following the work of Clarke *et al.* (2015), the data obtained from semi-structured interviews were analysed with the aid of Nvivo qualitative data analysis software. To answer the study's research questions, the researcher first considers the research paradigm, research approach, research design, research strategies, and data collection.

Figure 5.1 below described the methodological framework for this study- the interconnections of philosophical stance, design, approaches and research methods.

Figure 5.1: Methodological Framework
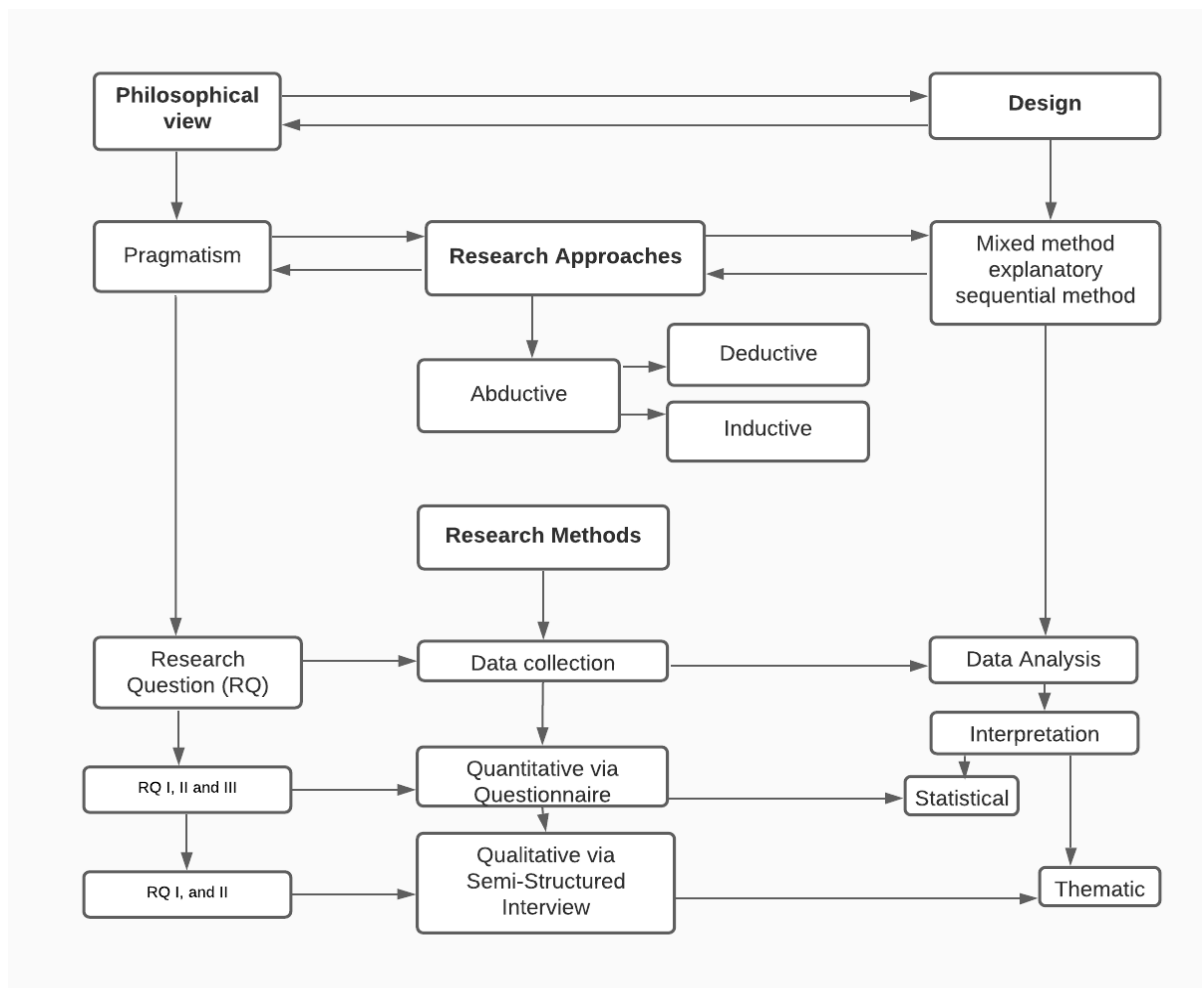
Source: Author

5.2 Research paradigm

The research paradigm explains the philosophical way of thinking that defines and guides the researcher's worldview (Kuhn, 1962; Kaushik *et al*., 2019). Thomas Kohn first introduces the idea (research paradigm) in 1962, which discusses the shared beliefs, values and generalisations of a particular group or community relating to the nature of knowledge and society (Kaushik *et al*., 2019). Lather (1986) clarifies that the research paradigm reflects the researcher's belief about the world, how the researcher sees the world, interprets and acts in the world. With that been said, the research paradigm for this study provides a set of beliefs that influence the study, how the study should be carried, how the researcher should interpret the results and provide implications. In other words, the research paradigm is used as conceptual and heuristic tools to solve the research questions. Ponterotto (2005) further argues

that there are four different perspectives of the research paradigm: pragmatism, positivism, constructivism, and critical theory.

The pragmatism paradigm argues that there is a non-singular approach to undertaking a research or studying a phenomenon. It employs pluralistic and practical way by using mixed methods to understand the truth (Kivunja and Kuyini, 2017). Positivism paradigm advocates, describes the worldview of research as the scientific approach of investigation, believing that objective knowledge is attained using empirical methods and testing hypotheses (Kolakowski, 1993; Krauss, 2005). On the other hand, Krauss (2005) explain that Cconstructivists gain knowledge through belief that is linked to a phenomenon investigated. The researchers of constructivists paradigm engage with the subjects or participants of the study to get data. Critical theory supporters are conscious of social actors and address social, economic, and political issues resulting in social conflict, oppressions, and struggles at whatever heights these might happen (Healy and Perry, 2000; Kivunja and Kuyini, 2017). Researching this study's paradigm, the researcher found the pragmatic paradigm most suitable. Supporters of pragmatic paradigm do not employ a single approach to attach knowledge but use mixed methods to study a phenomenon (Creswell, 2003). Thus, this research uses mixed methods, both qualitative (using the semi-structured interviews and reports analysis) and quantitative (using questionnaire surveys), to answer the research questions in the complex context of Nigeria's oil industry governance. The rationale is that one method offers a limited viewpoint and challenge the objectivity of the data to a greater extent.

Notably, the work of Healy and Perry (2000), Denzin and Lincoln (2008) and Kaushik and Walsh (2019) assert that the research paradigm consists of four assumptions: Ontology, epistemology, methodology and axiology. Concisely, ontology refers to the reality that the researcher is studying; epistemology is the relationship between the researcher and reality (how do we know); the processes and procedure refers to as methodology, which is considered the best approach to gaining the knowledge researcher uses to investigate the phenomenon or reality; while Axiology refers to a research's morals and values (Bryman, 2016).

The conduct of this research underscored the contextual business environment of Nigeria's petroleum industry. Hence, it involves an integrated framework consisting of legislations, regulators, stakeholders and investors. One of this study's main objectives is to examine Nigeria's petroleum regulatory governance. Therefore, key stakeholder's perceptions are

required to interpret the regulatory governance principles. The quantitative method through a questionnaire-based survey represent the statistical stance for the investigation in evaluating the suitability of the Nigeria's PFR. On the other hand, a qualitative method is utilised to complements the questionnaire results by exploring the scale at which the regulatory governance is implemented through semi-structured interviews. Hence, the two methods compound multiple realities experience by the oil practitioners.

Accordingly, Bryman (2016) asserts that the epistemological theme relates to what should be (is) a valid knowledge in a research. Given the nature of epistemology research that examines the relationships between the researcher and the research subject, the researcher is expected to be independent of his research paradigm (Creswell, 2014). Hence, this study's quantitative method aspect attempts to reduce bias by deploying appropriate sampling technique through questionnaire-based survey and maintained objectivity throughout the research process of data collection and analysis stage.

In contrast, the interpretivist orthodoxy restricts the distance between the researcher and the subject being researched (Kaushik and Walsh, 2019). Therefore, the qualitative study allows closer interaction with the research subject (human beings) within the social context and observation of social phenomena over some time. In the context of this study, Nigeria's petroleum regulatory governance is examined empirically using a compendium of Nigeria's tax laws, which allows the researcher in becoming independent on the research subject. In evaluating the petroleum industry regulatory governance and examining the petroleum industry legal framework requires interaction with the practitioners. Hence, in this study, the interpretivist paradigm suggests using interviews that allow interactions between the researcher and interview participants.

Third, the axiology assumption underscores the role of morals and values in this research. Saunders et al. (2007) argue that axiological skills demonstrate the researcher's expression of values as the underpinning in making judgements regarding the subject under investigation and how the researcher organised it. Although the positivists did not consider the research subject to be affected by their research activities, some effects might manifest after the research is completed. On the other hand, the constructivist considers moral and ethical values crucial in research. Hence, a qualitative researcher is more value and ethics-driven than a quantitative researcher (Creswell, 2014).

94

Following the axiology assumption, the current study utilises the Royal Institute of International Affairs, Chattem House Principles of Good Governance, to evaluate Nigeria's petroleum regulatory governance. Other parts of this study examines the suitability of Nigeria's petroleum fiscal regime strategic objectives and its legal framework using Compendium of Nigeria's Tax laws and organisational gazettes and reports. Hence, these investigation results leads to a statistical and descriptive assessment of questionnaires and interviewees respectively. To organise how the investigation should be- prior to the data collection, gatekeeper's permission was sought from heads of departments of oil and gas participating organisations in Nigeria. The gatekeeper's permission contains a comprehensive research objective of this study detailing participant information sheet, consent form, interview protocol and questionnaire, which was first submitted to the university research ethics committee for assessment and ethics approval before sending it out to the participating organisations (see appendices…).

The methodological assumption considers the processes and procedure as the best approach to gaining the knowledge that the researcher uses to investigate the phenomenon or reality (Bryman, 2016). The procedures include a philosophical framework and theoretical approach and its implications (Saunders et al. 2007). Prior to conducting the study, the positivist orthodox of this study determines the concepts, variables (i.e. the statements of the questionnaires), and hypotheses drawn from the literature review to establish generalisation that contributes to finding precise predictions, explanations, and understandings of the phenomena under investigation in chapter six. In contrast, the constructivist orthodox for the current study uses an inductive approach generated from groups within the interview data. The inductive approach provides more detailed information drawn from thematic framework in chapter seven of this study and theories that enable the study in interpreting social phenomena (Anderton and Ronald, 2017; Braun *et al*., 2019).

The following section discusses the dichotomy of the inductive and deductive approaches for the study.

5.3 Research Approach

Having discussed the chosen philosophical stance for this research, describing the link between theory and research is by all means of crucial relevance to a researcher. Thus, the degree to which a study is concerned with either theory testing or theory-building poses an essential inquiry towards a research design (Saunders et al., 2007). Hence, this study employed "Abductive" as its research approach. The abductive approach combines the strength of both deductive and inductive approaches (Saunders et al 2012). The rationale for employing the abductive approach is to eliminate the shortfall of inductive approach that may originate from the reproach of the deductive approach and vice-verse (Saunders et al., 2007; Braun *et al.*, 2019). Specifically, deductive approach is critised with unclarity regarding the selection theory to be tested through hypotheses formulation. In contrast, the inductive approach is critised due to the fact that no sufficient amount of empirical data can complement theory building (Saunders et al 2012). More so, all the issues at stake in linking theory to research, Bryman (2016) postulated that there are two essential issues to be considered. First, what form of a theory to adopt. Secondly, whether data are collected to test a theory or build a theory. Accordingly, Saunders *et al.* (2007) posit that these issues can be termed as 'Research Approach', divided into deductive and inductive approaches. The swaying between the deductive and inductive established the third approach as 'Abductive' (Saunders et al., 2007; Bryman 2016).

Nonetheless, the tendency of theory testing, be it as the researcher develops a theory or hypothesis and design a research strategy to the formulated theory, is referred to as the deductive approach (Bryman, 2016). Thus, the deductive approach is theory-driven. However, the deduction begins with establishing relationships between concepts with a theory's support. The theories were then be subjected and may deduce a hypothesis, which would be tested using the data collected. Hence, the data set's findings reveal whether the deduced hypotheses are confirmed or rejected before conclusions and implications are made (Saunders *et al.*, 2007). Therefore, the present study's quantitative arm is deductively driven using guiding principles from the game-theoretical and stakeholder theoretical perspectives to test the proposed study's hypotheses. Figure 5.2 below represent the deductive approach process of this research.

Figure 5.2 Deductive Approach Process
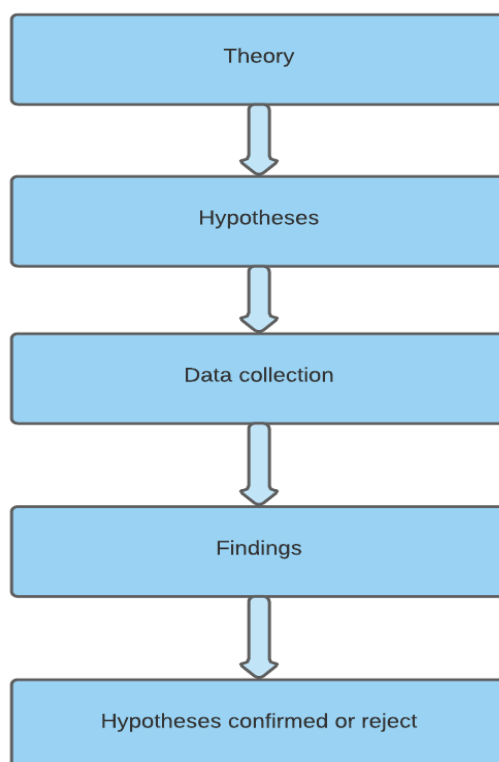
Source: Abducted from Bryman (2016).

In contrast, an inductive approach is somewhat more participants or data driven. Thus, data is gathered and analysed to understand the phenomena under investigation and build/develop a theory (Bryman 2016). The inductive approach is built upon observations to discover patterns from the observations and the findings are fed back into the theory's stock and the research findings associated with a specific inquiry domain (Saunders *et al.,* 2007). However, within this study's context, an inductive approach is adopted for its qualitative arms. Therefore, data from the interview transcripts and reports were analysed to identify themes and meaningful patterns of narratives that emerged directly from the data sets using inductive coding (Anderton and Ronald, 2017). Thus, the inductive analysis allowed the ability to explore thematic information that is particular to the specific questions (Braun *et al*., 2019), helping the researcher to answer how effective and suitable the petroleum fiscal regime is to the government and the MOCs. The inductive thematic analysis captures detail and nuanced information from the qualitative data that was unable to be identified by the quantitative datasets (Braun *et al*., 2019). The inductive thematic analysis helps the researcher's objective

on robust petroleum regulatory governance concerning the petroleum industry legal framework that ensures the suitability of strategies and choices. On the other hand, this study's deductive component espoused the construction of hypothesis and strict logic of theory-testing that enhances the research's validity and provides reliability. The inductive process of this research is demonstrated in figure 5.3

Figure 5.3: Inductive Approach Process
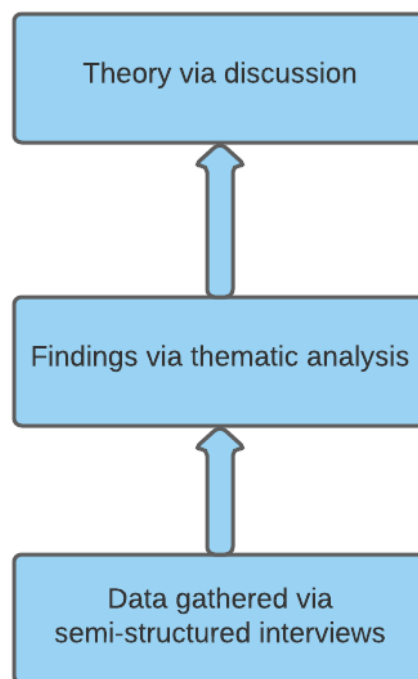
Source: Author

5.4 Research design

Akhtar (2016) argues that research is valid when the findings are accurate, and the research design depicts the conceptual blueprint within which the study is conducted. The research design explains the researchers' plan for the proposed research. More so, a research design is not linked to one specific data collection approach or a particular type of data. Creswell (2009) further clarified that research design helps the researcher identify the evidence needed to answer the research questions in a meaningful way. Following this study's research objectives and questions, the current research consists of three phases. Table 1.0 presents the research design linking research questions, data collection and data analysis.

The first phase conducts a narrative literature review (Wong and Sumsion, 2013) on main topics under Nigeria's petroleum fiscal regime (e.g. policies in Nigeria petroleum industry, governance and strategies). The literature review determines how interview protocol is designed, who should be the study participants, and what to expect from participants. It also informs the researcher of mapping up the interviews' responses that determine the effectiveness, suitability, and efficiency of Nigeria's petroleum fiscal regime for both government and multinational oil companies. The literature review also answers the research question partly by revealing available improvement strategies that can be learned from different economies. So, the suggestions as answers for the research question two and three are provided by the literature review. Finally, a research design informs the researcher to design the study's hypothesis and be tested.

Table 1.0 Research Design (Linking Research questions, Data collection and Data analysis).

	Phase	Research Questions that the phases addressed	Data collection	Data analysis
1	Literature review	Research Question I, II and III (partially)	Peer-reviewed journal articles, books, reports and conference papers	Systematic literature review
2	Questionnaire surveys	Research Question II and III	Questionnaires to key stakeholder's groups	Descriptive statistics and nonparametric tests of Mann-Whitney using Statistical Package for Social Science (SPSS)
3	Semi-structured interviews	Research Question I, II and III	Face-to-face interviews with key stakeholder's groups	Thematic analysis through Nvivo software

Source: Author

Second phase of the study conducts questionnaire surveys (McLafferty, 2003). The researcher administered questionnaires to key stakeholders in the Nigeria petroleum industry. The aim is to gather information on petroleum fiscal regime policy objectives, government regulations relating to reporting and disclosure, fiscal allowances relating to the suitability (attractiveness) of PFR that can ensure robust petroleum regulatory governance. The questionnaire helps the researcher validate the hypothesis and explain it further based on the semi-structured interviews. The three phases of this research design discusses this research's blueprint and seek valuable contributions in petroleum governance literature. The current study's research design was carefully chosen to ensure this research is valid, reliable, and enhances understanding.

The third phase study conducts semi-structured interviews (Longhurst, 2003; Creswell *et al.,* 2006). The researcher uses the semi-structured interviews as an explanatory tool to gain insights into the effectiveness of regulatory governance and policies suitability of Nigeria's petroleum fiscal regime to the government and MOCs. Thus, the interview protocol was administered. Participants include managers and senior staff from Nigeria National Petroleum Corporation (NNPC), Federal Inland Revenue Service (FIRS), Department of Petroleum Resources (DPR), Nigerian Extractive Industry Transparency Initiative (NEITI) and MOCs such as Total Petroleum Company and ExxonMobil.

5.5   Research Strategy: Questionnaire-based survey and semi-structured interviews

This study's research strategy consists of a mixed-method research approach combining quantitative and qualitative techniques in data collection, analysis, and interpretations. The concepts underpinning the nature of studying petroleum fiscal regimes from a game theory supported by stakeholder theoretical perspective seems to blend compatibly with the characteristics of mixed methods research design. For instance, game theory's guiding principles involve strategic interactions among rational decision-makers from the Nigerian government and MOCs, which may be dynamic at all levels and entails continuation rather than a set of dichotomous interactions. The stakeholder theory's main characteristics promote the ongoing task of maintaining a balance between Nigeria's government and MOCs by incorporating multiple objectives and relationships that guarantee long-term success. Also, mixed methods focus on the research questions and hypotheses in determining the research strategies, and therefore, it is more flexible to accommodate the presenting variables (Teddlie and Tashakkori, 2011; Mertens, 2014). Precisely, this research will follow the concurrent procedure elaborated by Creswell (2014) to explore qualitative and quantitative strategies to provide a comprehensive analysis that answers the research questions.

The current study's mixed method provides an in-depth view of the study as the quantitative and qualitative approach's strength makes up for the two approaches' weakness. For example, the study's quantitative arm provides an objective view of the factors associated with the governance and policy on petroleum fiscal regime implementation. Whereas the qualitative approach further explores the topic from a multi-paradigmatic lens related to more profound meaning, perceptions and opinions of actors involved in strategic interactions and decision-making in the petroleum industry operations. Hence, leading to exploring the effectiveness of

governance and suitability of Nigeria's petroleum fiscal regime for both government and MOCs.

The present study strategy is tilted as explanatory sequential mixed methods strategy. The explanatory sequential mixed methods strategy seeks to execute the quantitative data and deployed its findings in the succeeding qualitative segment (Creswell, 2014). The strategy involves a twofold-phases process whereby the questionnaire data was first collected and used its findings and built on the second phase "interview" protocol. The quantitative phase informed the type of the interview questions and also the participants for the qualitative phase. The rationale for deploying the explanatory strategy fosters better measurements with the exclusive population sample (in the qualitative segment) compared to a sizeable population sample of the quantitative segment. Following the explanatory sequential mixed methods research strategy process described above, this research first collects data via questionnaire-based survey consistent with the research hypotheses. Subsequently, the results of the questionnaire findings informs developing the interviews questions to a sample of a larger population of key stakeholders in the Nigeria's petroleum industry. The explanatory strategy deemed suitable for the current study as it fits the overall aims of the research with regards to achieving robust information on the PFR from key stakeholder's perspectives.

5.5.1 Questionnaire Surveys

The questionnaire-based survey represents the quantitative part of this study, which adopted self-administered questionnaires. The questionnaires statements measure the degree to which the stakeholders agree or disagree with Nigeria's petroleum fiscal regime's strategic objectives. The survey entailed a questionnaire with Likert-type sub-scales for the participants to indicate the level of their agreement or disagreement based on a specific statement on discreet and restricted values (de Winter and Dodou, 2010). The rationale for adopting the questionnaire builds as the appropriate means by which suitability indicators of fiscal allowances and reporting and disclosure are investigated. It is also regarded as the most standard and regular platform that allows participants to answer independently (Saunders *et al*., 2007).

The researcher undertook a statistical method in analysing the survey's data collected through a descriptive statistic and a nonparametric statistical test. To cover the personal information of the respondents' groups and their perception of each of the questions, the researcher utilises a descriptive statistic using the frequencies, mean, median and cross-tabulation. On the other

hand, the use of a nonparametric test of Mann-Whitney identifies and discusses the difference between the respondents' groups.

5.5.2 Semi-structured interviews

The researcher conducted face-to-face semi-structured interviews and recorded them with a digital recording device. The interviews were an interactive session between the interviewer and interviewee to explore the participants' views and opinions on Nigeria's regulatory governance, legal framework and petroleum fiscal regime. The interviewees or participants consists of Nigeria National Petroleum Corporation (NNPC), Federal Inland Revenue Service (FIRS), Department of Petroleum Resources (DPR), Nigerian Extractive Industry Transparency Initiative (NEITI) and MOCs such as Total Petroleum Company and ExxonMobil. The interviewer steered the interview discussions to ensure that the data collected were relevant to the present study (Blumberg *et al.*, 2014). Also, the interviewer is guided by the interview scheduled to steer up the conversation to explore meanings and ultimately generate robust qualitative data (Cameron and Prince, 2009; Blumberg *et al.,* 2014).

More so, the interview protocol was developed using a rigorous iterative process in which initial sets of questions were drafted and reviewed with the supervision team consistently until the final stages of questions refined for the interviews (Gilbert and Stoneman, 2015; Bryman, 2016). Thus, the interview schedule ensured questions were structured and asked for meeting the researcher's specification that addresses the aims of the study. An account of how the interview questions emerged and the protocol observed in the interview (see Appendix 5).

Furthermore, audio files from the interviews were transcribed in preparation for analysis. Interview transcripts were analysed using thematic analysis whereby the common patterns and themes were identified (Burnard *et al.*, 2008; Reichertz, 2010). Due to thematic analysis's flexibility, it seems to be one of the most frequent qualitative data analysis techniques for social research that is inductive or data-driven (Burnard *et al.*, 2008; Braun *et al.,* 2019). The themes emerge through a coding process. Patton (2014) described coding as the process by which text is broken down and reduced into an adaptable component that forms meaningful units. Coding has also been defined as the systematic way that concentrated extensive data set is transformed into smaller analysable units by creating categories and the concepts derived from the data (Lockyer, 2004).

5.6 Data Collection

The concept of mixed methods adopted in the current study entailed both interviews and questionnaire surveys. These strategies combined the theoretical elements of inductive (interview data) and deductive (survey data) reasoning for primary data collection and analyses (Saunders, 2011). Also, the secondary data featured in the present study was a compendium of relevant literature about Tax and Related Laws.

5.6.1 Procedures and Participants' Recruitment

The researcher adopts a purposive sampling technique for quantitative data collection and snowballing technique sampling for qualitative data collection. Participants were recruited from staff members working in the Nigerian Oil and Gas related institutions of both public and private organisations. These include managers and senior staff at Nigeria National Petroleum Corporation (NNPC), Federal Inland Revenue Service (FIRS), Department of Petroleum Resources (DPR), Nigerian Extractive Industry Transparency Initiative (NEITI) and MOCs such as Total Petroleum Company. It is essential to note that prior to participant's recruitment, ethical approvals were received from the UEL Research Ethics Committee (UREC) and designated Oil and Gas organisations in Nigeria. The participant recruitment exercise followed the stages below:

Stage 1: The researcher drafted and emailed an introductory letter to the sampled population for the study through heads of Oil and Gas organisations in Nigeria, requesting their permission to interview their staff members. Subsequently, after preliminary acceptance, a further email was sent containing the participants' information sheet, consent forms and debriefing to enable designated persons to overview the research scope, the proposed dates and the methods of data collection.

Stage 2: Following the approval from the head of organisations and ethical approval from UREC, the researcher travelled to Nigeria for data collection. Research adverts were printed and placed in strategic areas of the designated organisations. Participants' information sheets were also distributed to intended volunteers who intended to participate in the study. Volunteers that met the inclusion criteria were asked when it was convenient to participate in the survey and agreed unanimously.

Stage 3: At the beginning of the interview sessions and the surveys, the researcher gave out a brief to each participant that explained the nature of the study. Participants were also provided with the opportunity to ask questions prior to interviews/surveys. In addition, participants who wished to participate in the interviews signed a hard copy of a consent form.

Stage 4: This step involved the interview process and administering the survey questionnaire. Interviews were conducted using a semi-structured interview schedule. The interview schedule items were exploratory questions that covered the current utilisation of fiscal allowance and regulations relating to legislations on the Oil and Gas Industries. The survey questionnaire is an additional set of questions using Likert type scale to measure the participants' views about the current Nigerian government regulations relating to legislation and reporting disclosure in the Oil and Gas Industries and the utilisation of fiscal allowance in the country.

Step 5: Participants were given the opportunity, at the end of the interviews/surveys, for debriefing to share their general thoughts regarding the data collection process. The debriefing also clarified any concerns participants raised after the interviews/surveys. Additional information about the research and contact details were given to participants, should they want to contact the researcher later after the interview is completed.

5.6.2 Anticipated problems and challenges

The researcher encountered challenges associated with data collection from overseas travelling to Nigeria on several occasions, such as: the risks of both international travels from UK-Nigeria and local travels connecting to the different Governmental Departments for Oil and Gas and multinationals within- the Niger-Delta regions, FCT Abuja and Lagos State, where dominant petroleum activities on Fiscal Regime take place. However, safety and security risks issues were mitigated following international travel advice from the university's international offices and reliable sources and making a local arrangement such as emergency contact numbers of local security agents in Nigeria during data collection. The supervision team was kept posted with all progress of data collection throughout the periods.

5.6.3 Ethics, informed consent and confidentiality

The present study received ethical approval from the University of East London Research Ethics Committee (see appendix 1). Prior to data collection, participants were provided with sufficient information in numerous formats such as participant information sheets (see

appendix 2) and consent forms (see appendix 3) to enable them to establish the understanding necessary to decide whether to participate in the study or not. For example, an initial research advert was made available to the target audience, and interested volunteers were given a verbal briefing and handed participants information. More so, sufficient time was allowed for participants to read and understand the content of the participants' information sheet before deciding to participate in the study. The content includes how their information and data will be used and participants' rights to withdraw from the study without being obliged to do so. At the end of every interview and survey data collection, participants are also given a debriefing and reminded of their rights, including confidentiality of information provided.

The researcher ensured confidentiality in numerous ways. For example, all identifiable participants' information was replaced with pseudonyms for interviews and unique identifiable numbers for surveys. The rationale for the participant's confidentiality was deliberate by the researcher, should any participant request to withdrawal from the data collection excises after data collection is completed. The researcher ensured all the participant's signed interviewed consent forms were kept in a separate locked filing cabinet. However, the participants were informed that the study could not provide full anonymity of interview data, and some direct extracts from the dataset may be published in peer-reviewed journals.

5.7 Method of Data Analysis

In analysing data, the obtained information is explained and interpreted to make scenes of the meaning surrounding data (Best & Kahn, 2016). Following the data collected from multiple sources in this study; primary data (quantitative and qualitative) and secondary data (Compendium of Tax and related laws, organisational gazette and reports). Hence, each of the data collected is subjected to its specific analytical procedure highlighted as follows:

5.7.1 Analysis of Interview Data

The obtained data through the semi-structured interview was firstly transcribed and analysed using a thematic technique whereby the common patterns and themes are identified (Burnard et al., 2008; Reichertz 2010). The thematic analysis technique's flexibility makes it one of the most frequent technique in qualitative analysis of social research that includes top-down theory-driven and bottom-up data-driven and accommodates all forms of research questions (Braun and Clarke, 2019).

5.7.1.1 Data coding

In this phase of analysing the interview data, the researcher documents the patterns found through generating an initial list of ideas as labels (codes) for the reoccurring patterns that emerged from the interview transcripts produced (Nishishsiba et al., 2017). The list of ideas as codes enables the researcher to attach a definite meaning to bits of text that imply a specific concept. Although, a single bit of a text might produce a number of different codes to indicate a number of interpretations of similar parts.

Patton (2014) describe coding as the process by which text is broken down and reduce to an adaptable component that forms meaningful units. Coding has also been defined as the systematic way by which concentrated extensive data set is transformed into smaller analysable units by creating categories and the concepts derived from the data (Lockyer, 2004). Subsequently, the researcher coded the data, which became easy and keyed into a computer for analysis using Nvivo version 12 in analysing the codes generated from the concentrated transcribed data.

5.7.1.2 Themes Identification

Themes represent a broader pattern of data considered key to explaining a phenomenon relevant to the research question (Nishishsiba et al., 2017). Themes identification enables the researcher to an intimate examination of the codes to extract the research and merge similar codes as a single unit theme.

At the initial stage of themes identification, the researcher's purpose is purely inductive, focusing on patterns that emerged from the data set. Further examination suggested deductive means, searching for common patterns that blend with a theoretical model of the phenomenon under investigation, such as principles of good regulatory governance and strategic objectives of petroleum fiscal regime.

5.7.1.3 Reviewing, Defining and Indexing of Themes

After a careful looking at the initial themes generated for the study, which involves a review and modification of identified themes in the previous step 5.7.4, the researcher ensures that the obtained themes underpin the research question coherent to the data set (Braun and Clarke, 2019).

However, the second phase was defining the themes consistent with the storyline it talks about the data. This process defines the theme by giving names to each theme concisely, informing the reading audience with an idea of what the theme represents (Braun and Clark, 2006).

The next phase is indexing; indexing involves the researcher linking each defined theme to the participant by utilising a numerical system for referencing and annotated in the margin beside the text. The indexing task was performed using Nvivo software for accuracy and efficiency of the analysis, enabling the researcher to identify a part of the data set that corresponds to a particular theme.

Finally, the researcher arranged the indexed data into a chart in accordance with the defined themes. This process would the data from the original textual context to a chart format, which consisted of headings and subheadings generating a thematic framework.

5.7.2 Analysis of Questionnaire Data

A statistical method is undertaken to analyse the data collected using questionnaires through the renown statistical software package "SPSS" Version 21. The data initially subjected to Little's MCAR test in order to find out if there's any missing data either at random or non-random for accuracy. To cover the personal information of the respondents' groups and their perception on each of the questions, a descriptive statistic is utilised using the frequencies, mean, median that determines the relevance of each participant with regards to years of experience, background knowledge and qualification. The participant's personal information ensures participants adequately represent a chosen respondent groups, to have more robust information on the statements of the questionnaire. On the other hand, the numerical values responses of 1-5 (ranging from strongly agree to strongly disagree) for the Likert-scale questionnaire are converted into ranks that creates ordinal data, which further analyses using non-paramedic statistical techniques (Carifio and Perla 2008; De-Winter and Dodou, 2010). The use of nonparametric test of Mann-Whitney is used to identify and discuss the difference between the respondents' groups. The rationale for adopting nonparametric test is due to the non-distribution of the data gathered for the study.

Mann-Whitney test: this nonparametric test is conducted with the aim to test between respondent groups (i.e., each group would test against one another) to check an assumed

hypothesis that "there's *no significant difference between the responses of the stakeholders"*. While a cross-tabulation utilised provides the likely causes for the differences.

5.7.3 Analysis of Compendium of Related Tax Laws/Organizational Gazettes/Reports

 One of the simplest ways by which presence of original information can be detected in research is through literature review (Krippendorff, 2004). Thus, the textual policies and government regulations related to the Nigeria's PFRs contained within the Compendium of Related Tax laws, organisational gazette from government regulatory agencies such as DPR and FIRS as well as reports from NEITI and NNPC is reviewed to create a narrative review of literature based on relevance of regulatory governance, suitability of the Nigeria's PFRs strategies and legislative framework. The secondary data method detects the presence/absence and volume of information for government regulation relating to reporting and disclosure on petroleum operations such as volume of oil lifted by each operator.

5.8 Validity and Reliability

Validity and reliability refer to as the concept used to evaluate the quality of a research by exploring the extent of how well a technique or a test measure a phenomenon. Therefore, the tendency of a study to measures what it claims to measure refers to as validity (Bryman, 2015; Creswell, 2014). To put it clearer, validity is the accuracy of a test focusing on an outcome. Whilst reliability is the extent at which a tool or test produces similar outcome given a consistent condition. Thus, reliability refer to as the consistency of a measure by maintaining consistent result (Mohajan 2017).

 In this mixed method research, the quantitative validity refers to as the degree to which questionnaire-based survey measures the hypotheses deduced for the study (Thatcher 2010). Whilst the qualitative validity of this study uses the thematic framework discussed in (7.2) to check the accuracy of the research findings (Creswell,2014). Overall, the validity of this study measures the degree at which the relevant scientific research methods and techniques are followed throughout the process of producing the research findings. Therefore, the validity of the findings of this study occurs throughout the paces of the methodology chapter ranging from the paradigm to the analytical techniques in chapter six and seven of this study. However, validity can be explored in a number of facets, depending on the kind of research taken. In this study, the discussion of the validity focuses on the construct validity. At the onset, the study

aims at exploring the regulatory governance of Nigeria's petroleum industry, focusing on its petroleum fiscal regime strategic objectives. In doing so, the study begins with deducing hypotheses which were tested using a questionnaire-based surveys. However, identifying appropriate participants for the study as well as determining the suitable the sample size (see section 5.6.1) enhances the validity and reliability of the study using purposive and snowballing techniques. To enable the participants answer the questionnaires more comfortably, ample time for up to four weeks was given to the respondents to ensure their responses are valid.

Whereas the reliability of the quantitative arm of this study uses the coefficient of 5% significance level, Mann-Whitney tests were carried out to determine any possible differences amongst the respondent groups. Consequently, crosstabulation tests were utilised in analysing any differences emerged. Also, the numerical values responses of 1-5 (ranging from strongly agree to strongly disagree) for the Likert-scale questionnaire are converted into ranks that creates ordinal data, which further analyses using non-paramedic statistical techniques. Additionally, this study reduces the occurrence of participant biases by using anonymous codes in order to refrain identifying individual response that can generate desirable answers. Hence, assured the reliability of the questionnaires were not affected in any way by the participant bias. On the other hand, standardising, minimising and interpreting questionnaire design technique were used to avoid the observer errors which enables the respondents with easy and simple understanding of the questions.

Although, section *7.2* discusses the detail stages of the validity and reliability of the qualitative study, however, at a glance, the entire interviews were recorded using a digital recording device as consented by the respondents. The digital voice recorder makes it more truthful in generating accurate transcripts from the interview audio files of all the study data. The accuracy of generating transcripts is crucial to the data analysis (Braun and Clarke, 2019), which serves as the fundamental element of data analysis success.

5.9 Summary

The literature relating to methodology and methods employed for the study was thoroughly reviewed within the content of this chapter. Justifications were also provided for the chosen philosophical lance, which gives rise to a pragmatic paradigm. The questionnaire survey and semi-structured interview were designed that serve as the quantitative and qualitative arm of the primary data collection. A secondary data through organisational gazette, compendium of

Nigeria's tax laws and reports were also designed. Finally, the study employed Nvivo and SPSS for the questionnaire and semi-structured interview/secondary as the analytical tool for the data collected. The next chapter presents findings of the interview analysis.

Following the outline of the methodological and the methods adopted as well as the method of analysis for this study, the subsequent chapter (i.e. chapter 6) presents the findings from the analysis of the primary data obtained from the questionnaire-based survey.

<div align="center">

Chapter Six

Findings of Primary Data from Analysis of Questionnaire-Based Survey

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6.1 Introduction

This chapter's primary aim presents an analysis of the key petroleum stakeholder's responses obtained from the questionnaire-based survey. The questionnaire responses represent the quantitative primary data for this study. Also, the presentation and the data analysis are designed to reflect the constituents of Nigeria's petroleum fiscal regime as part of the hypothesis of the study.

To achieve this chapter's objective, the rest of the chapter is structured into five sections and subsections for clarity and understanding as follows: 6.2 questionnaire response rate, 6.3 statistical analysis of questionnaire responses, 6.4 main findings of the study, 6.45 summary of the quantitative findings and 6.6the summary of the chapter.

6.2 Questionnaire response rate

Under this section, distribution, gathering and the responses achieved are presented from a total number of 170 questionnaires administered by the study. The response rate in table 6.1 is consistent with Walonick (2004) postulation, who asserts that a well-designed questionnaire generates a considerable response rate. The questionnaire response rates vary from one questionnaire to the other, which typically fall within a range of 10% to 90% (Williams, 2003). A breakdown and the structure of the process is presented in table 6.1 below.

Table 6.1: Statistics of questionnaire response rate

No	Respondent groups	Administered	Returned	Response Rate
1	DPR	25	18	72%
2	NNPC	27	21	78%
3	MOCs	25	16	64%
4	IOCs	25	14	56%
5	NEITI	25	13	52%
6	FIRS	26	19	73%
7	NASS	17	11	65%
Total		170	112	66%

 Source: Author from fieldwork

DPR= Department of petroleum resources; NNPC: Nigerian National Petroleum Corporation; MOCs= Multinational Oil Companies; IOCs= Indigenous Oil Companies; NEITI= Nigeria Extractive Industry Transparency Initiative; FIRS= Federal Inland Revenue Service; NASS= National Assembly

Table 6.1 above shows a total number of 170 questionnaires were administered by the researcher across the seven stakeholder's groups, of which 112 were completed and returned. Therefore, it indicates an overall 66% response rate, which is adequate to conclude the stakeholders' standpoint opinions (Williams, 2003). The high response level can be attributed to the following reasons: the striking format that the questionnaire was designed for– questions were carefully worded in simplified and layperson terms according to the study's objectives. Secondly, the respondents' ample time to answer the questionnaires- an average period between two to three weeks. Thirdly, the researcher made persistent follow-up efforts through various means such as telephone phone calls and personal visitation. Fourthly, an approval letter for data collection secured by the researcher from the University Research Ethics Committee (See appendix).

6.2.1 Missing values

Checks were carried out by the researcher on data files for missing data. Reason being is, in a survey with such magnitude of information, missing data erupts virtually all surveys and a considerable number of experimental designed (Scheffer, 2002). This survey was, however, not with its restraint of missing data.

To resolve the missing data problem, the researcher made a decision consistent with Little and Rubin 2002 to fill the missing data, which allowed the statistical software to carry out a hitch-free analysis. The first step was to fill the missing values; the study carried out a hypothesis test to ascertain whether the missing data's nature and the pattern were random or otherwise (Little and Rubin 2002). However, having utilised the Little's MCAR test at 0.05 alpha value, the result revealed Chi-Square = 428.117 (DF=405, Sig= .206). At 0.206 significance level, the result shows, it was greater than the alpha (0.05), which confirmed nonexistence of identifiable pattern in the missing data. Hence, no further investigation was required. Table 5.2 below represents the distribution of missing data.

Table 6.2: Missing Data

A	32	34	10	19	58	23	24	26	26	20	21	41	44	22	102	103	105	106	107	108	109	112	110	104	38
B	1	1	2	2	2	4	4	4	4	4	4	4	4	4	6	6	6	6	6	6	6	7	7	7	9

Source: Author

A= Cases

B= Missing Data

6.3 Statistical Analysis of Questionnaire Responses

In this section, discussed herewith, are the analysis of three tested hypotheses developed for the study. Twenty-nine variables designed were analysed based on a descriptive statistic of the respondent's opinions, with each statement computed in line with five categories scale of responses (1=Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree, 5= Strongly Disagree). At 5% significance level, Mann-Whitney tests were carried out to determine any possible differences amongst the respondent groups. Consequently, crosstabulation tests were utilised in analysing any differences emerged.

6.3.1 Demographic Information of the Respondents

The demographic information of the respondents at this moment are presented before moving into the primary analysis. It is imperative to explain and show the respondent's calibre chosen for the survey, which adds to the credibility and reliability of the data gathered. Table 6.3 presents the demographic information of the respondents.

Table 6.3 Demographic Information of the Respondents

Gender	(%)	Experience (%)		Age	(%)	Qualification (%)		Organisation (%)	
Male	65.2	1-5	3.6	20-29	1.8	Below degree	1.8	DPR	16.1
Female	33.9	6-10	34.8	30-39	42	First degree	35.7	NNPC	18.8
Missing	1	11-15	29.5	40-50	41.1	Masters	47.3	MOCs	14.3
		16- above	27.7	50-above	13.4	PhD	10.7	IOCs	12.5
		Missing	1	missing		Others	.9	NEITI	11.6
								FIRS	16.1
								NASS	9.8

Source: Author from field work

Among the five indicators across the respondents' demographic information showed in Table 6.3 above, the study considers experience, organisation and qualification as the most basic indicators relative to age and gender. Because petroleum policy relating to fiscal regime requires legal and law interpretations, planning and tax knowledge, among others. Therefore,

it is logical selecting experienced respondents with a minimum of six years and above and a minimum of first degree in a relevant organisation.

6.4 Main Findings of the Study

The three hypotheses designed in this study are tested under this section. According to Lean-Guerrero and Frankfort-Nachias (2011:166), hypothesis testing comprises the following stages: first, assumption development; second, criteria set-up for decision; third, test statistics computation, fourth; decision making. The demographic information consists of variable measurement, population distribution, sampling technique, and size, as discussed in chapter five.

The following sub-section presents the descriptive analyses about the frequency distribution obtained from the responses of the participants.

6.4.1 Concerns related to effective policy for achieving economic potentials of the country's petroleum resources

This study sought the expert opinions on the regulatory framework for achieving economic potential in line with the petroleum fiscal regime's strategic objectives. To this end, the null hypothesis $H0_1$ is designed to test the opinions of oil experts on effective policy for achieving economic potentials of the country's petroleum resources concerning resource control, revenue generation, job creation and development of national expertise (see section 3.4).

H01: The policies under Nigeria's petroleum fiscal regime are not effective in achieving the country's petroleum resources' economic potentials due to the uncertainty of the petroleum legal framework.

One of the petroleum fiscal regime's strategic objectives is achievement of economic potentials from many aspects, including increasing revenue generations, expertise and skills, employment within the oil value chain, and environmental concern (Cottarelli, 2012; Swe and Emodi, 2018). Hence, like a number of other oil-rich economies counterparts such as Norway, Australia, Iraq, and other oil-rich economies, these objectives correspond to the strategic objectives of the petroleum fiscal regime in Nigeria as discussed earlier (see 3.4.1) (Ogunleye,2015; Nyoor, Oyebimpe, and Iledare, 2019). However, the central argument is whether these strategic objectives have been achieved in Nigeria.

Table 6.4 report the results derived from the descriptive frequencies of the stakeholder's responses based on the statements that reflect Nigeria's government strategic objectives.

Table 6.4 Descriptive frequencies relating to the economic objectives policy

S/N	Statements	Median (Mean)	SA (%)	A (%)	N (%)	D (%)	SD (%)	Total (%)
1	Adoption of contracts has increased government control within the petroleum sector	2.00 (2.32)	41 (36.6)	28 (25.0)	24 (21.4)	14 (12.5)	5 (4.5)	112 (100)
2	Increased acquisition of technological skills has been achieved through the bearing clauses contained within contracts	2.00 (2.46)	9 (8.0)	4 (3.6)	37 (33.0)	16 (14.3)	46 (41.1)	112 (100)
3	Job creation for national entities has been achieved through the fiscal terms	2.00 (2.57)	7 (6.3)	13 (11.6)	30 (26.8)	49 (43.8)	13 (11.6)	112 (100)
4	The fiscal system has created stronger economic links within the petroleum value chain	2.00 (2.56)	5 (4.5)	17 (15.2)	34 (30.4)	41 (36.6)	15 (13.4)	112 (100)
5	An appropriate degree of project risk-sharing throughout the life of all contracts has been established	2.00 (2.74)	8 (7.1)	19 (17.0)	29 (25.9)	48 (42.9)	8 (7.1)	112 (100)

Source: Author

Note: M=Mean, Md=Median, SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree, %= percentages.

6.4.1.1 Adoption of contracts has increase government control within the petroleum sector

The basis for seeking the statement above is to determine the extent to which the Nigerian government exert a level of power and authority in other to be able to regulate the oil industry. In the interest of national development, the OPEC (1968) coffered inalienable right of all its member states to exert permanent control over their natural resources. One of the significant objectives of introducing current contracts in Nigeria is to allow the oil host states to control the oil industry from the multinational oil companies (Kyari 2013: Edward, 2015; Roach and Dustan, 2018). The findings of the statement above will inform the study who (between the MOCs and government) is responsible for regulating the petroleum industry to hold them accountable in achieving the country's petroleum resources' economic objectives.

Following the respondents' differing opinions in Table 6.4, most of the respondents agreed with the statement by 61%. In contrast, 17% disagreed, and the remaining 24% were neutral that "Adoption of contracts has increased government control within the petroleum sector". Mann Whitney tests were carried out to determine the difference between the stakeholder groups in table 6.5 below

Table 6.5: Mann-Whitney tests result concerning 'The adoption of contracts has increased government control within the petroleum sector.'

The adoption of contracts has increased government control within the petroleum sector	
Groups	**NNPC**
MOC	0.020

Note i) Mann Whitney test run at p≤ .05 significance

ii) MOC= Multinational Oil Company, NNPC= Nigeria National Petroleum Company

Mann-Whitney test on table 6.5 above, revealed that the MOCs differed with NNPC group. A crosstabulation test shows that 50% of the respondents from the MOCs disagreed that "The adoption of contracts has increased government control within the petroleum sector". The MOCs opinions were contrary to the 76% agreement opinion held by the respondent from the NNPC. The agreement position of the respondents of the NNPC is consistent with the literature that the "Geneva convention of 1958 that conferred exclusive rights of petroleum resource to the national governments across all the oil wealthy states within their jurisdiction (UN, 2010). Also, the Organization of Petroleum Exporting Countries (OPEC), directed all its member states to partake towards the oil industry operations with the sole objective of having considerable control over resources deposit (Omoregbe, 2001). Hence, it could be argued that the Nigerian government securely control the oil industry through the Nigerian National Petroleum Corporation (NNPC) with a goal to maximise efficiency in the petroleum industry. See section 2.4.2 II.

The findings above could be concluded that the research hypothesis $H0_1$ is not accepted for the above statement and pave the way to understand that Nigeria as host government is responsible for regulating the petroleum industry in the country.

6.4.1.2 Increased acquisition of technological skills have been achieved through the bearing clauses contained within contracts

Technological advancement is seen as an effective tool that drives the modern economy across the globe. Hence, achievement of technology transfer through skills development and increasing local expertise becomes inevitable as one of the petroleum fiscal regime strategic

objectives (Dudău, 2015). The study tested the statement above to determine the extent transfer of technological skills is achieved by the Nigerian citizens, as one of the objectives of the PFR. On this note, Daniel et al. (2010) argued:

> "On the practical side, state participation was expected to regulate, or rein in, the behaviour of private sector investors in the national interest, to build national capacity in the resource sector through the transfer of managerial and technical skills and information from the private sector, and, whether explicitly stated or not, to address a wide range of development goals outside the resource sectors.

Consistent with Daniel et al., Ogunleye (2015) asserts that one of the key objectives for introducing the JVs as a fiscal regime is recruitment and training of Nigerians by the oil contractors to develop national expertise.

Following the analysis of the statement mentioned above in Table 6.4, the overall stakeholder's groups revealed a mean of 2.46 and median score 2.00, implying that the broad stakeholder's groups opinions have disagreed that "Increased acquisition of technological skills has been achieved through the bearing clauses contained within contracts". These positions represent 62% of the respondents' opinions that disagreed, while 37% were neutral and the remaining 11% agreed. The respondent's position is consistent with the literature that "budget delays and cuts have made the government unable to meet participating cash obligation and rendered the Joint venture itself with a massive failure. Also, the Mann-Whitney test carried out at 5% significant level did not shows any statistical significance difference.

Empirically, the evidence from the above statement implies that the government objective relating to increased technology skills transfer has not been achieved. Therefore, the hypothesis $H0_1$ is accepted.

6.4.1.3 Job creation for national entities has been achieved through the fiscal terms

Job creation is the most common primacy which underscores the host government economic objectives for developing a petroleum fiscal regime (Cottarelli, 2012). The above statement seeks to determine whether the government has achieved the goal above through the fiscal terms established with the MOCs.

117

In table 6.4, the descriptive statistics disclosed that out of the overall 112 response opinions across the stakeholder's groups, a total of 62 respondents disagreed with the statement above. On the contrary, a small proportion of 20 respondents agreed while 30 respondents remain neutral about the statement in this subsection above. Mann-Whitney tests carried out at 5% significance did not reveal any statistical differences between the respondent's groups.

The possible reason for the respondent's disagreement opinions could be attributed with the collapse of the four local refineries and petrochemical industries in Nigeria which has a combined oil production capacity of 450,000 barrels per day. As result, a considerable number of jobs were loss (PWC, 2017). In spite the establishment of Nigeria Local Content Development that is geared towards job creation in the oil and gas industry through capacity building of local oil firms, which aimed to provide more job opportunities to local workforce. Evidence suggests there is low participation of local firms, which is directly attributed to the local firms' inadequate capacity to compete with their counterparts MOCs and inability to meet the oil industry challenges such as technology, financial strength, and technical skills (UNCTAD, 2006).

The analysis findings for the statement above gives this study sufficient ground to argue that, job creation for national entities has not been achieved in the country; therefore, the research hypothesis $H0_1$ is accepted for the above statement.

6.4.1.4 The fiscal system has created stronger economic links within the petroleum value chain

The desire for value-adding status can be linked to the new oil reserves and growth in the oil production that invariably generate more petroleum revenue from oil sale proceeds, royalties, taxes and other related fees (McPherson, 2004). An economic link is expected to drive the upstream investment opportunities with steady polity and economic growth. The research tested the above statement to determine whether PFR has achieved much stronger economic linkages within the petroleum value chain.

The analysis from the descriptive statistics table 6.4 reveals that 50% of the respondent's opinions disagreed with the statement, while only 24% agreed and the remaining 26% were neutral. At 5% significance, the Mann-Whitney test result shows that there were statistically significant differences in the NEITI group's response and those of the DPR and NNPC groups concerning the statement above.

Table 6.6 Mann-Whitney tests result related to "The fiscal system has created stronger economic links with the petroleum value chain."

The fiscal system has created stronger economic links with the petroleum value chain		
Groups	DPR	NNPC
NEITI	0.028	0.044
NASS	0.048	-

Source: Author from field work

Note i) Mann Whitney test run at p≤ .05 significance

ii) NEITI= Nigeria Extractive Industries Transparency Initiative, NASS= National Assembly, DPR= Department of Petroleum Resources, NNPC= Nigeria National Petroleum Company

Crosstabulation tests were carried out to ascertain the individual differences among the respondent's groups. 85% of the respondent's opinions from the NEITI disagreed with the statement. In contrast, 39% and 48% of the DPR and NNPC respondents respectively agreed that the fiscal system had created stronger economic links with the petroleum value chain. However, the establishment of NEITI, an institution saddle with the responsibility of promoting transparency and due process in the extractive industries of the Nigerian chapter through an annual audit of the extractive industry (NEITI, 2020). Thus, the NEITI disagreement is possible given its role in the industry, for instance; the inability of the Nigerian government to boost its oil production to 4.5 million barrels per day as well as to grow its oil proved reserve to 40 billion barrels by 2010, despite the government vision 2010 aspiration (Gboyega et al., 2011). However, DPR is a regulatory agency of the government, while NNPC represents the government's interest, their agreement is possible given the nature of how government agencies cover-up their shortfalls (Subai, 2014).

On the other hand, a comparison of NASS and DPR revealed that 73% of the respondents' opinions from the NASS disagreed, while 39% of the DPR respondents agreed with the statement. The disagreement by the NASS can be supported with the recent pressure of youth unemployment in the country that necessitates the NASS to include a figure of N52 billion in the 2020 budget appropriation for the special public works programme aimed at employing 774,000 citizens, a thousand from each of the 774 local government areas in the country (Premium times, 2020). Similarly, the recent #EndSARS protest that unfolded in late November 2020, which the protesters used #EndSARS move, as a steppingstone to convey their rage for the hardship they are living with insinuates the extent failure of economic linkages within the value chain. Despite massive oil wealth and one of Africa's largest economies,

119

Nigeria's people have high levels of poverty and lack of basic services due to rampant corruption and charge rights groups (Aljazeera, 2020).

While oil has been the mainstay of the Nigerian economy, the operations of the regulatory agencies and the NNPC are expected to develop and create prospects in other sectors of the economy.

The evidence suggests that government objective in creating stronger economic links within the petroleum value chain has not been met in Nigeria. Thus, the hypothesis $H0_1$ in relation to the above statement is accepted.

6.4.1.5 An appropriate degree of project risk-sharing throughout life of all contracts has been established

Oil investments in the upstream sector are determined by petroleum fiscal regimes (PFRs) and tax policies in today's globalised world (Aleksandrov et al, 2013). Correspondingly, the attractiveness of the PFRs depends on certain criteria such as equity in risk and reward sharing between the participants in the contractor, neutrality and stability (Miller and Alalade 2003). This section sought the respondent's opinions on the degree of project risk-sharing throughout life of a contract.

Table 6.6 result reports the disagreement opinions of the respondents by 50%, in contrast only 24% of the respondents agreed with the above statement, while 26% respondents were neutral on this statement. The mean and median score of (2.74) and (2.00) were also driven with the disagreement opinions. No sign of statistically significant difference was observed when Mann-Whitney tests were run between the respondent's groups at 5% significance level.

The possible reason for the disagreement opinions could be linked to the enormous risks operators faced with the Service Contract in Nigeria as discussed in section 2.4.4 IV, which results in having only one surviving SC currently in operation between NNPC and AGIP out of the eleven (11) SCs that were first signed into law in 2000 as an improvement of PSCs (Ado, 2016).

The above findings conclude that, appropriate degree of project risk-sharing has not been achieved throughout the life of all contracts. Thus, the research hypothesis for the study is accepted for the above statement.

Table 6.7 Descriptive frequencies relating to oil revenue generation

S/N	Statements	Median (Mean)	SA (%)	A (%)	N (%)	D (%)	SD (%)	Total (%)
1	Adoption of PFR increases government share of revenue annually	4.00 (3.43)	8 (23.0)	26 (23.0)	16 (14.2)	34 (30.1)	28 (24.8)	112 (100)
2	Adoption of PFR increases petroleum production in the country	4.00 (3.70)	3 (2.7)	24 (21.2)	8 (7.1)	46 (40.7)	31 (27.4)	112 (100)
3	Adoption of PFR through PSCs and JVs made distribution of oil revenue between the government and the MOCs equitable	3.00 (3.19)	13 (11.5)	24 (21.2)	24 (21.2)	31 (27.4)	20 (17.7)	112 (100)
4	Petroleum production of 2millions brrls/day in relation to Nigeria's proved oil reserved of 37.1 billion barrels is sufficient enough	4.00 (3.77)	3 (2.7)	17 (15.0)	17 (15.0)	41 (36.3)	34 (30.1)	112 (100)

Source: Author

Note: M=Mean, Md=Median, SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree, %= percentages.

6.4.1.6 Adoption of PFR increases government share of revenue annually

The main goal for petrostates in designing PFR is achievement of strategic objectives, of which an increase revenue share, otherwise referred to as government take (Cottarelli, 2012) is of vital importance towards economic development. However, in consistent with one of the major objectives of the of Nigeria's PFR "to get additional revenue to the government from the windfall gain of oil" (see section 3.4.1). The statement above was tested to determine whether in the respondent's opinions, government share of revenue from windfall gains of petroleum is increasing on annual basis.

The descriptive statistics table results reveal, 62 respondents out of the 112, representing 55% were in disagreement that 'Adoption of PFR has increase government share of revenue annually'. Corresponding with a significant mean and median score of 3.43 and 4.00 respectively. Contrastingly, only 34 respondents representing 30% were in agreement with the statement while 14% respondents were neutral.

One of the possible reasons for the disagreement opinions from the majority of the respondents is that, about 95% of the Nigeria's foreign earnings comes from sales of oil revenue, therefore,

the Nigerian budget depends largely on the oil revenue to finance her budget (Reuters, 2019). However, over a decade- 2010 to 2020, the Nigerian government is unable to finance its budget without a foreign borrowing due to the shortage of oil revenue (Trading Economics, 2019). In the current year 2021 alone the country's budget has a deficit of N5.20 trillion, which is above the 3.64% GDP, also above the 3% benchmark fixed by the Fiscal responsibility Act (PWC, 2020). Consequently, above facts are contrary to the postulations of Krachik and Wehner (1998) who asserts that "budget best matches the nation's needs with the available resources through focusing on areas that require improvement upon.

It can be argued from the findings of the statement above that the adoption of PFR has not increases government share of revenue annually. Therefore, the research hypothesis $H0_1$ for this statement is accepted.

6.4.1.7 Adoption of PFR has increase petroleum production in the country

The payoff of petroleum optimal production depends on whether the value of exploring the petroleum resources exceed the worth leaving the petroleum deposit beneath the ground (Aleksandrov, 2013). The optimal petroleum exploration depends on the strategic policies available to oil investors, due to the fact that the oil host countries are limited to some options that they can exercised such as technology, financial capability among others. This statement sought the opinions of the stakeholders on whether adoption of PFR has increase petroleum production in the country.

Following the results from the descriptive statistics table 6.7, the overall respondents disagreed that adoption of PFR has increase petroleum production in the country with a mean and median score of 3.70 and 4.00 respectively. Also, Mann-Whitney tests result at 5% significant threshold did not reveal any statistical significance difference between the respondent groups. Despite, the oil production allowances in PSC regime 2018 (section 3.2.3.5) based on volume of production for crude oil differently for onshore, shallow water, and deep offshore waters geared toward optimal production of oil, not much has been gain towards production increment. The respondent's position could be true, given the drawback of the PSC regime 2018, which is criticised with lack of explicit provisions of for costs recovery limit and profit sharing which could create concerns among investors and possibly jeopardise investment (Nyoor, et al., 2019).

122

With the empirical evidence in the statement in 6.4.1.7, it can be argued that the hypothesis $H0_1$ is accepted for the above statement.

6.4.1.8 Adoption of PFR through PSCs and JVs made distribution of oil revenue between the government and the MOCs equitable

Petroleum fiscal regime are designed by the oil host states with the aim of getting fair share of wealth that accrues from their petroleum sector without discouraging investors to make desired investment for optimal exploration of such natural endowments (Ripley 2011). Thus, respondents' views were asked due to the fact governments of oil host states are faced with challenges of striking balance in fair and equitable distribution of oil revenue between themselves and MOCs.

From the descriptive statistics table 6.7 The overall response rate of median score (3.00) of the respondents indicates that, the respondents disagreed that "Adoption of PFR through PSCs and JVs made distribution of oil revenue between the government and the MOCs equitable". Accordingly, the disagreement is consistent with the literature that, governments of oil producing states faces challenges of designing a PFR that ensures fair share of revenue simultaneously to themselves and to the oil investors (Nakhle, 2008). It could be argued that, neither the Nigerian government nor the MOCs were satisfied that there was equitable distribution of oil revenue between themselves, given the numerous petroleum reform policies undertaken over the years, see (section 3.2.3.4 to 3.2.3.6)

The Mann-Whitney tests run to determine the existence of any possible difference between the stakeholder's groups revealed no differences at the alpha value of 5% set for this study.
The evidence in the above statement suggests that adoption of PFR through PSCs and JVs did not equitable distribution of oil revenue between the government and the MOCs. Hence, the hypothesis $H0_1$ is accepted for this statement.

6.4.2 Concerns related to Information regarding effective utilisation of fiscal allowances

Fiscal allowances are part of the most utilised mechanisms that petrostates uses to achieve set of PFR strategic objectives. With the objective to capture investors apatite into petroleum industry, petrostates offer some additional fiscal allowances and incentives (Manaf et al., 2015), such as investment tax credit, tax holidays, accelerated capital allowance, loss carry forward among other allowances. However, the research hypothesis $H0_2$ in this section, is

tested on seven (7) different Nigeria's petroleum fiscal allowance/incentives in table 6.8 below. An understanding of the effective utilisation of these allowances are of paramount importance in assessing whether or not the Nigeria's PFR have the attractive feature to capture investors into its petroleum industry.

H0$_2$: **The fiscal allowances contained in Nigeria's petroleum fiscal regime are not attractive to petroleum investors owing to the obsoletion of the policies that somewhat overweight their usefulness.**

Table 6.8 below presents the descriptive statistics results of the respondent's opinions on the effective utilisation of petroleum fiscal allowance in attracting investors.

Table 6.8 Descriptive frequencies relating to fiscal allowances within petroleum fiscal regime

S/N	Statements	Median (Mean)	SA (%)	A (%)	N (%)	D (%)	SD (%)	Total (%)
1	Sliding scale royalty rate applied base on water depth encourage deep-water-drilling	3.00 (2.99)	14 (12.4)	18 (15.9)	45 (39.8)	25 (22.1)	10 (8.8)	112 (100)
2	Allowing losses to be carried forward indefinitely serves as tax relief to oil investors	3.00 (3.14)	13 (11.5)	22 (19.5)	30 (26.5)	30 (26.5)	17 (15.0)	112 (100)
3	Investment tax credit for investment in research relating to oil field's development translates to increase in oil production	4.00 (3.46)	13 (11.6)	16 (14.2)	12 (10.6)	48 (42.5)	23 (20.4)	112 (100)
4	An accelerated capital allowance enables the operators to recover their capital expenditure within a short period	4.00 (3.22)	15 (13.3)	22 (19.5)	17 (15.0)	39 (34.5)	19 (16.8)	112 (100)
5	Accelerated capital allowance encouraged operators' fields development	2.00 (2.79)	18 (15.9)	44 (38.9)	5 (4.4)	33 (29.2)	12 (10.6)	112 (100)
6	Tax holidays to encourage operation during periods of losses resulting low oil prices	3.00 (3.22)	8 (7.1)	26 (23.0)	27 (23.9)	35 (31.0)	16 (14.2)	112 (100)
7	Guarantee by government to the oil operators that tax regime will remain stable during the contract periods	4.00 (3.62)	8 (7.1)	16 (14.2)	14 (12.4)	47 (41.6)	27 (23.9)	112 (100)

Source: Author

Note: M=Mean, Md=Median, SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree, %= percentages.

6.4.2.1 Sliding scale royalty rate applied base on water depth encourage deep-water-drilling

The petrostates, including Nigeria introduces a sliding scale royalty as a fiscal allowance in a bid to promote investment into the petroleum industry (Masud, 2016). This is evident in the seemingly quest for financial and technical expertise for oil exploration and production operations from the MOCs (Nwete, 2005). Given the adequacy as well as the immense opportunities open to MOCs, the petrostates have little or no choice rather than to design an attractive petroleum fiscal regime that offer incentive packages to the investors such a sliding scale royalty.

Table 6.8 descriptive statistics result reports: On the first incentive relating to sliding scale royalty rate, 35% of the respondents agreed that the incentive encourage deep water-drilling for improved oil production. While only 22% of the respondents disagreed, although, 45% of the respondents were neutral. The variation of the opinions from the respondents calls for Mann Whitney test to determine the differences between the stakeholder's groups as summarised in table 6.9

Table 6.9 Mann-Whitney tests result related to fiscal allowances within petroleum fiscal regime

1. Sliding scale royalty rate applied based on water depth encourage deep-water-drilling						
Groups	**DPR**	**NNPC**	**MOC**	**IOC**	**NEITI**	**FIRS**
NNPC	0.025	-	-	-	-	-
NEITI	-	0.002	0.016	-	-	-
FIRS	-	-	-	-	0.031	-
NASS	0.040	0.003	0.012	0.046	-	0.023
2. Allowing losses to be carried forward indefinitely serves as tax relief to oil investors						
Groups				**DPR**	**NNPC**	**MOC**
IOC				-	0.033	-
NEITI				0.038	0.000	0.035
FIRS				-	0.027	-
3. Investment tax credit for investment in research relating to oil field's development translates to increase in oil production						
Groups						**MOC**
NEITI						0.016
4. An accelerated capital allowance aimed to enable operators to recover their capital expenditure within a short period						
Groups						**NNPC**
NASS						0.048
5. Accelerated capital allowance to encourage operators' field development						
Groups						**DPR**
NNPC						0.040
NEITI						0.001
FIRS						0.005
6. Tax holidays to encourage operation during periods of losses resulting low oil prices						

Groups	DPR	NNPC	IOC
NEITI	0.006	0.020	-
FIRS	0.011	0.032	0.022
NASS	0.008	0.032	0.016

Source: Author from field work

Note: i) Mann Whitney test run at p≤ .05 significance ii) NEITI= Nigeria Extractive Industries Transparency Initiative, NASS= National Assembly, DPR= Department of Petroleum Resources, NNPC= Nigeria National Petroleum Company, IOCs= Indigenous Oil Companies, MOCs= Multinational Oil Companies

From Mann-Whitney tests result in table 6.9, NASS opinions were in contrast with all the stakeholder groups opinions (ie. DPR, NNPC, MOCs and FIRS) except NEITI. 73% of respondents from the NASS disagreed that "Sliding scale royalty rate applied based on water depth encourage deep-water-drilling". Although, a considerable number of other stakeholder's groups disagreed with one another at some point. The disagreement confirmed the confusion regarding the proposed bill by National Assembly regarding the scrapping of the sliding scale royalty rate (see section 3.2.3.6) which seeks to achieve substantial and progressive investment into the deep-water (Oyedele, 2018), and replaced with Cost Efficiency Factor (CEF) and Reserve Replacement Ratio (RRR) that is geared towards improving government revenue take. However, while the NASS disagreed with 73%, its counterpart stakeholder groups of NNPC and MOCs were neutral with 48% and 44% respectively. Both NNPC and MOCs being the operating arms of the petroleum industry in Nigeria with technical and operating experience in many petrostates across the globe, their neutral opinions with a significant percentage could indicate their reservation relating to the information necessary to either express their positive or negative stance due to unclarity of the legal framework.

Second incentive relating to "losses carried forward indefinitely as tax relief to oil investors", the total median score (3.00) of the respondents confirmed that, on average, the respondents were in disagreement that, allowing losses to be carried forward indefinitely serves as tax relief to oil investors. Given the divergent opinions of the respondent groups, Mann-Whitney tests were carried out to test the differences between the groups.

The Mann-Whitney result from table 6.9, shows that the NEITI opinions differed from the opinions from DPR, NNPC and MOCs. 85% of the respondents from the NEITI disagreed that loss carried forward has effectively been utilised, while on the other hand 50%, 49% and 25% respectively respondents from DPR, NNPC and MOCs agreed. Given the mean score of 3.00

aligning towards the disagreement opinions, it can be argued empirically that the statement above is negative.

6.4.2.2 Investment tax credit for investment in research and development relating to oil field's development translates to increase in oil production

In this section, respondent's opinions were sought to test the ability of Nigeria's petroleum fiscal regime incentive on investment tax credit related to research and development. The rationale behind the statement is, governments of oil host states and oil companies respectively engaged in capital investment with soul objective to explore and exploit oil field's development for revenue and profit opportunities, for instance, investment in research and development can lead to discovery of new technologies and patents that ultimately open up those opportunities (Dixit and Pindyck, 1995). Also, lack of investment in research has over the time create an overwhelming gap in technological fields, which impedes most oil producing states the goal of autonomy in the petroleum operations, in contrast, such gap can possibly be overcome with utilisation of investment in scientific research and development (McPherson, 2004).

To this end, the descriptive statistics table 6.8 reported an interesting result of 63% disagreement opinions of the respondent's opinions. Contrastingly, 26% were in agreement of the statement and 11% remained neutral. Also, Mann-Whitney tests carried out, identified a statistical significance difference between the groups of NEITI and MOCs in table 6.9. However, to analyse the individual group differences, a crosstabulation tests were deployed and reveals that respondents from NEITI disagreed with an overwhelming percentage of 92 in contrast with 36% agreement position of the MOCs. The disagreement of the NEITI respondents can be justified based on the holistic yearly audit it carries in the extractive industries in Nigeria, which give them the upper hand to understand any anomality from either government or investors area. The agreement position of the MOCs is not surprising, because they are the beneficiaries of such incentives and have found to be abusing the allowance in the recent time.

Drawing from the findings of mean and median scores 3.46 and 4.00 in table 6.8, it can be argued that the investment tax credit for investment in research and development relating to oil field's development has not translates to increase in oil production.

6.4.2.3 I. Capital allowance enables the operators to recover their qualify capital expenditure within a short period

6.4.2.3 II. Capital allowance encouraged operators' oil fields development

From a general overview of investment attraction and competition of amongst petrostates, renewed attention has been drawn by the oil producing states focusing on cost reduction, improving cash flow and sound tax burden management (Delloitte, 2017). Implementation of accessible government incentives and exemptions are among the few mechanisms MOCs can accomplished set objectives. To this end, the Nigeria tax codes prescribed how taxpayers are allowed to claim some benefits such as capital allowance in accordance with their business line with the aim to reduce certain tax burden such as recovery of the capital expenditures. Thus, the second schedule of Nigeria Company Income Tax Act (CITA) enshrined the legal basis for the claim of capital allowance by companies. The aim of the above statement is to find out the degree of Nigeria regulatory agencies in meeting the objective of the capital allowance by the MOCs.

The table 6.8 revealed the results from the descriptive statistics of the respondent's opinions of the above statement. Firstly, 51% of the respondents disagreed that accelerated capital allowance enables the operators to recover their capital expenditure within a short period, and 33% agreed with the statement, while 15% were neutral. Mann-Whitney tests carried out reported the statistical differences between the NEITI and MOCs groups. Additionally, a crosstabulations results confirmed that 62% of the respondents from NEITI disagreed while 38% of the MOCs respondents agreed with statement. However, the disagreement opinions of the majority of the respondents are consistent with concerned raised by a renowned accounting firm Delloitte, which stressed that over the years, certain provisions of the of the Second Schedule have raised controversies between the MOCs and the FIRS, particularly relating to interpretation and implementation, hence, in most circumstance the provisions of the Act defeated the purpose for which capital allowances were introduced.

On the contrary the second statement, 55% of the overall respondents agreed that accelerated capital allowance encouraged operators' fields development, while 40% disagreed with statement and only 4% were neutral. Given the statistical difference observed when Mann-Whitney tests were carried out in the table below 6.8 a crosstabulation test utilised revealed where the differences emerged. Respondents from the NNPC, NEITI and FIRS differed by 38%, 62% and 56% disagreement respectively to their counterparts DPR by 89%. Although, it

is surprising to have a conflict of opinions from agencies representing the interest of the same government in the affairs of regulations, but somewhat either reflects the lack of lack of synergy (clarity of role and responsibility) between the regulatory agencies as discussed in (3.1.1.2) or confirmed the ascertained statement made by Delloitte in the first statement above.

6.4.2.4 Tax holidays encourage operation during periods of losses resulting low oil prices
Qualified investment projects or companies are granted tax incentives enshrined within a special tax provisions that favourably deviated from the main tax code (IMF 2017). In Nigeria, the tax holiday incentives typically fall in profit-based incentives. The statement above was tested to determine the extent tax holidays incentives meet their objectives.

From the descriptive statistics in table 6.8, 45% of the opinions from the respondent's groups disagreed that tax holidays encourage operations during periods of losses by MOCs. On the contrary, 30% agreed with the statement, while 24% were neutral. A significance statistical differences between the respondent's groups were revealed from the findings of the Mann-Whitney tests.

From the Mann-Whitney tests findings in table 6.9 it can be observed that the NEIT, FIRS and NASS groups differed in the strength of opinions as supposed to the DPR, NNPC and IOCs groups. A crosstabulation tests further revealed that 69%, 67% and 64% strength of opinions from the respondents of NEITI, FIRS and NASS disagreed with the statement above respectively. In contrast, 45%, 38%, and 50% agreed that tax holidays encourage operation during periods of losses by MOCs. The disagreement opinions didn't come as a surprise from FIRS, because as the federal tax authority in charge of collecting and remitting of all revenues accrued in the country, FIRS is in the best position to know if there is an abuse of incentives by the operators or not. However, NEITI as extractive industries transparency initiative conducts yearly audit in the extractive industries, also their position can be justified based on their role in the industry. Also, the NASS accused the executive arm of abusing the tax holiday in the name of pioneer status due to discretionary powers vested to the Executive to grant the pioneer status without need to secure for approval from the NASS (Tax Justice Network, 2018). Consistent with disagreement opinions, Rapu et al (2013) exemplified tax holidays as poorly targeted incentives, which were poorly designed due its ineffectiveness and costly to administer. The Actionaid group also noted that, Nigeria has lost out $3.3billion as result of an

extraordinary ten-year tax holidays granted to some of the world oil majors- Shell, ENI and Total (Actionaid, 2016).

The above findings conclude that tax holidays do not encourage operation during periods of losses by the MOCs. Thus, the research hypothesis for the above statement is accepted.

6.4.2.5 Guarantee by government that petroleum fiscal regimes will remain stable during the contract periods

Petroleum operations are characterised with long term and huge capital-intensive investment in the upstream petroleum sector, which underscores the vulnerability of MOCs to unilateral changes of the petroleum contracts by the host state within the life of the contracts at some point. On this note, Cameron (2006) argue that, a provision that guarantees contract stability is a major mechanism that mitigates the risk of the huge capital and time been invested. Thus, a key aspect of attracting MOCs.

Analysis of the descriptive statistics in table 6.8 revealed an overwhelming disagreement mean and median scores of 3.62 and 4.00 respectively. The mean and median scores also correspond to 66% disagreement opinions of the of the overall respondents. Consistent with this disagreement position, the Nigeria petroleum fiscal regimes as has been subjected to quite a number of changes (please refer to section 3.2.3.1 to 3.2.3.6). The swaying of the regulations is possible to negatively affect the investors and the general public. Hence, poses threats to the MOCs investments.

It can be argued that the government does not guarantees stability during the lifetime of the contracts.

Table 6.10 Descriptive frequencies relating to the stability of the petroleum fiscal regime

S/N	Statements	Median (Mean)	SA (%)	A (%)	N (%)	D (%)	SD (%)	Total (%)
1	PFR enables risk sharing between the government and oil investors	4.00 (3.38)	10 (8.8)	30 (26.5)	12 (10.6)	27 (23.9)	33 (29.2)	112 (100)
2	PFR has an effective administrative framework to encourage investment and compliance	4.00 (3.43)	13 (11.5)	27 (23.9)	3 (2.7)	37 (32.7)	32 (28.3)	112 (100)
3	PFR enables profit sharing between the government and the investors	4.00 (3.21)	13 (11.5)	28 (24.8)	12 (10.6)	40 (35.4)	19 (16.8)	112 (100)
4	PFR enhances and guaranty investor's revenue rising potentials	3.00 (3.25)	18 (15.9)	20 (17.7)	20 (17.7)	24 (21.2)	30 (26.5)	112 (100)

Source: Author from fieldwork

130

6.4.2.6 PFR has an effective administrative framework to encourage investment compliance

An effective administrative regulatory framework is an enabler for social welfare objectives established by the government through regulatory authorities (Djankov, 2003). To this end, Section 1 of the Petroleum Act as well as the Exclusive Economic Zone Act, both vested powers to Nigeria government towards controlling and regulating the entire mineral resources under or upon any land in the country or, in, below or upon the sea as well as the exclusive economic zone of Nigeria remains property of the Federation (DPR, 2018) see section 2.4.2. Accordingly, opinions of stakeholders were sought on the above statement.

The extract from the descriptive statistics in table 6.10 shows that 61% of the respondents disagreed, in comparison to 35% agreement opinions, while 3% were neutral. However, the overall respondents disagreed with a mean and median score of 3.43 ad 4.00 respectively. At 5% significance, Mann-Whitney test did not reveal any statistical difference between the respondent's groups. The disagreement position of the respondent's groups could be supported given the delay in passing of the PIB into law for more than a decade, which also shows clearly how Nigerian petroleum sector has suffered series of petroleum fiscal regimes ranging from concessionary system, JVs, and a considerable forms of PSC regimes some of which are yet to be implemented specifically the PSC fiscal regimes under the PIB of 2008 and PIFB of 2018 (see section 3.2.3.6). It can be argued that, with the delay of passing the PIB into law by the Nigerian government, many investment decisions would be put on-hold due unclarity of the regulatory framework.

From the findings in this section, it could be argued that the Nigeria's PFR does not have an effective administrative framework that encourage investment and compliance. Hence, the research hypothesis $H0_2$ is accepted for the above statement

6.4.2.7 PFR enhances and guaranty investor's revenue rising potentials

This section sought the opinions of the respondents on whether the Nigeria's petroleum fiscal regime has the ability to increase share of MOC's profits simultaneously as government revenue increase. The statement above is imperative, given the characteristics of a competitive

petroleum fiscal regime, which aimed at having a built-in revenue/profit sharing (Nackle and Lassourd, 2019).

An analysis of the descriptive frequencies from table 6.10 revealed the following findings: 54 respondents disagreed with the statement, while 38 agreed and 20 were neutral. An interesting median score of 3.00 supports the disagreement position of the respondents. However, there was no significance difference between the respondent's groups when Mann-Whitney tests were carried out at 5% significance. Accordingly, the disagreement position is also consistent with the literature by Otto et al (2006: Xi) that:

"In matters of mining taxation, governments rarely believe that companies pay too much tax; companies rarely believe that they pay too little tax; and citizens rarely believe that they actually see tangible benefits from the taxes that are paid".

The findings for the statement above, suggests that there is no indication that share of MOC's profits simultaneously rise as government revenue increases. Therefore, the research hypothesis $H0_2$ for the above statement is accepted.

6.4.3 Concerns related to existence of sound administrative and regulatory frameworks within Nigeria's petroleum fiscal regime regarding reporting and disclosure

The existence of sound administrative structured can have a greater influence on how the regulatory framework implements the petroleum policy and how the petroleum activities are applied (Hunter, 2016). The federal government of Nigeria discharges the legislative roles mostly by Regulatory, Supervisory and Participatory through its agencies that include: Federal Ministry of Petroleum Resources, Nigerian National Petroleum Corporation (NNPC) and Department of Petroleum Resources (DPR) as well as its affiliates or subsidiaries as the case may be as discussed in chapter two, see section 2.4.3. Therefore, an understanding of the influence of the administrative structure on the implantation of regulatory framework in relation to reporting and disclosure will inform the current study the suitability of the PFR in the petroleum industry. The following research hypothesis below tests the statement.

H0₃: Nigeria's petroleum fiscal regime does not have sound administrative regulation relating to reporting and disclosure in the petroleum industry due to lack of political will.

Table 6.11 Descriptive frequencies relating to the administrative and regulation frameworks within Nigeria's petroleum fiscal regime in relation to industry reporting and disclosure

S/N	Statements	Median (Mean)	SA (%)	A (%)	N (%)	D (%)	SD (%)	Total (%)
1	DPR is conferred with the powers of oil regulation	2.00 (1.95)	50 (44.2)	39 (34.5)	5 (4.4)	15 (13.3)	3 (2.7)	112 (100)
2	Existing provision of oil contractual arrangement are adhered to in petroleum industry	4.00 (3.73)	7 (6.2)	22 (19.5)	3 (2.7)	42 (37.2)	38 (33.6)	112 (100)
3	Adequate knowledge and competence have been demonstrated by the fiscal regime policy makers in setting effective regulation for PFR	4.00 (3.15)	12 (10.6)	31 (27.4)	9 (8.0)	48 (42.5)	12 (10.6)	112 (100)
4	Political and other conflicting intrusion by the government regulatory bodies are separated from operational and commercial decisions	4.00 (3.71)	10 (8.8)	22 (19.5)	4 (3.5)	31 (27.4)	45 (39.8)	112 (100)
5	DPR and other allied regulatory government agencies have the necessary technical skills to exert their mandate effectively	3.00 (3.12)	17 (15.0)	21 (18.6)	26 (23.0)	28 (24.8)	20 (17.7)	112 (100)
6	Adequate Financial resources are in place to the regulatory agencies to carry out their duties effectively	4.00 (3.49)	18 (15.9)	22 (19.5)	5 (4.4)	21 (18.6)	46 (40.7)	112 (100)
7	As a regulator, DPR ensures transparency towards reporting and disclosure with regards to petroleum production	3.00 (2.97)	18 (15.9)	32 (28.3)	16 (14.2)	27 (23.9)	19 (16.8)	112 (100)
8	DPR ensures transparency towards reporting and disclosure in remittance of petroleum sales revenue to federation account	4.00 (3.81)	5 (4.4)	21 (18.6)	2 (1.8)	46 (40.7)	38 (33.6)	112 (100)
9	DPR ensure transparency and disclosure with regards to cost of petroleum production	3.50 (3.14)	16 (14.2)	29 (25.7)	11 (9.7)	35 (31.0)	21 (18.6)	112 (100)

Source: Author from fieldwork

Note: M=Mean, Md=Median, SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree, %= percentages.

6.4.3.1 DPR is conferred with the powers of oil regulation

DPR has the statutory responsibility of ensuring compliance to petroleum laws, regulations and guidelines in the Nigerian oil and gas industry. The discharge of these responsibilities involves monitoring of operations at drilling sites, producing wells, production platforms and flow-stations, crude oil export terminals, refineries, storage depots, pump stations, retail outlets, any other locations where petroleum is either stored or sold, and all pipelines carrying crude oil,

natural gas and petroleum products (DPR, 2018). The rational for testing this statement was to ascertain which regulatory agency has the mandate to carry petroleum regulation on behalf of the Nigerian government.

The result from the descriptive statistics table 6.11 shows that 79% of the respondents agreed, 16% disagreed while 5% were neutral with the statement. Mann-Whitney tests were conducted to ascertain whether difference exist between the respondent's groups.

Table 6.12 Mann-Whitney tests result related to DPR is conferred with the powers of oil and gas regulation, production, refining & enforcement of government policies

DPR is conferred with the powers of oil and gas regulation, production, refining & enforcement of government policies				
Groups	DPR	MOC	IOC	NEITI
IOC	0.044	-	-	-
NEITI	-	0.015	0.006	-
FIRS	-	-	0.030	-
NASS	-	-	-	0.032

Source: Author from fieldwork

Note: i) Mann Whitney test run at $p \leq .05$ significance ii) NEITI= Nigeria Extractive Industries Transparency Initiative, NASS= National Assembly, DPR= Department of Petroleum Resources, NNPC= Nigeria National Petroleum Company, IOCs= Indigenous Oil Companies, MOCs= Multinational Oil Companies

Table 6.12 shows the differences of opinions between the respondent groups. An analysis of the crosstabulation tests reveals that 93%, 39%, 72%, 91% from the IOCs, NEITI, FIRS, NASS respondents agreed with statement respectively. In contrast, the DPR, MOCs, IOCs and NEITI disagreed with the statement. The possible reason for the disagreement positions of the DPR, MOCs, IOCs and NEITI could be linked to the fact that the by virtue of statutory power, the Ministry of Petroleum Resources (MPR) is the mother ministry of all the oil regulatory agencies such as DPR, PPMC, NNPC, PPRMC, Equalization funds and others. Therefore, the DPR is a subsidiary of the MPR.

6.4.3.2 Existing provision of oil contractual arrangement are adhered to in the petroleum industry

The general industry regulation is geared towards attaining socially desirable target and blocking manifestation of any illegal conduct (Subai, 2014) see section (2.1). MOCs are profit making entities, as such it is possible the MOCs to use any loopholes of the contractual terms to their investment advantage. Reed (2002) argue that it is the topmost responsibility of the

134

regulatory agencies to ensure compliance with any provision of the contractual terms are adhered to and reprimand any investor or counterpart agency which violates the contract terms. To this end, this statement sought the opinions of the stakeholders ascertain the level of compliance towards the existing the contractual terms.

Following the results from the descriptive statistics in table 6.12: 80 respondents disagreed that existing provisions of the oil contractual arrangements have been adhered to in the petroleum industry, in contrast, 27 respondents agreed with the statement and only 3 respondents were neutral. Mann-Whitney tests result shows significant difference of opinions from NEITI and MOCs groups.

Table 6.13 Mann-Whitney tests result related to Existing provision of oil contractual arrangement are adhered to in petroleum industry

Existing provision of oil contractual arrangement are adhered to in petroleum industry	
Groups	**MOC**
NEITI	0.050

Souce: Author from fieldwork

Note: i) Mann Whitney test run at p≤ .05 significance ii) NEITI= Nigeria Extractive Industries Transparency Initiative, MOCs= Multinational Oil Companies

Given the differing opinions between the response groups of NEITI and the MOCs in table 6.13, a crosstabulation tests further carried out to ascertain the possible reason for the differences of opinions between NEITI and MOCs. 54% of the respondent from NEITI disagreed with the statement above. In contrast the MOCs respondents agreed with a significant of 81%. The position of the NEITI is in accordance with its soul responsibility of representing public interest through strengthening of transparency in the extractive sector. Accordingly, the National Assembly probe the regulatory agencies reluctancy in revoking and prosecuting the licenses of oil-marketing companies engaged in illicit practices at the expense of the public interest (Subsidy Report 2012). National Assembly probe underscored the disagreement of the NEITI. On the flipside, the agreement opinions from the MOCs, can be argued that, given the number of indicted oil investors before the Economic and Financial and Crime Commission and other awaiting trials (Premium times, 2020). However, from the mean and median scores (3.73 and 4.00), the analysis shows that there is low compliance in the petroleum industry towards adherence to existing provision of the contractual arrangement. Hence the statement of the research hypothesis $H0_3$ is accepted.

6.4.3.3 Adequate knowledge and competence have been demonstrated by the fiscal regime policy makers in setting effective regulation for PFR

The table 6.12 above reports the descriptive statistics relating to "Adequate knowledge and competence demonstrated by the fiscal regime policy makers in setting effective regulation for PFR". The overall response rate of median score (4.00) of the respondents indicates that, on average, the respondents disagreed that Adequate knowledge and competence have been demonstrated by the fiscal regime policy makers in setting effective regulation for PFR". With inference to the series of changes it suffers since its introduction in 2008, the Petroleum Industry Bill (PIB) (see section 3.2.3.4 to 3.2.3.6), which it is yet to be ascent into law due various reviews, literature argue that the lingering incompetence resulted to absence of clear governance framework and invariably caused Nigerian government revenue leakages of over $10.4 billion as result of inefficiencies, under-remittances and theft (Olawoyin, 2018). The incompetency and inadequate knowledge in setting effective regulation for PFR confirms the non-clarity of role and responsibilities in relation to the agency that proposed the fiscal regime, the agency that recommend course for action with regards to policy approval as well as the agency that enforce the implementation and agency that monitors the implementation. The Mann-Whitney tests run to determine the existence of any possible difference between the stakeholder's groups revealed no differences at the alpha value of 5% set for this study.

From the evidence above, it is empirically discovered that there is inadequate knowledge and incompetence by the fiscal regime policy makers in setting effective regulation for PFR. Thus, the research hypothesis $H0_3$ for the statement above is accepted.

6.4.3.4 Political and other conflicting intrusion by the government regulatory bodies are separated from operational and commercial decisions

The ability for any regulatory authority to achieve its desired objectives such as creating or adding value among others to the public, depends on its autonomy to make decisions. Accordingly, Tordo et al. (2011) argue that, factors such as political and conflicting intrusion can significantly affect an organisational ability to attain good regulatory governance practice. To this end, the statement in this subsection was developed to determine respondent's opinions whether Nigerian regulatory bodies are free to separate political intrusion from their operational and commercial decisions independently.

The cumulative median score (4.00) from table 6.12 of the respondent's opinions indicates a significant disagreement position that "Political and other conflicting intrusion by the

government regulatory bodies are separated from operational and commercial". One of the possible reasons for the respondent's disagreement opinions about the statement can be inferred to the evidence of missing revenue discovered during the investigative panel by the National Assembly in 2014 for a total sum of $20 billion non-remittance into the federation account by the Nigerian National Petroleum Corporation (NNPC) (NEITI Report, 2015). Furthermore, sparks the controversial suspension of the then central bank governor due to the confirmed allegation he made to the missing funds by management of the NNPC, thus confirms the political office abuse. The Mann-Whitney test run to determine the existence of any possible difference between the stakeholder's groups revealed no differences at the alpha value of 5% set for this study.

Given the findings in table 6.12, the conclusion is that the majority of the disagreed with statement. Hence the research hypothesis is accepted for the statement above.

6.4.3.5 DPR and other allied regulatory government agencies have the necessary technical skills to exert their mandate effectively

Possession of sound technical skills from the petroleum industry regulators arguably put the MOCs conscience on a check towards dealings in the petroleum operations and would be able to uncover any possible wrong doings by the MOCs and other oil stakeholders. On this basis, the opinions of the stakeholders were sought to determine the respondents' opinions on the above statement 6.4.3.5.

The descriptive statistic table 6.12 reports a mixed opinion by the respondents: 48 out of 112 respondents, representing 43% disagreed with the statement. In contrast a total of 38 respondents corresponding to 34% agreed while 26 respondents representing 23% were neutral. Table 6.14 presents the Mann-Whitney tests results for the difference between the respondent's groups relating to the statement "DPR and other allied regulatory government agencies have the necessary technical skills to exert their mandate effectively".

Table 6.14 Mann-Whitney tests result related to DPR and other allied regulatory government agencies have the necessary technical skills to exert their mandate effectively

DPR and other allied regulatory government agencies have the necessary technical skills to exert their mandate effectively				
Groups	DPR	NNPC	MOC	NEITI
NEITI	-	0.024	-	-
NASS	0.032	-	0.025	0.007

Source: Author from fieldwork

Note: i) Mann Whitney test run at p≤ .05 significance

ii) NEITI= Nigeria Extractive Industries Transparency Initiative, NASS= National Assembly, DPR= Department of Petroleum Resources, NNPC= Nigeria National Petroleum Company Companies, MOCs= Multinational Oil Companies

From table 6.12 a number of differences exist between the groups relating DPR and other allied regulatory government agencies have the necessary technical skills to exert their mandate effectively. First, with 69% disagreed opinions, the NEITI differed in strength of opinions from NNPC who in contrast agreed by 38% strength. Second, 64% response opinions by NASS respondents differed with respondents' opinions from the DPR, MOCs, and NEITI, which has an average 50% disagreement response rate. The position of the three (DPR, MOCs, and NEITI) stakeholders could be possible, because the three groups represents the stronghold of the petroleum industry stakeholders – DPR is the regulator and MOCs are the operators while the NEITI is the independent body for transparency initiative. In reality the three stakeholders should not be agreeing with one another, yet on the above statement they found to be on the same side, which confirm that there is element of truth.

6.4.3.6 Adequate Financial resources are in place to the regulatory agencies to carry out their duties effectively

Adequate financial resources by the petroleum regulatory agencies is essential in setting effective monitoring, compliance and enforcement, which are of high importance to the Nigerian government whose economy solemnly depended on oil revenue generation. Respondent's opinions were sought to determine the adequacy of government finance to the regulatory agencies.

Following the respondent's opinions in table 6.12 a cumulative median score of (4.00) was reported. The result confirms that inadequate financial resources to the regulatory agencies

contributed towards inability to discharge their duties effectively. This result can be supported by the literature on the codes of good governance that recommends realistic annual budget to support the relevant agencies in carrying out their assigned roles (see section 3.1.1.3). Evidence reveals that the major challenge in oil and gas industry is inability of NOC to meet the obligations under their participation interest including cash calls and also mismatch of skills and its concentration between the operator and policymaking arm of the oil producing countries (Lassourd, 2015). It can be argued that one of the major issues in Nigeria relating to regulatory agencies enablement to carry out assigned roles are link to the lack of financial autonomy by the regulator function. The assertation is consistent with the literature: Gboyega, et al., (2011) asserted that DPR which supposed to carry-out its regulatory function independent without interference ended off being an arm of Ministry of Petroleum Resources (MPR) and NNPC from which it receives directives. Moreover, NNPC that supposed to be operator or commercial entity ended off having an overbearing influence in the overall operations of the industry, which results in inefficiencies and fraud in the sector due to obscure nature of the company (Ikeanyibe, 2015). Mann-Whitney tests run to determine the existence of any possible difference between the stakeholder's groups revealed no significance differences at the alpha value of 5% set for this study.

The findings on the table 6.12, suggest that there is inadequacy in financial resources in place to the regulatory agencies to carry out their duties effectively. Therefore, the research hypothesis $H0_3$ for the above statement is accepted.

6.4.3.7 DPR ensures transparency towards reporting and disclosure with regards to petroleum production

Oil investors and general public depends on publication of relevant, reliable and timely information (see section 3.1.1.4), to make investment decisions. Transparency in reporting and disclosure uncovers corrupt practices and enables earlier identification as well as ratification of possible problem as it built trust in the system. This statement was tested with a view to ascertain stakeholder's opinions on the level of transparency in the petroleum industry regulation.

Following the response on table 6.12, 44% of the respondents disagreed. In contrast, 40% of the respondents agreed with the statement DPR ensures transparency towards reporting and disclosure with regards to petroleum production. while on the other hand 14% were neutral.

The Mann-Whitney tests result shows a significant difference, which calls for a crosstabulation to analyse the differences between the groups.

Table 6.15 Mann-Whitney tests result related to DPR ensures transparency towards reporting and disclosure with regards to petroleum production

DPR ensures transparency towards reporting and disclosure with regards to petroleum production						
Groups	IOC	NNPC	MOC	IOC	NEITI	FIRS
DPR	0.014	-	-	-	-	-
NEITI	-	-	-	0.009	-	-
NASS	0.002	0.039	0.013	-	0.002	0.029

Source: fro fieldwork

Note: i) Mann Whitney test run at p≤ .05 significance

ii) NEITI= Nigeria Extractive Industries Transparency Initiative, NASS= National Assembly, DPR= Department of Petroleum Resources, NNPC= Nigeria National Petroleum Company Companies, MOCs= Multinational Oil Companies

The result from the Mann-Whitney table 6.15, firstly indicates a statistically significant differences between the respondent's groups of IOCs and DPR. A crosstabulation of the respondent's opinions reveals that 56% of the IOCs disagreed with the statement. On the contrary, the respondent's opinions from DPR agreed with 50%. The ICOs position could be correct given the audit report of NEITI: non-segregation of oil production and lifting profiles (i.e Oil Mining Lease blocks) relating to federation from Nigeria Petroleum Development Company (NPDC) in line with the business models implies transparency, disclosure and ethical flaw, which may lead to product diversion and huge revenue loss to the country (NEITI 2015). On the other hand, the position hold by the DPR is not surprising, since the agency is in question. In essence, the respondent's opinions in relation to the DPR reporting and disclosure of petroleum production is negative. Evidence from the overall median score (3.50) confirmed the disagreement on this statement. Therefore, the research hypothesis $H0_3$ for the statement above is accepted.

6.4.3.8 DPR ensures transparency towards reporting and disclosure in remittance of petroleum sales revenue to federation account

Revenue reporting and disclosure shapes regulatory transparency. Regulatory agencies have a duty towards commitment to publish financial report as well as other revenue generated income (Tijjani, 2016). Hence, this statement was tested in a bid to determine Nigeria's regulatory agencies transparency and accuracy of information relating to reporting and disclosure in remittance of petroleum sales revenue to the federation account.

To this end, descriptive statistics result in table 6.12, reveals 74% of the overall respondent's opinions disagreed with the statement while only 23% of the overall respondent's agreed. However, at 5% significance, Mann-Whitney did not show any statistical difference. With the mean and median scores of 3.81 and 4.00 siding the disagreement position of the overall strength of the respondent's opinions, it can be concluded that, DPR does ensure transparency towards reporting and disclosure in remittance of petroleum sales revenue to federation account.

6.4.3.9 DPR ensure transparency and disclosure with regards to cost of petroleum production

The opinions of the oil stakeholders were sought on the statement that disclosure related to the cost of petroleum production by the DPR in order to justify the essence of information on transparency and accountability of regulatory agencies. From the descriptive statistics table 6.12 it can be observed that out 112 respondents, a total of 56 respondents representing 50% of the response strength, disagreed with the statement. In contrast, 45 respondents corresponding to 40% agreed, and 11 respondents making up10% were neutral about the statement. Mann-Whitney tests carried out did not reveal any possible statistical differences at 5% significance between the stakeholder's groups. Also, mean and median scores (3.14 and 3.50) align with the disagreement position of the respondent's opinions.

The respondent's opinions implied that there is no transparency and disclosure with regards to cost of petroleum production by the DPR. The negative opinions by the respondents could be regarded given the findings by the NASS that there was no public information regarding the cost segregation of petroleum production (Petroleum Task Force, 2012).

The findings above, confirmed the negative opinions on the transparency and disclosure with regards to cost of petroleum production by the DPR. Therefore, the research hypothesis H03 for the statement is accepted.

6.5 Summary of the quantitative findings

The sections above presented an analysis and findings of the questionnaire-based survey. Specifically, three hypotheses relating to the Nigeria's petroleum fiscal regime were tested. This section presents the summaries of the quantitative findings as follows:

6.5.1 Findings on the Effective policy for achieving the economic potentials of the country's petroleum resources

The empirical findings from the quantitative data revealed that the introduction of contracts (PSCs and JVs) securely gave Nigeria's government control of the petroleum industry. Coherent to the finding, the literature suggests that the Organization of Petroleum Exporting Countries (OPEC) directed all its member states to partake in the oil industry operations with the sole objective of having considerable control over resources deposit (Omoregbe, 2001). However, the strategic objectives of Nigeria's PFR relating to the acquisition of technological skills, Job creation for national entities, strong economic link within the petroleum value chain and risk-sharing found to be below average. The empirical findings indicate the following implications.

The seeming inequitable distribution of oil revenue between the government and the MOCs suggests a review of the legislative framework by the government to establish equity towards the government and MOCs relationship. Literature relates equity as charging tax on the net profit of MOCs rather than on their gross income (Manaf et al., 2016). Also, the perceived inadequacy in an annual increase of government revenue suggests a lacuna in terms of the stakeholder relationship. Under the stakeholder theory, the normative assumption requires the stakeholder's intrinsic value to be considered (i.e., stakeholder should not be treated as a means to end). Thus, for MOCs to affect the petroleum industry towards incremental investment, the Nigerian government needs to adequately invest its relationship with MOCs. The Nigerian government in the

6.5.2 Findings on effective utilisation of fiscal allowances

The analysis of the participant's opinions perceived the entire fiscal allowance instruments were not adequate to attract investors. Thus, the null hypothesis "Fiscal allowances contained in Nigeria's petroleum fiscal regime are not attractive to the petroleum investors" is accepted.

The fiscal allowance instruments employed in this study corresponds to the findings of the inadequacy in an increase in government revenue share annually and petroleum production. Also, it indicates that the scale at which Nigeria's petroleum fiscal regime fail to create stronger economic linkages due to inequitable project risk-sharing. It is also an indication of a lack of confidence by the MOCs in the attractiveness of the country's petroleum fiscal regime.

However, the policy should be designed to achieve a high degree of effectiveness on the fiscal instruments through an adjustable mechanism that adapts to changing circumstances in the international oil market.

6.5.3 Findings on the existence of sound administrative and regulatory frameworks within Nigeria's petroleum fiscal regime concerning industry reporting and disclosure

Empirically, the general findings of the analysis on this hypothesis show that the main upstream regulator "DPR" has a realistic degree of expertise on administration and regulation; however, it has not utilised the skills. The critical issue was due to some specific factors such as inadequate funding and political and conflicting intrusion. Similarly, the participants indicate the necessity of enforcing compliance on contractual provisions and improvement towards the conduct of regulatory duties, including the reporting and disclosure relating to petroleum sale revenue to the government, cost of petroleum production and barrel of oil production.

Literature suggests that internal factors such as resources, timing and cost of information disclosure can limit the ability of the government to imbibe the culture of reporting and disclosure (Parsa and Kouhy 2008). Despite the limitations of adapting to the culture of reporting and disclosure, Brammer and Pavelin (2005) argue that reporting and disclosure creates a positive reputation and protect their interest in the event of misconduct. Apart from the degree of regulation, ownership and financial performance aspect, host governments and MOCs considered reporting and disclosure crucial in establishing and sustaining a positive reputation with their stakeholders. Evaluating the reputation from the Game theoretical lens, reputation creates perception amongst stakeholders and the general public about what the industry is, what it does and what it stands for.

6.6 Summary

This chapter analyses the findings of the questionnaire survey administer to the stakeholders of Nigeria's upstream petroleum sector. The three research hypotheses were analysed and accepted based on the responses of the stakeholder's in the respective organisation. The analysis findings reveal ineffectiveness of petroleum regulatory governance in the implementation of petroleum fiscal regime in Nigeria PFR. also, the findings highlighted the uncertainty of the regulatory framework due to non-passage of Petroleum Industry Bill (PIB), which affects the investment climate of the petroleum industry.

Chapter Seven

Findings of Primary Data from Interview Data Analysis

7.0 Introduction

This chapter's content presents the findings collected as part of the primary research and comprises analysis of a series of semi-structured interviews. The interviews were conducted with a total of fourteen participants from the key stakeholders which I refer to hereafter as the seven stakeholder's group as listed in section 5.5.1 within Nigeria's petroleum industry using the thematic analysis technique. The thematic analysis is a process whereby themes that adequately represent data in accordance with the research question were identified (see section 5.7.2). However, the participants had been carefully selected based on their expertise combined with their managerial experience level within the oil industry (see section 5.5.3). The purpose of applying the interview analysis technique in this study is to explore and further build on the exploratory sequential mixed research design see 7.1 below. The chapter is structured as follows: The first part discusses the objective of the method choice. In the second part of this chapter, an overview of the thematic framework analysis is presented. The remainder of the chapter is structured into sections 7.3 discussing the main research findings' primary analysis, and 7.4 presents unexpected outcomes data set, while section 7.5 concludes the chapter.

7.1 Objective of Method Choice

A considerable number of objectives were the primary drivers for adopting the semi-structured interview as one of the two methods used for data collection for the current study. Notably, the unstructured nature of semi-structured interview provides the researcher with the capacity to gain insight into how the interview participants view Nigeria's petroleum industry based on what they perceived as relevant and essential, which add to the depth of inquiry (Bryman, 2016). Although what the interviewee perceived as relevant and essential might seem nuanced to the researcher, nonetheless, the nuances form unexpected outcomes providing a rich detail and reduce the researcher's bias during analysis (Levin, 2017). Furthermore, a semi-structured interview offers the researcher the opportunity to evaluate validity of the participant's responses by observing non-verbal indicators (i.e. the body language and physical impression) that are of paramount importance when discussing information (Creswell, 2014). Similarly, the method blends well with exploring values, attitudes, motives and beliefs of primary data.

More so, the selected method complements the mixed-method research design by providing an in-depth view of the study in contributing towards the strength of both qualitative and quantitative approach that make up the weakness of either of the two methods (see section 5.5).

7.2 Overview of Thematic Framework Analysis for the study

The researcher identifies, sorts, describes and reports the themes that adequately represent the study's data set. The study utilises the rigorous thematic approach to enable the researcher with insightful analysis that reflects the study's data (Braun and Clark, 2006). The steps which were taken during the thematic framework analysis to achieve accuracy and efficiency in data analysis follows in the next sub-sections below.

7.2.1 Data Familiarization

The researcher followed the principle of consistent listening to all the fourteen participants' interview audio files to have an initial idea of the data content. At this stage, the researcher seized the opportunity of jotting down adequate information, which was of an immense deal to the coding process.

The second step involved the researcher generating accurate transcripts from the interview audio files of all the study data. The accuracy of generating transcripts is crucial to the data analysis (Braun and Clarke, 2019), which serves as the fundamental element of data analysis success. The researcher utilised Express-Scribe Software (ESS) in transcribing all the data verbatim into written word context. The researcher found Express-Scribe software to be one of the most accurate and efficient qualitative research interviews assisted by digital transcription software, which enables the researcher to set a slow play mode and fast-forward and rewind with a click of a button (Justina, 2015). Also, the ESS provides exploration involving transcription, aiding the novice researcher with detailed solutions on transcription processes.

7.2.2 Generating Data Codes

In this phase, the researcher documents the patterns found through generating an initial list of ideas as labels (codes) for the reoccurring patterns that emerged from the interview transcripts produced (Nishishsiba et al., 2017). The list of ideas as codes enables the researcher to attach a definite meaning to bits of text that imply a specific concept. Although, a single bit of a text might produce a number of different codes to indicate a number of interpretations of similar parts.

The coding process is a systematic way where a concentrated extensive data set is broken down into smaller analysable units by creating categories and the concepts derived from the data (Lockyer, 2004). Subsequently, the researcher coded the data, which became easy and keyed into a computer for analysis using Nvivo version 12 in analysing the codes generated from the concentrated transcribed data.

7.2.3 Themes Identification

Themes represent a broader pattern of data considered as a key to explaining a phenomenon relevant to the research question (Nishishsiba et al., 2017). Themes identification enables the researcher with an intimate examination from the codes extract of the research and merge similar codes as a single unit theme.

At the initial stage of themes identification, the researcher's purpose was purely inductive (see section 5.3), focusing on patterns that emerged from the data set. Further examination suggested deductive means, searching for common patterns that blend with a theoretical model of the phenomenon under investigation, such as principles of good regulatory governance and strategic objectives of petroleum fiscal regime.

7.2.4 Reviewing, Defining and Indexing of Themes

After a careful looking at the initial themes generated for the study – which involves a review and modification of identified themes in the previous step – the researcher ensures that the generated themes underpin the research question coherent to the data set (Braun and Clarke, 2019).

However, the second phase was aimed at defining the themes consistent with the storyline it tells about the data. This process defines the theme by giving names to each theme concisely, informing the reading audience with an idea of what the theme represents (Braun and Clark, 2006).

The next phase is indexing; indexing involves the researcher linking each defined theme to the participant by utilising a numerical system for referencing and annotated in the margin beside the text. The indexing task was performed using Nvivo software for accuracy and efficiency of

the analysis, enabling the researcher to identify a part of the data set that corresponds to a particular theme.

Finally, the researcher arranged the indexed data into a chart in accordance with the defined themes. This process raised the data from the original textual context to a chart format, which consisted of headings and subheadings generating a thematic framework.

7.2.5 Mapping and Interpretation

After the data were laid out in the chart, a schematic diagram of the phenomenon was generated, which serves as a guide to the researcher in interpreting the data set. At this stage, the researcher was reminded of all the steps listed above i.e. "the cognizant of qualitative analysis objectives that cut across "defining concepts, mapping range and nature of phenomena, creating typologies, finding an association, providing explanations and developing strategies" (Ritchie and Spencer, 1994:186).

7.3 Main Interview Analysis Findings

Subsequently, the researcher utilised three major comprehensive segments of the research question in analysing the interview data obtained from the petroleum stakeholder's groups. The following comprehensive segments are summarised below:

i. Implementation of Petroleum Regulatory Governance
ii. Strategic objectives of Petroleum Fiscal Regime
iii. Petroleum Industry Legal framework

Table 7.1 below summarises the number of the interviewees, organisations and their experience in the petroleum industry.

Table 7.1 Summary of Stakeholder Organisation's Details

Respondents Codes	Organisation	Experience (years)
N1	Department of Petroleum Resources	19
N2	Nigeria National Petroleum Corporation	15
N3	Department of Petroleum Resources	25
N4	ExxonMobil	10
N5	ExxonMobil	7
N6	Federal Inland Revenue Service	11
N7	Nigeria National Petroleum Corporation	28
N8	Nigeria Agip Oil Company	22
N9	Nigeria Extractive Industry Transparency Initiative	9
N10	Saplat	7

N11	Total Nigeria	14
N12	NASS	8
N13	NASS	12
N14	Nigeria Extractive Industry Transparency Initiative	10

Source: Data collected by the Author during from fieldwork data collection

7.3.1 Perception Relating to Petroleum Regulatory Governance

A primary key to a GRG system is having credible regulatory agencies that contribute effectively towards shaping a fundamental relationship between the state, citizens and businesses. To ensure qualitative service of good governance is rendered by the regulatory agencies efficiently, regulatory mechanisms should be centred towards a good design, implementation and management of appropriate policies (Zhang, 2010). As clarified above, evaluation of the extent of Nigeria's petroleum industry's regulatory governance framework, in the current study adopts the Royal Institute of International Affairs (RIIA), Chatham House Principle of Good Governance. The justification for adopting the RIIA Chatham House Principles of Good Governance lies in its broad recognition as a benchmark for extractive industries sovereign states, driven explicitly towards the petroleum industry relative to the IMF codes as earlier discussed (see 3.1).

The common characteristics of the reviewed "good governance" are linked to the petroleum industry-actionable principles that include the following: First, Clarity of goals, roles and responsibility. Second, enablement to carry out the assigned role. Third, accountability of decision-making & performance. Fourth, transparency and accuracy of information. (Lahn et al., 2007) see section 3.1.1. The stated principles were used as a scale to benchmark the concerns of the regulatory governance practices in Nigeria's petroleum industry. The responses of the interview participants gave an overwhelming negative finding. The following sub-sections below presents the results of the interview enquiry.

7.3.1.1 Clarity of goals, roles and responsibility

Following the analysis of the empirical data from semi-structure interview, this subsection presents the findings from the key oil stakeholders views about the impact of lack of clarity of goals, roles and responsibility amongst the key regulatory agencies of the Nigerian government. The findings discovered that factors such as (i) Ambiguity (ii) Lack of strategy (iii) improper operational decision-making (iv) Improper monitoring and (v) lack of

enforcement and reprimand, has significantly resulted in confusion and conflicting strategies in the practices of Nigeria's petroleum industry.

a. Finding 1: Regulatory Problem Relating to Policy Somersault/ Ambiguity

This study identifies confusion around practices (goals, roles and responsibilities) amongst and within regulatory agencies, which are I referred to as organisational behaviour puzzle. The organisational behaviour puzzle can be evidenced by a number of inconsistencies that occur at the level of regulatory agencies. In this regard, a number of the stakeholder's views reveal that there are quite a number of distinct laws and policies regulating the Nigeria's upstream petroleum sector. The distinct laws and policies are described as ambiguous contributing to many policy somersaults among the regulatory agencies during interpretation.

One of the participants N2 described the petroleum laws in bits and pieces with up to 80 number of distinct laws governing the number of fiscal arrangements in the petroleum industry. From the participant N2 deduction, it implies the scale at which the guiding regulatory instrument aimed at governing the petroleum industry becomes puzzling to the degree that it creates ambiguity. Literature reveals that the impact of ambiguity of roles and complexities in responsibilities have been found to thwart collaborative strength of Joint Venture from their goals and expectations (Gil-Garcia et al, 2019). Similarly, N14 relates that lack of synergy among the regulatory agencies as the contributive factor of ambiguous policies in the petroleum sector. In this vein, N1 noted that although many regulations are geared towards making an Act clearer, yet its interpretation between one regulatory agency to the other might somewhat differs. Thus, causing misunderstanding between the agencies. However, N1 reveals.

> "*We can give a list of a lot of legislative instruments that we are using, but literally every major activity we carry out as a regulatory body, is governed by appropriate legislative instrument, it can be an act; there are so many acts, it could be a regulation; there are many regulations, and then it could be in some cases to even make regulatory requirements clearer then we cascade from regulations in the procedure guide. But you find all of these legislative voluminous and sparks ambiguity even what a procedure guide also governing what is required regulatorily in Nigeria*".

N1 indicates that the process of cascading the legislative instruments in the procedure guide for clarification resulted them to be voluminous. The views of the participants N1,N14 and N2 above are supported by the assertation of Wahab and Diji (2017), who pointed out that the inability of Nigerian government to ascent the proposed Petroleum Industry Bill (PBI) into law for more than a decade prove to be a strong evidence that without a unified legal framework in the petroleum industry, goals and responsibility of the regulatory agencies would continue to creates more anxiety and tension in discharge of duties (Kemp et al 2013). More so, the scale of the inconsistencies mentioned above is contrary to the descriptive assumption of stakeholder theory, which espouses the policies and regulatory governance that bounds the government and the MOCs (see section 4.5.4). Therefore, the petroleum laws may adequately contribute to the increasing complexities which often caused by the multi-layered structure across various regulatory bodies in Nigeria's petroleum industry.

From the inference of the interview participants views above, alongside supported literatures, it is empirically evident that the ambiguities of the regulatory instruments affect the principle of good governance regarding a clear-cut of goal, roles and responsibility.

b. **Finding 2: Regulatory Problem Relating to** Operational Decision-Making and lack of Strategy

This study identifies insufficient segregation of roles and responsibility between the regulatory, administrative and monitory functions as the risk factor that contributed to problems in operational decision-making within the Nigeria's petroleum industry. Operational decision-making is one of the fundamental governance framework function that portrays the role and scale of autonomy apportioned to a regulatory agency in effectively regulating the MOCs activities (Lahn et al, 2007). The extract from the view of the interview participants recognise that the operational decision-making in the Nigeria's petroleum industry is in direct contrast with the autonomous functions of the regulatory agency. Specifically, N2 pointed out that if "the people that are supposed to regulated are the ones who determines how the fiscals should be". In essence the MOCs have some degree of interference with the regulation. Furthermore, N9 described how one of the petroleum Act 1969 rendered the regulatory agency handicap by vesting the licensing power to the minister against the regulatory agency. Similarly, N11 argue that lack of political will, contributed a lot to the inconsistences within the petroleum industry. Hence, the shift of autonomy from the regulatory agencies to other actors as identified by the

interviewee participants has rendered the regulatory agencies ineffective in the discharge of their roles and responsibilities. In support of this, Gil-Garcia et al, (2019) posited that when roles and responsibility are clear for regulatory agencies, the staff are committed and satisfied to their job role.

> *"The law actually allows the minister to discretionary award a license to an individual or a company or whatever. So that kind of stuff ties the hands of DPR and as a regulator, I mean, one of your key activities is the award of licenses you know, on these assets, so if the minister can unilaterally decide to do things in a certain way. That takes away a lot of your authority".*   [participant N2].

Consistent with the organisational behavior puzzle identified in this study, interviewee N8 describes the impact of concentrating on one oil region out of the seven oil sedimentary basins (Niger Delta) region as regional exploration monopoly as result of lack of strategic governance plan by the government. Strategy is found to support objective and well inform policy design and implementation across government agencies (HM, 2013) within the oil and gas sector. Given one of the strategic objectives of Nigeria government "getting additional revenue" through optimal oil production (Ogunleye, 2015). For a clear and defined strategic plan, the government's focus would be on achieving optimal recovery of oil.

It can be reduced from the empirical findings above, that lack of full autonomy from the regulatory agency reflects the regulatory agencies ineffectiveness in the discharge of their operational decision-making relating to their regulatory functions.

c. **Finding 3: Regulatory Problem Relating to Monitoring, Enforcement and Sanctions**

In this subsection, monitoring, enforcement and sanctions are identified as the contributive factors that affects the success of petroleum regulation in Nigeria. The monitoring and enforcement function provides a degree of assurance that policies and regulation are followed to achieve government goals. Specifically, monitoring addresses the lacuna between the knowledge of regulatory body and the operator. The views of the interview participants deduces that lack of frequent monitoring and oversight activities as well as sanctionable measures contributes to the regulatory issues withing the regulatory agencies. Although, N10

specifically mentioned that the law empowered the petroleum minister "to formulate, monitor and administer government policy in the petroleum industry on behalf of the Government", not much has been seen in terms of the positive impacts relating to outcomes of strict monitoring exercise.

> *"The Minister of Petroleum is empowered to formulate, monitor and administer government policy in the petroleum industry on behalf of the Government, shall have rights of pre-emption of petroleum and petroleum products marketed under any license or lease, in the event of a national emergency"* [Participant N10].

In contrast, participant N6 noted that the gap in knowledge between the regulator and operator in the Nigeria's petroleum industry is significant that resulted in confusion towards monitoring. The N6 viewpoint implies that lack of knowledge from the regulators to clearly define an act in a given operation contributes to hinderance of enforcement given the fact that a dispute may arise in the process. For instance, N6 reported that

> *"So, you have cases where the fiscal terms for gas in some contract, for instance, are not clearly defined, because at the time the laws were passed, what the law said was each contract will define a particular set of rules that would govern the production of gas for that particular asset through strict monitoring of the regulatory agency. That hasn't happened. I mean, they never happened for those assets and so the companies are left to handle it in different ways without monitoring. Nobody can really monitor or say anything, because the law did not define how to deal with those products".*

Closely related to the view of N6, participant N12 pointed how political will plays a vital role towards sanctioning function "The executive arm frustrates the efforts of legislative arms due lack of political will". On this note, Thomson and Perry (2006) argue that with a collaborative effort across regulatory bodies, they can perform mutual expectation about their roles and role of other counterpart regulatory body. Although Nigeria may have a robust judicial and legal framework in place, the government may suffer a shortcoming of public officials undermining the state's capacity to sanction defaulters from the outcome of monitoring exercise. From the above evidence, i argue that the regulatory agencies at some point lost their oversight functions of monitoring, enforcement and sanctionable measures due to lack of political will that resulted in none clarity of roles. Hence, directly affects the good regulatory governance in the Nigeria's petroleum industry

7.3.1.2 Enablement to carry out the role assigned

This subsection outlined the participants views relating to how enablement to carry assigned role impacts on the good regulatory governance of Nigeria's petroleum industry. Finding below describe the nexus between the cash-call arrears and enablement to carry out the role assigned as one of the principles of good governance.

d. **Finding 4: Regulatory Concern on Cash-Call Arrears Relating to Enablement to Carry Out the Role Assigned**

A key challenge for petroleum regulatory governance is linked to concentration of skilled personnel in the operating companies both NOCs and MOCs at the expense of policymaking arms. For instance, the staff in the ministry, regulatory agencies and broader government arms such as the lawmakers are not as technically sound in relation to their counterpart MOCs. A situation of such kind could eventually make the policy and regulatory function very weak compared to the operational decision making, thus, making the policy and regulatory arms weaker in carrying-out their assigned role due to shortage of skilled manpower (Lahn et al 2007). More significant, financial capability to carry out assigned role such as inability of the National Oil Company to meet its financial obligations (cash-call) in the Joint Ventures (JV), either due budgetary delay or diversion of the funds meant for cash-call counterpart funding (Lassourd, 2015). Cash-call obligation is a periodic counterpart funding that the operator calls upon Joint Venture partners of the JV operation based on each partner's equity. In this regard, the view of the interviewee N7 points out that a considerable investment in the JV operation has been stagnant as result of the inability of the government to finance its counterpart funding through its National oil company NNPC. The N7 viewpoint implies the inability of the government to carry its role assigned since it cannot meet up with its financial obligation and further contributes to loss of investment in the JV operations. More so, participant N6 view reveals that there's an act of shortchange if the amount of the cash-call paid by the government is higher than the amount of revenue been remitted to the government in the JV operation.

> *"We have seen that what was being remitted to the federation account is less than what was paid to joint venture cash calls, which is an act that shortchanged the joint venture operation".   [participant N6]*

The assertation revealed by N6 above is further affirmed by interviewee N3. The intervieweeN3 faults the professional conduct of the JV joint committee is ensuring timely

remittance and recovery of revenue accrued from the JV operation into the government. In his remark, N3 point out that, is the statutory mandate of the committee to block any manifestation of malpractice collectible by the regulatory agencies.

> *"The mandate of the joint committee is to determine in a statutory and professional manner the revenue amount involved in the malpractices by each organisation based on every revenue line-item collectible by the government agencies for the purpose of timely recovery into the government accounts".*   [participant N3]

Consistent with the shortchange of the revenue pointed by N6 and supported by N3, participant N1 agrees that the government is losing revenue in the JV operation and suggest a review of the whole JV arrangements.

The shared views of the interview participants above with divergent views regarding the enablement to carry out assigned role by regulatory agencies due the inconsistencies in the practices by the government. Participant N7 reported the impact of delay in cash-call obligation by the government to meet up its participating interest. The implication of cash-call arrears has significant effect that weaken enablement to carry role assigned of the NNPC and invariably affects the JV operation as whole. By extension, the view of N6 regarding the inability of the government to funds its participating interest through its company NNPC either due to budgetary delay or funds diversion in the JV operations contributes to considerable investment in the JV been stagnant and resulting in huge revenue loss to the country. Specifically, Ifesinachi and Aniche (2014) asserted budget delays and cuts has made NNPC unable to fund its participating interests, which remains a significant challenge for JVs in Nigeria. Its also believed that there's a possibility of malpractices by the government officials in diverting the funds meant for the government counterpart funding. On this note N3 believed that if the JV sub-committee were doing due diligence in discharging their statutory duties with professionalism, a lot of the inconsistencies and malpractices in the JV would have been cut down. Furthermore, participant N3 and N1described how lack of competent and professional skills fails to determine the revenue amount involved in malpractices by organisation to remits revenue into government account. Consistent with this N3 and N1 views, Lassourd, (2015) cautioned that the inability for government to meet the cash-call obligations in the JV resulted in the ineffectiveness towards executing its mandate and further affects investment in the JV

operations and inability to hire competent personnel. In aggregate, the issue of cash-call arrears is more complex and appears to be going against the notion of principle of good governance.

Correspondingly, the findings above revealed the extent of how the inconsistencies in the current petroleum practices create a gap in the nexus between the instrumental perspective of the stakeholder's theory and the state of affairs in the JV operation in Nigeria. Given the outlook of instrumental perspective of stakeholder theory, which seeks to make link concerning the achievement of commercial objective such as growth and stability as well as profitability with the stakeholder approach. I argue that the budget delay directly affects the commercial objective in terms of growth and stability of JV's partners.

7.3.1.3 Accountability of decision-making and performance

Another key principle of good regulatory governance discussed in the literature is the accountability of decision-making and performance. A good provision of accountability measures within the system brings about certain level of assurance to the investors and the citizens at large. The finding under this subsection presents the impact of the problem of attitudinal changes of people relating to accountability issues, particularly government officials work in the regulatory agencies.

e. Finding 5: Concern Relating to Attitudinal Issues towards Accountability of decision-making and performance

This research identifies issues of attitudinal changes in the conduct of public official as threat to accountability towards decision-making and performance in the Nigeria's petroleum industry. The empirical data obtained from the interview participants reveals that public servants in the petroleum regulatory value chain are not accountable on their public service affairs. The extract from the interview participant N8 illustrates the attitudinal changes as the key to achieving accountability. Also, N8 made reference to the reason where economies of developed economies work such as United Kingdom, Europe and United States relative to Nigeria, is due to the attitudinal changes of their people. The mindset of the Nigeria's citizens ought to change towards public service affairs and be aware of the punishment of any accountability issue found in the conduct of their duties. Similarly, Participant N10 elaborate the scope of N8 view, that a spending out the lawful framework is nothing apart from theft and

the only way rectify this attitude of mixing up an unlawful spending is through a strict check of any expenditure.

> *"Any spending outside this lawful framework is a case of an agent not accounting honestly for proceeds of sale to a principal. In everyday language, that illegal conversion is called theft, pure and simple, and in violation of the constitution. Therefore, the people in government should be kept under strict checks regarding what expends."*

However, N11 stated the significance level of accountability issues in the Nigeria's petroleum industry as the apex bank (CBN) governor could public revealed such inconsistencies of accountability concerns.

> *"It is a serious matter when a CBN governor goes public with the charge that these agreements merely serve to transfer revenue due to the Federation into private hands – yet another clear, more serious case of theft of federation revenues by a private firm, facilitated by the NNPC"* [participant N11].

In support of the interviewees viewpoint above, Okafor (2018) reported that National Assembly failed to utilise its constitutional powers to ensure a sustained accountability and transparency in the oil industry. On the other hand, Kyari (2013), described the legislative inefficiencies have made it enormously difficult for the Nigerian legislators and their relevant committees to ensure accountability through reforms that could clean up sharp practices in the oil and gas sector. On this note, Lahn, et al. (2007), noted that Decision makers who cut across high ranking public officials, individuals and institutions ought to provide a high degree of assurance to the citizens that they are accountable to higher authorities, public through an objective assessment of their performance. However, in the case of NOCs, its officials must be accountable to the government which public entrusts it natural resources, and eventually the government to be accountable to the society based on the revenue received from the natural resources. To achieve the accountability measures, there should be mechanisms that will hold policymakers accountable to public, benchmark NOC performance, provide incentives for better accountability, and promote the role of parliament and civil society in ensuring accountability. To sum up, the interviewee's views indicate the significant scale at which the regulatory bodies failed to utilise their constitutional powers in correcting the inconsistencies relating to the abuse of office. Thus, undermine the public confidence that wrong doings are accountable to higher authorities and public and objective assessment of their performance.

Based on the foregoing empirical evidence, this research argues that absence of attitudinal changes mechanisms by the government towards its public officials affects the accountability of decision-making and performance of good regulatory in the Nigeria's petroleum sector.

7.3.1.4 Transparency and accuracy of information

A principle of good regulatory governance in the petroleum industry espouses commitment towards publication of timely fiscal information to ensure transparency in governance. The effectiveness of this depends on relevant, reliable and timely information (EITI, 2019). The findings of the interviews show that reporting and disclosure affects the implementation of good regulatory governance.

f.   Finding 6: Concerns Relating to Reporting and Disclosure

Under the principle of transparency and accuracy of information of the good regulatory governance in the Nigeria's petroleum sector, the research identifies lack of reporting and disclosure as a threat towards publication of timely fiscal information. The extract from the empirical data obtained through a qualitative method discovered that absence of timely publication of annual reports both from the regulators and the oil companies has significant impact of the transparency towards good governance. Participant N3 reports mistrust and lack of synergy among and within the regulators as the major concern undermining free flow of information contributes to inadequacy of reporting and disclosure of the true position of things in the industry. Similar view was shared by participant N11 that due to lack of synergy and unified system of reporting and disclosing information of the activities in the petroleum sector, a lot of transparency has been loss. N12 relates the impact of lack of proper reporting disclosure in the Nigeria's petroleum industry a lot of revenue coming into the country could be accounted for and there is nothing to show as petroleum exporting country.

> *"A lot of money has been coming into the government, but with the loopholes of the system there is nothing to show in the country. So, there should be a continuous sensitisation and awareness on transparency, and we have an agency for transparency initiative within the extractive industries. Their job is not just tied up to publication of annual audit reports, also they should be able to sensitise transparency across board. Transparency is needed in all the regulatory agencies of the government that are involved in the entire value chain."* [participant N12].

Correspondingly, N5 noted that the impact of synergy concern as resulted to some regulatory agencies corralling with their counterparts. For instance, the agency in charge of the investment segment of the oil industry "NAPIMS" disagree with DPR which is the main regulator of the industry.

> *"Lack of synergy is the key challenge. We have seen where the investment part would be corralling with the regulatory part among the same government agencies. For example, the NAPIMS, the NAPIMS is in-charge with the investment part, the regulatory part is the DPR. So, if you check very well, you'd see there's no synergy between those two agencies."*   [participant N5]

N9 on the one part view the reporting and disclosure of information in the oil sector as very for mature oil exporting like Nigeria, which he indicates as threat to the development of a petrostate such as Nigeria. N10 reveals the discrepancies in reporting of different oil figures by the regulators due to lack of synergy to harmonise information among the government regulatory agencies.

> *"If you are producing 2million barrels and some agencies underreported, for instance, one agency would say is 1.2 and you go to the next agency they'd say is 1.1 and the next agency would say 1million and you have different figures all around"*   [participant N10]

N3 believed that is not difficult to correct this problem of reporting and disclosure concern once there is a political will by the executive.

To sum up, the interviewee's views indicates that mistrust among the regulatory agencies has created a loophole within the system that even with the quantum of revenue coming into the government there's nothing to show. Furthermore, the interviewees questioned the synergy ground between the regulators, which resulted in having different reporting oil figures. Finally, the interviewees attached all the inconsistencies with lack of political will by the government. Consistent with the interviewee's views, the IMF report (2019) described that NEITI as an institution that ensures transparency and accuracy of information in the Nigerian petroleum sector have severally highlights important concerns relating to the accountability and transparency in the sector due to increased deductions from revenue over the years.

However, based on the Normative Assumption of the stakeholder theory, stakeholder's explicit ethical consideration should be dully given with regards accuracy of information through transparency in reporting and disclosure. Therefore, it can be argued that lack of synergy amongst the regulatory agencies due mistrust between the government agencies contributed to

lack of transparency and inaccuracy of information towards attainment of good regulatory governance in Nigeria's petroleum industry.

A demonstration of the cumulative interviewee's perception is summarised in a rocket-shape model in figure 7.1 below, using the four principles of good governance that were perceived to contribute on the ineffectiveness in the implementation of the regulatory governance within the Nigeria's petroleum industry.

Figure 7.1: Summarised Empirical Findings of Ineffectiveness Implementation of Regulatory Governance In A Rocket-shape Model

Source: Author generated from empirical data

159
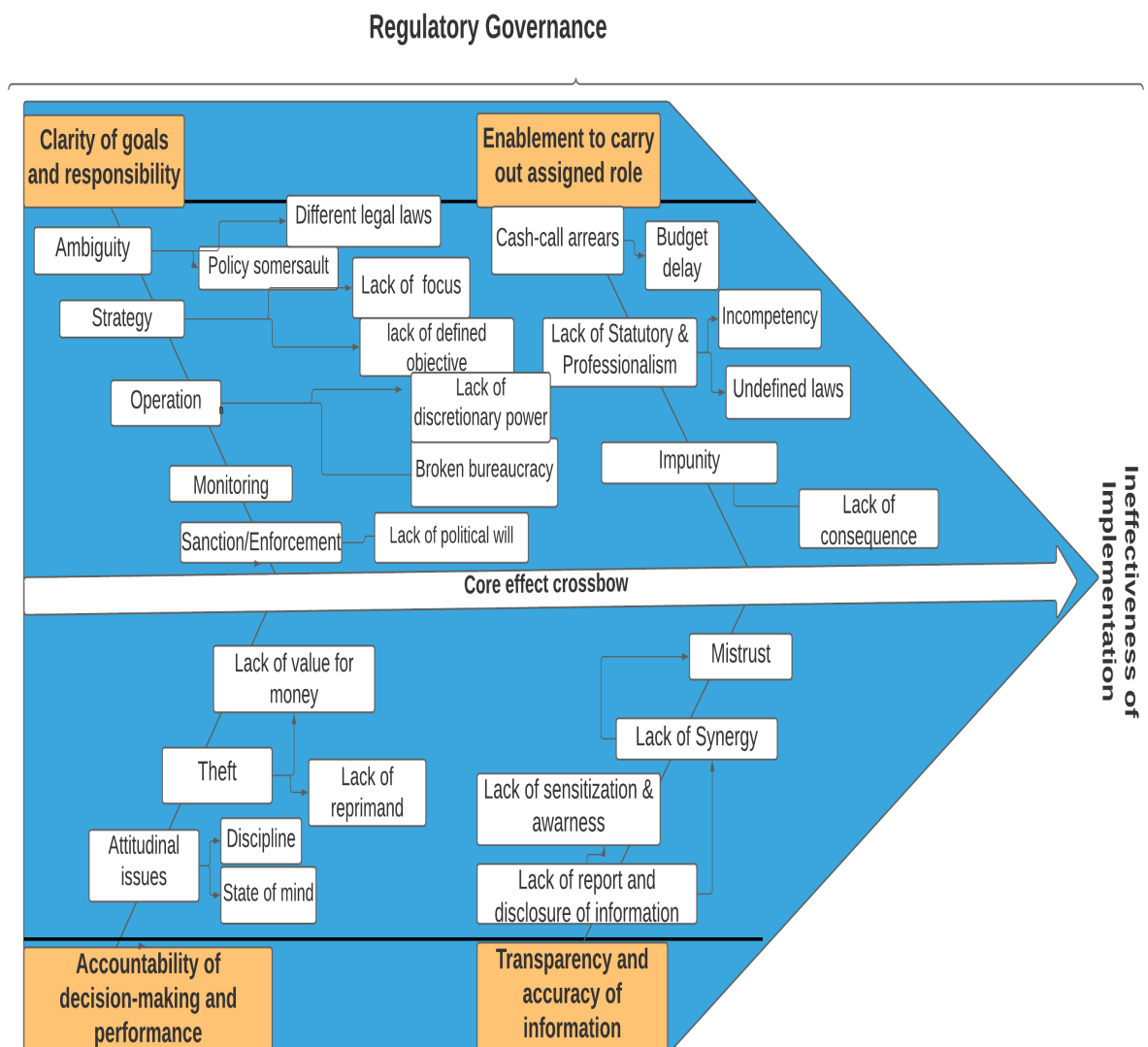
7.3.2 Concerns Relating to The Suitability of Petroleum Fiscal Regime Strategic Objectives

In today's globalised age, investments in the upstream petroleum sector are determined by the suitability of petroleum fiscal regimes and tax policies around the globe (Kondrashov, 2013). Given the global competition for investment amongst the petrostates, the petrostates designed their petroleum fiscal regimes to ensure it is not less consistent, or even better up designed than their competitor economies (Manaf et al, 2016). Hence, countries develop strategic objectives of their petroleum fiscal regime in line with certain global criteria for assessing the competitiveness of petroleum fiscal regime (see chapter three, section 3.3).

However, interview inquiries made towards the suitability of the petroleum fiscal regime strategic objectives through opinions of oil and gas stakeholders reveal the following findings:

7.3.2.1 g. Finding 7: Concern Relating to Unstable Political and Fiscal environment

A stable political and fiscal environment is one that guarantees a provision of contract stability and mitigates the risk of the huge capital and time been invested. Thus, a key aspect of attracting MOCs (Cameron, 2006). Any unilateral changes to the petroleum contracts by the host government within the life of the contracts at some point underscores vulnerability of investors risk. The findings from the interviewee N2 identifies that with a material change in the fiscal terms contained in the PIB, a considerable number of investments in the major capital projects are have been put on hold in order to understands the government direction. In concurrence, interview N6 mentioned that;

> *"Fiscal stability provides some level of predictability and reliability that assists with reliable expenditure forecasting and budgeting. If for example, the government says we are not proceeding with the PIB anymore, that is clarity, you would know that the sensitive fiscal regime would apply."*

In support of N2 viewpoint, N6 revelation implies that the Nigerian government fall short of ensuring fiscal stability which is a key strategic objective to the investors. On different instances, unstable political and rapid changes to fiscal environment has been identified by the interviewees as a major cause for uncertainty of investment decisions been put on hold while other investors have started to diversify their assets to neighboring countries. For instance, N14 reveals that.

"A tax system subject to continuous tinkering tends to undermine investors' confidence, we also talk about the uncertainties of government policies on the administration of oil and gas in Nigeria."

the interviewees views are evident looking at the $200billion worth of investment been lost due to lack of certainty regarding non passage of the PIB (NEITI, 2016). For instance, from 2002 to 2007 Nigeria petroleum industry grew its proved oil reserved from 22 billion barrels to 37 Billion barrels, while only 5 million barrels oil reserves were growing from 2007 to date. Furthermore, there are no MOCs participated in the bid round of license in 2005, resulting to a huge loss of revenue to the country.

Other concerns related to the unstable fiscal regime identified by the interviewee N11 is continues tinkering of tax system that undermines investors' confidence. In addition, another concern presented by the interviewee is the presence of instability as result of linking taxes to oil prices. The interviewee's views are also supported by the material changes in the proposed Petroleum Industry Bill (PIB) for instance; the PSC regime 2008 introduces production-based sliding scale royalty, price-based royalty, in addition the regime also adjusted the cost recovery (Saidu & Mohammed, 2014). Ten year later PSC regime under Petroleum Industry Fiscal Bill 2018 introduces assessable tax charge on onshore and offshore even though the international crude oil price was slating down (Nyoor, et al., 2019). However, the PSC regime under deep offshore and inland basin (amended) act 2019 brought two additional changes- it abolishes the sliding scale royalty rate provision and replaced it with a flat rate regime of 10% for all offshores operations in excess of 200meters depth. Second, it introduces sliding scale royalty based on oil prices.

Point worth noting is that all the regimes mentioned above were not fully ascent into law, which is enough fact that creates uncertainties towards investment decision for investors. Given the scale at which the fiscal environment is changing without having a single Bill for the petroleum industry to date, I argue that unstable political and fiscal environment has significant backlash on the future of Nigeria's petroleum industry.

7.3.2.2 Management of Operations on Sound Commercial Basis

In this subsection, interview participant's views are analysed on the basis of sound commercial and management of operation as one of the strategic of objectives of PFR, in order to affirm performance excellence via innovative process improvements in all oil and gas operations and

promote leading global practices that align with good management structures and compliance. Analysis of the empirical data obtained from reveals the finding below.

h. Finding 8: Concerns Relating to Unstructured Operation and Management of Investment

Given the primacy of oil and gas revenue in Nigeria's economy, the role in managing the nation's upstream oil and gas investments running through the petroleum fiscal regimes, that is- Joint Venture Agreements, Production Sharing Contracts and Service Contracts requires a high sense of commitment, collaboration and due diligence. This study identifies unclear defined objectives, management, inadequacy of resource deployment and lack of emplacement of a conducive environment affects the suitability of the Nigeria's PFR strategic objective to the MOCs. Explicitly, the empirical data drawn from the interview participants shows the risk factors that contribute negatively towards attainment of the management operation on sound commercial basis objective. The participants relate their concerns on the management of operations on sound commercial basis in the Nigeria's petroleum industry. Participant N1 view indicates that a key strategic objective of petroleum fiscal regimes is geared towards attracting investment into an oil province. N1 worries that improper management of the policy (PFR) Nigeria by the regulators is anomaly and contributed to a huge revenue loss of revenue and paved way for corruption over the years. The view of N7 on one hand indicates that market forces such as demand, and supply should free to work in the investment part of the oil industry without interferences of regulators. N7 also believed that there is degree of political interreference from the foreign governments to ensure the fiscal policies suits their oil companies.

On the contrary, participant N2 emphasised that fiscal policies specifically for investment driven should take consideration of the global competitiveness in order to not to lose investment. The N2 viewpoint implies that with a growing discovery of oil in the African continent, attention should be drawn on flexibility of policies so that they policies won't be stringent to chase away investors who might look for other opportunities elsewhere in the region.

> *"In determining the fiscals, you need to consider how competitive the market would be globally. So, we need to be considerate of these factors in Nigeria in order not to lose investment especially now that most of the regions within the continent are discovering oil." [participant N2]*

162

Arguably, the views of the interview participants indicate the unstructured management of investment climate in the country. Thus, it is evident from the empirical finding that Nigeria government is exhibiting a reluctancy towards the appropriate management structures for proper investment into its petroleum sector.

7.3.2.3 Balanced risk/reward relationship

This subsection presents the finding regarding "striking a balance on risk and reward" sharing which underscore the strategic objective of a petroleum fiscal regime. On this note, the interview participants share their opinions based on the revenue allocation formular in oil operations of Nigeria's petroleum industry.

i. **Finding 8: Concerns Relating to Revenue Allocation Formular Affecting Balance of Risk and Reward Relationship**

The literature discussed in chapter three suggests that the attractiveness of the PFRs depends on certain criteria such as equity in risk and reward sharing between the participants and the contractor joint ventures and also in the production sharing (Miller and Alalade, 2003). The findings from the interviewees identifies that the Nigeria's petroleum fiscal regime operations are affected in the aspect of unbalanced risk and reward relationship between the government and the multinational investors. However, participant N3 refers the relationship as the twinkling one, in which both parties are been beneficiaries of the current fiscal regime.

> *"In some quotas, some believes that the IOCs are not getting enough while some at the other hand, believes the IOCs are getting more than their fair share. Erhh… but If you ask me, it is twinkling here and that both the IOCs and the government of the nation Nigeria are benefiting from you know, the present state of the fiscal regime"* participant N3*]*

Although, there is no universal blueprint for achieving the right balance for petroleum fiscal regime between risk sharing and revenue generation, it is pivotal for oil-host states to design and implement the ideal petroleum fiscal regime that accomplishes the balance of appropriating revenue between the government and MOCs. On this note, participant N8 described the Nigeria's allocation formular for sharing of oil proceeds in favor of the federal government to a greater extent. In addition, N8 cautioned that NNPC has distorts the revenue sharing formular due its power it has in the petroleum operation. The N8 view implies that although the overpowering arrangement relating to balance objective, policymakers and researchers alike

have so far contended that there is no ideal system that strike the said balance (Otto, 2000), somewhat the consensus is that on, the host country's bylaws ought to interpret the petroleum fiscal regimes in a specific manner that investments are sustainable a revenue allocation formular that is fair to the investors.

> *"The conduct of the NNPC thus distorts the revenue allocation formula,*
> *already weighted too much in favor of the Federal Government. It must*
> *be in the interest of the Federal Government of Nigeria and the NNPC*
> *not to allow the perception to fester that the NNPC has indeed become*
> *a state within a state, protected and reinforced in its law breaking".*
> [participant N8]

The viewpoint of participant N12 cautioned that although, Nigeria's government is geared towards increased revenue generation to the government through introduction of new fiscal policies, consideration should be observed about what other competing oil provinces across the globe are offering and the existing global oil markets. The N12 viewpoint implies that due to the fact there would other conditions in the prevailing global markets relating to flexible and attractive policies suitable in other oil provinces, Nigerian government through its designated regulatory agencies should pay attention on such markets in order not to lose investment through stringent fiscal policies such as the derivation allocation formular.

Arguably, the profit oil percentage split between the NNPC and MOCs in table 2.4 shows a decrease in the cumulative production from oil blocks (i.e., from 250-1500) of the MOCs from 65to 35. Also, the empirical data reveals unbalanced rewards between the government and the MOCs, despite the cost of exploration and production put by the MOCs. This study argue that balance of rewards objective is unbalanced scale in terms of revenue allocation formular in Nigeria.

7.3.2.4 Realisation Of Country's Economic Potential

Countries design a PFR to achieve some noble objectives, one of which is the design of an effective policy that enables a country to achieve important economic potentials from the petroleum resources such as to improve revenue generation through optimal oil production. The interviewees viewpoints discovered the following findings:

j. Finding10: Concern Relating to Low oil production

Optimal oil production typically translates to more revenue generation to the government and rise the profitability of investors. Findings from the interview data identifies that, the Nigeria petroleum industry can do more in terms of oil production of crude oil if certain factors such as deferment are tackled. N2 refers deferment as.

> *"capacity produce more, but for example because there's a security bridge on my facility, the government have to shut down that facility".*

Other factors identified were concern of the government roadmap of the oil industry through the leading instrument PIB. However, having 37billion barrels of oil proved reserve (Bp 2019), the current oil production in Nigeria of roughly about 2million barrel/day is questionable from many angles for which the concern of uncertainty due to non-passage of PIB is narrowed within the confines of this objective. On the other hand, participant N13 attributed OPEC quota as the main bottleneck for the low oil production in the country.

> *"Remember we are in OPEC, so at some level again the quota you know, so we are even actually getting to 2million, because chunk of what made up that 2million did not fall within the OPEC quota, that's a condense stream. So again, been the OPEC is another factor that you can understand at some point can also tamper what we produce, oh yeah, the optimal production".*

With about 95% dependency on foreign earnings from oil sales proceeds (Reuters, 2019), Nigerian economy depends largely on oil revenue to finance her budget. Hence, need the for the government to stimulates strategies that would improve optimal recovery of oil. In support of the argument, Ogunleye (2015) asserted that one of the objectives for introducing PSCs in Nigeria is to get additional revenue for the government from the investors' windfall gains. Therefore, with continues revenue decline in the country, I argue that Nigeria economy in terms of oil revenue from oil proceeds is well below expectation.

7.3.2.5 Development of national expertise

As noted in the literature (section 3.4.1), that oil host states develop a petroleum fiscal regime with a seeming view to achieve key strategic objectives, of which technology transfer through skills development increases local expertise and creates job opportunity in the host states from the Multinational Oil Investors. The position drawn from the interviewees discovered the finding below.

k. Finding 11: Concerns Relating to Bargaining/Negotiating Power On Development Of National Expertise

The concern related to the development of national expertise been one of the major negotiation powers of the MOCs in the petroleum operation and has been criticised by some of the participants. While participant N14 viewed the unemployment of the youth into the petroleum industry as the drawback of development of national expertise due to lack of required skills and incompetence. N2 attributed the origin of the problem as a case of investors with a lot technical know-how than the government regulators, hence, the MOCs were more at advantage in terms of negotiation power.

> *"For Nigeria is more like a case of you have investor owned with a lot of technical know-how, a lot more advance knowledge than we in government at the time of negotiation. Of cause, during the negotiation the Oil majors were at advantage, which we were not really aware of what we can negotiate at the time and here in the future comes in we still did not review the major policies"* [participant N2].

The views of N14 and N2 is possible given the evidence that, one in every two Nigerians within the labor force is either unemployed or underemployed (Quartz Africa, 2020).

In contrast, other interview participants believe that Nigerian government is able to have a good bargaining power. Specifically, N3 attributed the success of development of national expertise through the establishment of Nigerian Local Content Development Board (NLCDB), the Petroleum Technology Development Fund (PTDF). The enactment of the NLCDB is geared towards promoting of indigenous participation in the Nigeria's petroleum industry with the soul objective of improving the social and economic wellbeing local operators and the country at large. While the PTDF was established to promote and add value in skills acquisition, particularly in the areas of research and development and overseas training. Although, there

are individuals that are now either self-employed or employer of labour due to the advent of these policies, nonetheless, literature criticised the undertakings of some policies such as the PTDF that:

> *"Investigations by various strata of the government still insinuate that the PTDF is mere slush fund for political leaders in financing their vaunted political ambitions among other interests. Others have also raised criticism on the manner in which its scholarships were awarded. It must therefore be emphasised that these areas of inadequacies need serious attention if the PTDF must remain virile and become a human resource Centre for the West African sub-region in the petroleum sector as it aspires". (Adekalu et al, 2013).*

Comparatively, if achieved the required technical, skillful and competent staff, the NNPC been the Nigeria's national oil company should be representing Nigerian interest not just withing the country but also in the global oil arena like the rest of its counterpart NOCs such as the Saudi ARMACO, China National Offshore Oil Corporation (CNOOC), Norwegian EQUINOR among other NOCs. I argue that the bargaining power of the government did not necessarily translates to the much-needed skills competency to its citizen in the petroleum operations.

From the analysis of interviewee's responses in this section it is difficult to conclude that the Nigeria's petroleum fiscal regime has not strike up the much-needed balance suitable for both the government and the MOC's due to the lack of universal blueprint for balance of objectives. Given the four major strategic objectives of a petroleum fiscal regime which includes: stable political and fiscal environment, management of operation on sound commercial basis, development of national expertise/job creation, realisation of economic growth and balance of risk/reward relationship. Figure 7.2 below gives a summary of the major causes responsible for the inconsistencies that contribute to the unsuitability of the petroleum fiscal regime.

Figure 7.2 Summarised Empirical Findings on The Unsuitability of Nigeria's Strategic Objectives in Rocket-Shape Model
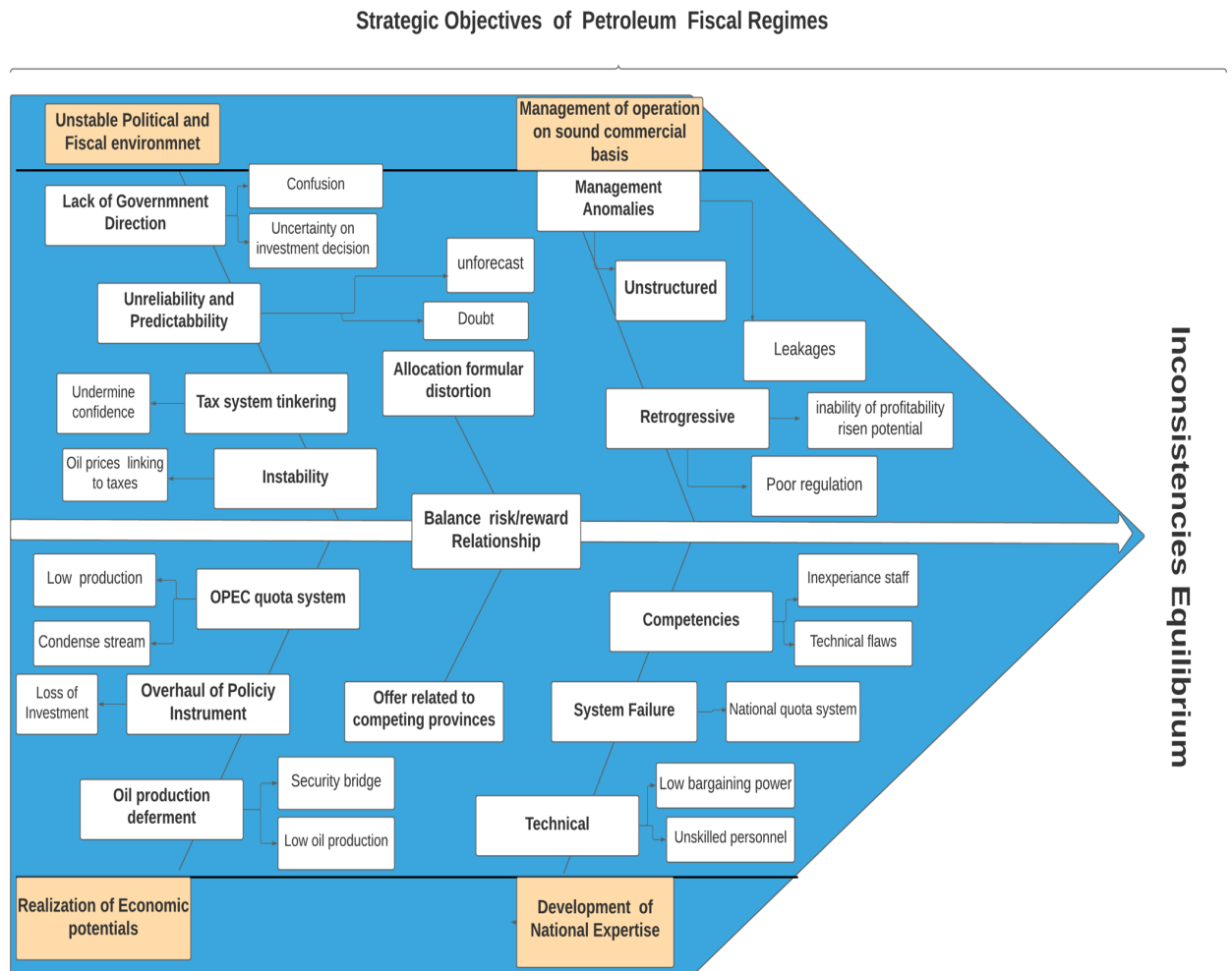
Source: Author generated from empirical data

7.3.4 Concerns Relating to The Petroleum Industry Legal Framework

Under this section, a number of findings in the petroleum industry legal framework have been discovered include corruption, obsolete fiscal policies, Adverse fiscal policies, political interference, lack of framework direction, high operating costs, incentive abuse and revenue leakages. The petroleum fiscal regime comprises a set of fiscal tools or instruments (taxes, royalties, dividends, etc) which determines the allocation of revenues that accrues from oil and gas projects between governments and private oil companies (NRGI, 2015). The performance of the PFR policy depends on the country's legal framework for oil and gas sector including

laws, regulations and contracts. A good designed and successful administration of PFRs produces a fair share of wealth that accrues from its petroleum sector without discouraging investors to make desired investment for optimal exploration of such natural endowments (Ripley, 2011). While stringent administration of the PFR results in number of problems such as chasing away investors or putting investment decisions on-hold, which can affect the country's revenue generation.

A design of the PFR begins with sound technical competencies from the government agencies and debated in a preliminary session of the senate and subsequently accent by the president. The causes that influence the poor designed and administration of the PFR include corruption, adverse policies, obsolete legislation, incentive abuse among others. Hence, a combination of these causes' peculiar to PFR were identified and the findings were overwhelmingly undesirable. Enquiries via the interview illuminates an imperative discovery.

7.3.4.1 l. Finding 12: Concern Relating to Corrupt Practices in the Oil Value Chain

The finding under this subsection identifies the impact of corrupt practices among the regulators. Corruption refers to any dubious and unlawful conduct towards gaining undue benefits illegitimately. The vulnerability to corruption could be increased through a number of risk factors such as weak judicial and legal system, ineffective enforcement of existing laws and regulation, and absences of regular monitoring and compliance within oil value chain among others. Based on the risk factors of corruption, participant N9 reveal that due to the lack of strict compliance and monitoring exercise, neither the regulators nor the concessionaire (NNPC) wants to take the fault when it is obvious corruption stalls within the oil regulatory value chain. For instance, in 2014 $20 billion dollars' worth of revenue to the government was found missing not have been remitted to the federation account. Neither the NNPC, DPR or FIRS take the fault. Seemingly, all the regulators and the concessionaire put their hands off and till date no one was found guilty despite the evidence by the CBN. This implies lack of regular and strict monitoring and weak judicial and legal system to reprimand defaulters. In confirming the corrupt practices in the oil value chain N13 pointed out that.

> *"We the lawmakers had also expressed concern that the billions of dollars revenue leakages may have been lost due to tax evasion, malpractices, misuse and diversion of foreign exchange allocations by companies and other entities. At present there is ongoing move by the lawmakers to also investigate the disbursement of foreign exchange*

169

by the Central Bank of Nigeria (CBN) and other agencies to determine
the exact amount that the government may have lost in the process."

[participant N13]

Although, the concern expressed by the N13 about the corruption drawn from tax evasion, malpractices and diversion of foreign exchange are been investigated by the legislators, however, the legislators lack the judicial power to prosecute the defaulters. The legislator's duty is to recommend to the executive arm of the government and if there is a political by the executives, it would then pass it to the judicial for hearing. This investigation and prosecution procedure implies a lengthy process and could led to many defaulters getting away with their corrupt practices.

On the other hand, N8 viewpoint explains the risk factor of corruption in the Nigerian petroleum industry as the implementation of the fiscal policies. Despite describing the enabling laws as credible N8 believed that when the policy is not correctly implemented, it can contribute to corruption. Similar remark was briefly echoed by participant N2, that the people interpreting the regulation and those people managing the assets and the resources that take undue advantage of the system. Consistent with N8 and N2 viewpoints, Ripley (2011) asserts that a successful implementation of PFR begins with sound technical competencies from the government agencies and debated in a preliminary session of the senate and subsequently accent by the president. N2 further described the politicians and members of the regulatory bodies as the people taking advantage of the regulations and the policies illegitimately. In his view N6, is not surprised that corruption features in big oil projects such as the Nigeria's petroleum industry. Participant N6 pointed out the main reason why there is regulations, guidelines, processes, procedures are that the law always built a situation where people would tends explore the system, either in terms of trying to go around the rosy or trying to influence it through power and authority. Similarly, N5 noted that PSC brought about corruption in the fiscal policy of Nigeria's petroleum industry

"So basically, there's a corruption aspect of the agreement, which is
in the Production Sharing Contract." [participant N5]

Contrastingly, other views from some of the participants considered that the legal framework system is too clear to be manipulated for corrupt purpose. For instance, interviewee N1 stated that:

> *"So, in Nigeria, I don't see how you can manipulate petroleum fiscal regimes for corrupt purposes. Erh.. because the laws clearly defined what are the applicable fiscal regimes are for each of these business arrangements."* [participant N1]

Based on the participants responses, the broad image on the corrupt practices in the petroleum value chain is that the manipulations of the existing legal framework in the upstream petroleum sector is so evident to a great extent, which undermines the successful implementation of petroleum fiscal regime. Although, some interviewees made reference to faulty policies of production sharing contracts which is also key point of concerns that create inconsistencies and irregularities in the petroleum value chain, other participants believed that the politicians and top members of the regulatory agencies are the problem of the corruption the oil industry. Thus, I argue that unless there is an effective judicial and legal system and institutional framework capable of prosecuting any defaulter irrespective of their political affiliation or level in the government, it may continue to constitute a significant risk factor vulnerability to corruption and further undermine the state capacity to effectively prevent and prosecute corruption cases.

7.3.4.2 m. Finding 13 Concerns Relating to Obsolete Petroleum Legislations

Petroleum legislations serves as the guiding principles of petroleum operation in the oil industry. It is expected of the host government to ensure the petroleum legislation are up to date in order to match the growing concern and checkmate any inconsistencies that may arise in the petroleum industry. The findings from the overall interview participants identifies that the existing petroleum legislations are overly aged and incapable of confronting the petroleum industry challenges such incentive abuse by the oil operators. For instance, participant N7 reveals that:

> *"The fiscal policies or fiscal terms are already aged. For example, the exploration in deep water, right? Normally when you do that, you expect that the operation is in high risk. So, for more than 20 years, there has been operation in deep water, so you do not have that kind of risk anymore. Government ought to have reviewed these policies ages ago which are the root cause of abuse of incentives that leads to revenue losses."*   participant N7]

The view of N7 is significant that implies the degree at which the non-review of existing legislation impacted on the revenue through incentive abuse by the oil companies in Nigeria. N1 is of similar view that inability of Nigeria's regulators to make reforms in the existing petroleum laws encourages not only abuse in the petroleum industry contributing to the corrupt

practices in the industry, but also make the country to lose investment to its other competing oil provinces within the continent. For instance N1 participant reveals that:

> *"When we look at Nigeria as a mature field and Africa as a whole in relation to the region in Africa region/continent, you realise that almost every region or almost every country in Africa is beginning to find oil and so, because reforms have not taken shape, I can say Nigeria is losing investment to its neighbouring nation."* [participant N1].

A periodic review of government legislations and policies became imperative to ascertain their usefulness or outmoded in order to continue maximising the economic recovery of their hydrocarbon reserves, while firmly committed to encouraging investment and innovation in the oil and gas industry. In sum, other interview participants N14, N6 and N3 concur about the obsoletion of the petroleum laws and raises concern about legislative review process in Nigeria either due to the maturity of the oil field, which becomes increasingly difficult and less cost effective to explore, posing opportunities to be tighter or technically rigorous, or the legislation outweighed their objectives, for instance, the legislation and policies for subsidising oil operators cost. Literature reveals that the oil-producing states review their PFRs periodically to improve their global competitiveness among competing oil-producing states across the globe (Manaf et al., 2016). On the weight of the evidence from the participants, it can be reduced that unless the Nigerian government becomes proactive towards reviewing the existing legislative instruments, some degree of investment could be affected while revenue that is supposed to accrue to the government would continue be loss.

7.3.4.3 n. Finding 14: Concern Relating to Adverse Fiscal Policies

A well-designed petroleum fiscal regime is the one which attract investment with favourable policies in place. If at the other hand the policies are acting on the contrary direction or become unfavourable to the investors, it would have a number of consequences within the petroleum industry. This study identifies adverse fiscal policies as a problem of Nigeria's petroleum industry. The findings from the interview participants views expressed that adverse fiscal policies could be viewed from the difference of the investors coming in and those investors leaving the country due to the unfavourable nature of the fiscal regimes. Specifically, N4 reported that:

> *"We can look at adverse regulation and the policies from different angles; so, we can look at it from the angle of how many operators have been in Nigeria and have left because the petroleum fiscal regime is not favourable to them*."[participant N4].

The view of N4 above implies that when fiscal policies are not investor's driven, it could result to either driving away the investor to look out for opportunity elsewhere or simply not attractive for the investors to invest in the country. With the discovery of oil in almost of every region in Africa such as Ghana, Angola, Sudan, Libya, Egypt among others, Nigeria should take measures to reform and replace the unfavourable policies in the country's petroleum industry. In concurrence N10 affirmed to the policies that can distort investors' appetite to invest.

> *"Of course, there are fiscal policies that could have adverse effect to investors, when you have polies that are not investors driven."* [participant N10]

For instance, participant N5 made reference to the policy that does not encourage progressivity in the oil sector such as the of "sliding scale royalty". Furthermore, N5 describes the features of sliding scale royalty including location, volume and prices as distorted by linking taxes to oil prices and contributes to instability. The implication of the linking taxes to oil prices is that, is that crude oil prices are determined in the international markets as such they are very volatile. Therefore, in the period of falling oil prices, investors would suffer undue taxes. One way that royalty would contribute to progressivity is by linking it to profitability measures. Also, in concurrence participant N9 reported that:

> *"The guideline for the deep offshore project is not very attractive. I mean from one side discourages investment from the deep offshore project."* [participant N9].

Another view from participant N3 also confirmed another policy that distort investors, which is the JV. N3 describes the JV policy as inefficient. The N3 view is possible in relation to the literature that Umar (2005) argues that the JV was almost ceased to exist due to continuous government default in meeting its part towards cash call obligation to the JV partners and funding deficit for investment from the corporation. Also, Blake and Robert (2006) associated the payment default by the NNPC with two significant effects. First, it would result in a long delay towards timely execution of projects, causing deferment to all benefits associated with the project, such as taxes and royalties. Secondly, it could account for accruing interest cost in

the event partners carry out the project through funding the NNPC's deficit by a loan from banks as stipulated in the JOA.

7.3.4.4 o. Finding 15: Concern Relating to Political Interference in The Regulatory Agencies to Discharge Their Duties

For a regulatory agency to function effectively and efficiently, a considerable autonomy is required for them to withstand the challenges of external interference by the political actors. In essence, political pressure and influences during regulatory decision making has the propensity to undermine regulatory reliability. The overall interview findings from the participants (stakeholders) shows that there is an interference of internal and external factors towards the regulatory aspect of the Nigeria's petroleum industry. specifically, N7 noted that

"I feel for a sovereign nation you need to be able to take a decision in terms of what your fiscal regimes should be without necessary interventions from the Majors (MOCs)." [participant N7].

The N7 viewpoint implies that there is a link MOCs as the external factors interfering with the Nigeria's legal framework. While the internal factors arise from the top government functionaries. Similarly, affirmation of the political interference was supported by N1 view, who remarked that Nigeria should be able to decides its fiscal terms through competent personnel. Consistent with this finding on political interference, literature suggests that regulatory reliability and consistency can certainly be achieved with a provision of independent regulatory arrangements (Dinar, 2000).

From the empirical analysis it can be reduced that high degree of politicisation of decision-making procedures and processes of discretional authority in the hands of both high- and low-ranking public office holders has a major risk factor undermining an effective petroleum industry legal framework in Nigeria. This concern may be observed for instance, in the passing of the PIB which has been debated for over ten year in the legislative chambers, or in bidding or negotiation or in the granting and approval for waivers among others.

7.3.4.5 p. Finding 16: Concern Relating to Complexities of The Petroleum Legal Framework

Lack of defined legislative framework of a country's petroleum industry contributes to a number of inconsistencies and uncertainties in the petroleum operations within the oil industry. Some of the inconsistencies are caused by complex nature of the bylaws. This is because the whole petroleum operation is regulated by the legal frameworks and therefore the degree of its structure and simplicity make it easier and less controversial towards interpretation across the regulatory agencies or between regulatory agencies and the MOCs.

The empirical data from the interview participants identifies that petroleum industry legal framework is overly complex with different structures and rates. More so, the participants describe the framework as regressive considering its inability to cope with oil price volatility and special for on royalty in addition to production and signature bonus. Pointedly, N5 noted that Nigeria's legal framework has fall short in meeting the basic guidelines for an effective fiscal system that include stability, simplicity, neutrality and progressivity. The failure of not meeting up with the guideline of an effective fiscal regime might be attributed to the frequency of proposal for structural changes and implementation, implying structural weakness of the framework and also hinders it to adopt to both evolving global and local petroleum industry best practices. N12 is hold similar view that tapestry of different rates that varies with terrain, water depth and oil prices make the framework unstable. On the basis of N5 and N12 viewpoints, participant N11 believed that the Nigeria's legal and regulatory framework that include Petroleum Act 1969, Oil and Gas Pipeline Act 1990, Petroleum Profit Tax Act 1959 and Petroleum Products Pricing Regulatory Act 2003 has ruinous effect in the petroleum industry. participant N11 proclaimed that:

> *"The extant regulatory framework of the oil and gas sector which includes the Ministry of Petroleum Resources, NNPC Act 1997, the Petroleum Act 1969, the Oil and Pipelines Act 1990, the Petroleum Profit Tax Act 1959, the Petroleum Products Pricing Regulatory Act 2003 amongst others have had more ruinous effect on the oil and gas sector, as they have not promoted a culture of transparency in the oil and gas sector."* [participant N11]

The view above from N11 could be reduced from the obsoletion of many petroleum legislations promulgated in the last three to four decades back, of which many them have outweigh their purposes. Furthermore, most of the Acts were established when Nigeria's bargaining power

was low as result of the country been new into the petroleum business. On one hand, participant N1 view the loophole of the petroleum legal framework in the country's gas development, linking gas resource in the petroleum operation act. Explicitly, the management of gas resources such as the provision of Associated Gas framework agreement is expected to be in a separate Act but end up codified in the Petroleum Profit Tax Act.

The complexities of the Nigeria's legal framework are also viewed by N14 as cumbersome as result of a number of shared interest channels among and within the regulators.

> *"Because fiscal terms are legislations, meaning that it passes through the normal process of number of channels; where you would have the National Assembly debate on it and you would have the president accent to it, and then it is passed. So, because of the various shares of interest in the National Assembly, that process might hinder an expedited action and erhh… I do not know any guidelines per say, but because it is a legislative process and legislative process in Nigeria is in great cumbersome."* [participant N14]

Participant N9 and N10 shared the same views that the need for the government to harmonise and consolidates them in order to strengthen the regulatory environment. Therefore, accenting on the PIB would be a starting point for clarity and certainty in the Nigeria's petroleum industry. Although, Nigeria is equipped with a robust petroleum acts, which are criticised in bit and pieces, the country suffers from shortcomings of collision of acts interpretation from one agency to the other, undermining the state's capacity to effectively regulate the petroleum operations.

7.3.4.6 q. Finding 17: Concern Relating to High Operating Cost

Crude oil production and refinement of oil products at lower costs is one of the key challenges faced by petroleum industries to stay competitive in the oil markets. Operating cost is critical to both investors and the government at large. For instance, tax oil which is a platform of revenue generation equals to gross oil production minus the operating cost. So, if the operating cost is kept high, it would invariably reduce the revenue generated by the government and also the profit of the investors. The findings from the interview participants viewpoints identifies that operating costs affected the whole of the petroleum value chain operations. On this note, N4 points out that high operating cost in the petroleum operation as the biggest threat to the Nigeria's petroleum industry. The operating cost include logistics, human resources and services rendered by the oil service companies in exploration and production activities.

> *"We are operating in a very high-cost environment and because the cost is very hash, it underscores our survival in the industry. We have to do what we need to do to bring the cost down otherwise it will bring us down."* [participant N4].

N5 on the one side, affirmed that a petroleum industry is incapable of having the tenacity and resilience to manage its operating cost cannot yield economic development and directly affects the investment climate of oil industry of the country. In describing the retarding effect of the unit operating cost and the process in the oil industry, N13 reported that

> *"We have to address all these things concurrently to reduce our unit operating costs. We are taking them one by one and focusing on the first three (Human Resources, logistics and direct handling costs) and we are engaging the industry to see how best we can achieve this." The Human Resources cost alone is about N785bn on less than 50,000 personnel and the national budget is N10.8trn for 200 million people. This, implies that less than 0.03 per cent of the country's population share 7.3 per cent equivalent of the nation due to high tax rates, profit margins are relatively low in Nigeria standing at about two per cent of price in Joint Venture arrangement and about ten per cent in Petroleum Sharing Contract agreement. "*[participant N13]

The participant's views relating to high operating cost are key to the challenges faced by operators reining in operating and capital expenses as well as the industry service providers. This implies cost control is the front burner issue in the Nigeria's petroleum industry. Some of the costs are attributed to taxation. For instance, multiple taxation from government at all levels: DPR hike costs of obligatory services, state governments demand various tariffs, local governments harass operators: legislative committees hold up works: regulators sometimes delay approvals or licenses. Hence, this study identifies the high operating cost as major factor that hinders optimising oil production operation and revenue take for the government.

7.3.4.7 r. Finding 18: Concerns Relating to Revenue Leakages

Revenue leakages become one of the appalling ways by which government loses its oil proceeds. This can happen if there are loopholes either in the administration of the legal framework or if the requirement of the policy of the petroleum fiscal regime is somewhat faulty. However, the views drawn from the interview participants identifies that Nigerian government has been losing revenue in its petroleum sector through number of ways including faulty

In his interview remark, Interviewee N9 reported that

> *"The leakages were as result of the faulty Production Sharing Contract (PSC), which gives room for the oil firms to fleece Nigeria of billions of naira revenue. The Production Sharing Contracts (PSC) is faulty and does not provide for the remittance of the proceeds from gas sales. It gives room for most of the oil companies to fleece our revenues."*

Another interviewee N12 stated the extent of these revenue leakages

> *"The House of Representatives ad hoc committee investigating revenue leakages in the Department of Petroleum Resources (DPR) uncovered about N6 trillion from gas sales and royalties is yet to be remitted to the Consolidated Revenue Fund by oil majors operating in the country. Specifically, the committee uncovered over US$8 billion unremitted accrual from gas sales by Total Oil & Gas Limited between 2007 and 2017; US$170 million by Mobil; US$34 million by Neconde; among others."*

The responses from the interviewees above suggests the root effects that undermines the workability peculiar to Nigeria's petroleum legal framework. The empirical findings from the interview survey are also consistent with the statistical findings of the questionnaire responses in chapter six. At various instances, the interviewees noted that the ineffectiveness petroleum legal framework due to absolute cumbersome of legislations processes, corruption, adverse policies, incentive abuse, political interreferences, high operating cost and cumbersome in legislative processes. To sum up, figure 7.3 provides the summary of likely causes and associate causes of the legal framework unattractiveness extracted from the interview findings.

7.3.4.8 s. Finding 19: Concern Relating to Incentive Abuse

A key strategic of petroleum fiscal regime to the government is to attract investors through a provision of incentives/allowances to investor, which stimulates greater output on investment. However, when the incentives are been misused by those intended for, it creates a room for manipulation and leakages in the system. The findings from the interview survey discovered that the fiscal incentives contained in the legal framework aimed at stimulating greater investment output is been misused leading to huge revenue losses to the government. Explicitly, participant N7 points out that there are cases of one of the fiscal incentives "cost incentive" has created room for cost padding among and within the oil companies. Cost padding is the deliberate overstatement of the cost without corresponding to increase in

production. In support of N7 claim, participant N2 and N3 refer the "pioneer status" been one of the fiscal incentives as of the worse way Nigerian government losses revenue. The pioneer status is a tax holiday granted to newly (qualifying) oil companies before starting production from paying taxes. It has an initial period of three years and renewable for additional two years. Thus, many companies connived with government officials to keep renewing their tax holiday to evade paying tax. On this note, N9 believed that the oil companies are having a liberty at the expense of country partly due to non-review of the legal framework or lack of strict monitoring and compliance.

> *"In my own perspective, the companies are enjoying themselves in the expense of the country due non review of various oil legislation and policies that outmoded their aim and that is why the oil companies are taking advantage of the incentives and allowances."* [participant N9].

N6 also viewed the investment tax credit as easy take for the oil investors that evade paying taxes, which contribute huge revenue leakages to the government. Specifically, N6 reveal that

> *"I haven't seen any other country where they are going to have an uplift of 50% in terms of investment tax credit, when you talk about investment tax credit, it is actually a deduction from tax liability not a tax benefit. Therefore means, you spend $100, I have advantage to take 50% of that in the first year as a tax credit, then I have an advantage to also take whatever the tax benefit that five years is. So, I haven't come across any system that is ok with that. The other part is in terms of the JV, the PPT, which is 85%, so for me, I also see it as an incentive for investors to actually invest and also be inefficient."* [participant N6].

Overall, the majority of the participants believed that the fiscal incentives/allowances are been misused by the oil companies. With particular reference to the pioneer status, investment tax credit and sliding scale royalty. The scheme has been criticised with enormous favours, I argue that the fiscal incentives or allowances are been abused which undermining their objectives in motivating the oil investors in their oil exploration and production operations for better output that invariably contributes to government revenue.

Figure 7.3 summarised empirical findings of the petroleum legal framework issues in the Nigeria's petroleum industry
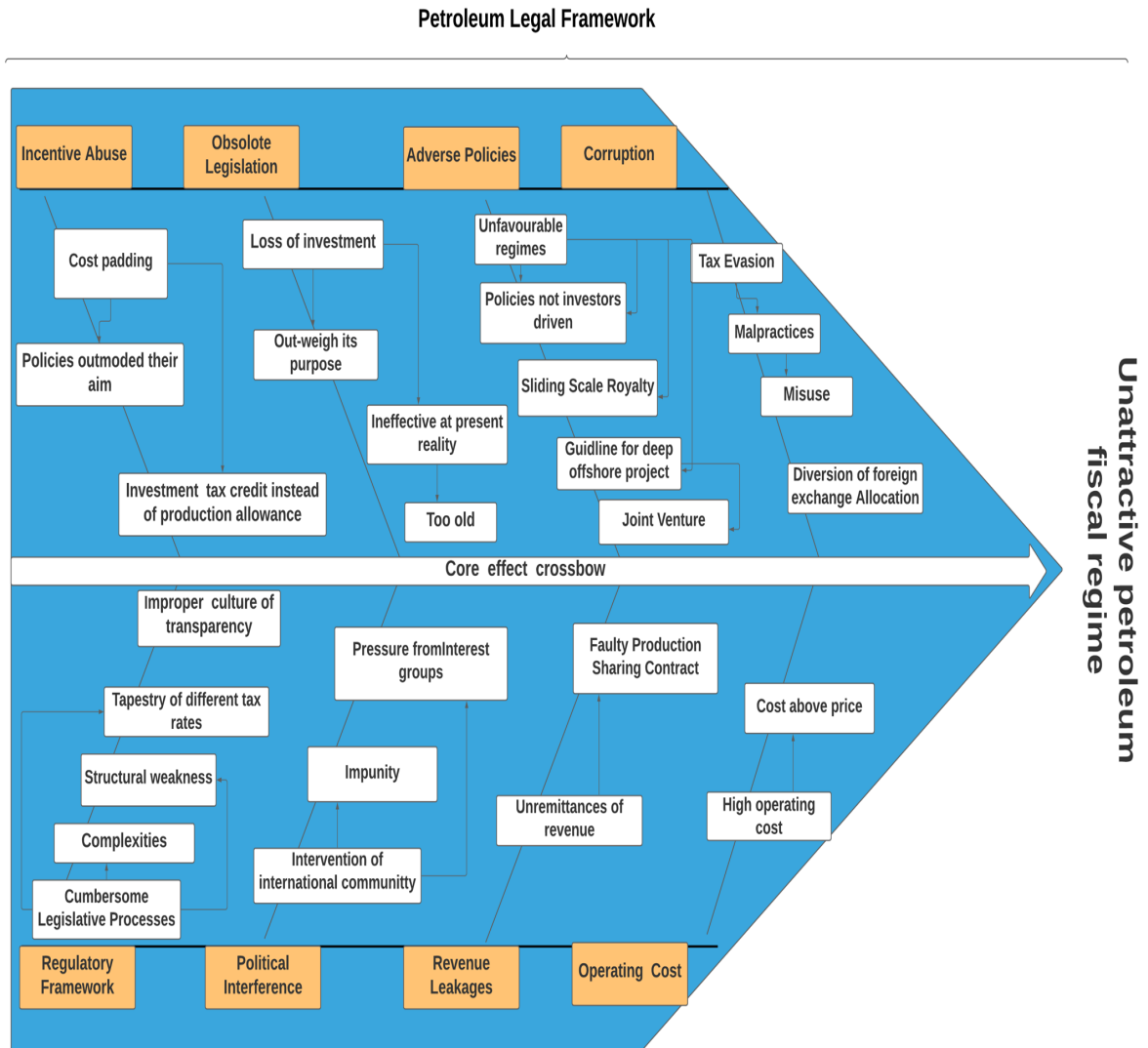
Source: Author generated from empirical data

7.4 Thematic Nuances

The emergence of extra themes as part of the unexpected outcomes from the conduct of the interview were identified and reported in the section, which justifies the depth of the thematic analysis. Thus, are referred to as thematic nuances in this section.

Some interview participants reported the unique development as part of the overall structure of the reforms that are taking place in the petroleum industry- the PIB is been divided into four phases for the easy cascading into law. It includes Petroleum Industry Governance Bill (PGIB), Petroleum Industry Fiscal Bill (PIFB), the Petroleum Industry Administrative Bill (PIAB) and then the Host Community Bill. In addition, there is the National Petroleum Policy recently approved and also National Gas Policy was approved. So, the Petroleum Fiscal Policy is the third policy that would be approved.

The division of the PIB into four different components could be seen as an attempted by the government on the key improvements to strengthen the DPR. Particularly the PIGB would strengthen the DPR given it the requisite legislative backing and also clear separation of roles, regulatory functions from commercial functions. While all other elements of the bill would further strengthen the administration of fiscal regime and its regulation in Nigeria

Although, other participant attributed the recent collapse in crude prices as a key driver of the reforms, because NNPC is no longer the cash cow it was, as its ability to divert funds has been substantially diminished

More so, another participant relates the how some oil companies began merger to stay stable financially due insecurity in the oil region and uncertainties surrounding oil operation. Although on the contrary, other participant explains the ongoing merger for oil companies better- a company might be looking for market share, and then so by merging with some other companies they would like to take advantage of that, for the purpose of market share. Other companies might want that for efficiency purpose as well. Because other company that don't have a particular asset would have taking to invest in it, so it is easy merge to reach efficiency for instance they could leverage on technology for efficiency. The participant cited an example with the recent merger between Shell and BG, was because the Shell company wanted to grow its share of gas market, particularly gas portfolio. Not necessarily because of constrained

7.5 Summary

This chapter presented the findings of interview data collected for this study. The presentation of the findings was done given the aim to examine the petroleum regulatory governance through the opinion of the participants and the suitability of the strategic objectives of the fiscal regime in Nigeria. The findings of the analysis suggest the legal framework issues, which create ineffectiveness of petroleum regulatory governance in the implementation of the Nigeria's petroleum fiscal regime, while the strategic of objectives of the petroleum fiscal regimes are affected by the inconsistencies in striking balance between the government and the multinational oil companies. Specifically, the principles of good regulatory governance are characterised as ineffective in the implementation processes. The strategic objectives impeded by imbalance of the regime while the legal framework outwit its objective.

A discussion of the aggregate findings drawn from the mixed method research adopted for this study is presented in the next chapter (8) as well as the clear contributions for the study. Also, limitations for the study and recommendations for further research would be presented in the next chapter.

<center>**Chapter Eight**
Discussion and Contributions</center>

8.1 Introduction

This chapter presents discussion on the research findings for both the quantitative and qualitative analysis in chapter six and seven of this study. Furthermore, the chapter outlines the contributions (significance) of this research, limitations of the study and recommendations for further research. The discussion section of this chapter provides an explanation on how the qualitative findings helps to explain the quantitative results.

8.2 Discussion

This section outlines and integrates discussions between the quantitative and qualitative findings in the light of the literature and the theoretical underpinnings employed for the study. As outlined in chapter one, this study has looked into Nigeria's petroleum regulatory governance in implementing its petroleum fiscal regime strategic objectives. To reiterate the research questions, the study empirically examined the petroleum industry legal framework. Also, the research aimed at determining the suitability of Nigeria's petroleum fiscal regime strategic objectives (see section 1.4). Accordingly, the research questions emerged from the research aim and objectives:

1. How effective is Nigeria's petroleum regulatory governance in implementing the country's petroleum fiscal regime?
2. To what extent does Nigeria's petroleum legal framework create certainty in the operations of the country's petroleum industry?
3. What is the suitability of Nigeria's petroleum fiscal regime strategic objectives both to the Nigerian government and MOCs?

In Chapters two and three, the study reviewed relevant literature on petroleum legal framework, regulatory governance and petroleum fiscal regimes arrangements. The review sought to achieve the following objectives: effective regulatory frameworks, principles of good governance, petroleum fiscal regimes design, and administration. Subsequently, the review identified a number of issues concerning Nigeria's petroleum regulatory governance, including: a non-universal standard approach towards applying legal framework across petrostates. By implication, oil-producing states employ distinct policy and regulatory

<center>183</center>

measures in implementing their strategic objectives based on their needs and political structure through a specific legal framework. Hence, a periodic review of petroleum legislation, policies, and regulations reveal critical areas requiring attention for improvement. Notably, the review revealed a criterion for good governance through the "Royal Institute of International Affairs (RIIA), Chatham House Principle of Good Governance" across regulatory agencies. More so, this criterion has been applied for assessment and review of the petroleum fiscal regime. Finally, the review of petroleum fiscal regime also identified the critical success for a petroleum fiscal regime through alignment of interest between the government and the multinationals investors.

Contextually, a review of Nigeria's petroleum industry, specifically the upstream sector, has been undertaken, focusing on its legal framework, regulatory governance and implementation of its petroleum fiscal regime strategic objectives. Sequel to its legal framework discussed in chapter 2.0, the review revealed Nigeria, similarly to petrostates counterparts such as Australia, Norway, has its strategic objectives – expanding its revenue base while ensuring a fair return for the investors. Also, the review discovered that Nigeria's regulatory governance is characterised by what I call 'patters of confusion' and conflict of interest among Nigeria's regulatory agencies. The patterns of confusion have been evidenced by inconsistencies within the agencies with regards to application of the key and basic governance principles that every agencies are said to espouse. In terms of implementing the petroleum fiscal regime, the review has revealed that the Nigerian government creates a set of measures to ensure a degree of flexibility for its investors. The set of measures includes adoption of a multi-statue framework aimed to broaden the revenue base and pave the way for the character of interest between the MOCs and the government. The multi-statue framework has a number of legislations conflicting in their regulatory functions through a multi-agency approach in the administration of petroleum policies and regulations.

The findings from the review of the literature informed the need for relevant theoretical framework. Accordingly, the research was underpinned by the theoretical assumptions "game theory and stakeholder theory". The game theory aids our understanding as to how most salient and strategies of the key regulatory agencies are formulated and provides insights into sources of the 'patterns of confusion' produced at the agencies' level. On the other hand, the stakeholder theory has been brought into the discussion to help to address the interest of key stakeholders and the groups they belong to. The research has looked into the stakeholder

alignment and their attainment towards key organisational objectives deprived of trade-off, which is the primary concern of corporate goal. However, the findings reported in the chapters six & seven – both of which have analysed the research questions- validate the assumptions of the two theories applied in this project. These assumptions are:

Assumptions under the Game Theory

1. Competitive bidding- a situation where companies compete amid limited opportunities.

2. Joint venture/partnership and strategy and decision making, in this circumstances, multiple companies have to come together to execute a project.

3. Negotiations between the partners, governments, suppliers and customers with a bid to maximise the largest share.

Assumptions under the stakeholder Theory

1. Normative Assumption- explains stakeholders should not be considered as means to end rather, they should be regarded and treated as an end.

2. Instrumental Assumption- identifies the connection between corporate stakeholder operation and corporate objectives within the business environment.

3. Descriptive Assumption- describes the state of affairs of stakeholders and corporation in relation to the past, present and future of the organization.

Guided by the pragmatic paradigm of this study, a questionnaire survey was carried out as the quantitative arm of this study, which provided an objective stance relating to governance and policy on petroleum fiscal regimes. Also, a semi-structured interview employed serves as the qualitative arm for the research. The qualitative method explores the thesis from a multi-paradigmatic lens linked to the stakeholder's opinions on the practices involving strategic interactions and decision-making in the petroleum industry operations. The following subsection below discusses both findings for the mixed method strategy adopted in the study underpinned by the objective of this study.

8.2.1 Ineffectiveness of Petroleum Regulatory Governance

The recent conduct of a key petroleum stakeholder (i.e., the central bank of Nigerian governor) in 2014 and the Nigeria Extractive Industries Transparency Initiative (NEITI) report in 2015, exposes a significant revenue leakage from petroleum operations, indicating a reactive position towards governance issues in the Nigeria's petroleum industry activities. In this, a sum of $20 billion revenue was discovered to be unremitted into the federation account by the Nigerian National Petroleum Corporation (NNPC), which were inconsistent and failed to meet a

minimum acceptable standard of PFR (NEITI, 2016). However, the findings of the primary data from the quantitative study suggest that the NEITI investigation are necessarily within the NNPC as a company, the oil regulatory agencies in Nigeria have a relatively low compliance stance in terms of reporting and disclosure of petroleum activities. In that, adequate knowledge and competence from the fiscal regime policymakers are lacking in establishing an effective regulation deprived of political intrusion that encourages adherence to the existing provisions of contractual arrangements. The thematic analysis strongly suggests that the concept of governance relating to its principles is very significant for understanding petroleum strategic objectives. The qualitative findings provide empirical evidence that the regulatory agencies report different oil figures, which indicates a lack of synergy between them, highlighting the scale at which lack of synergy and mistrust resulted in reporting and disclosure concerns. Further findings of the qualitative study suggest that the ambiguity of role and complexities in responsibilities impacted adversely towards the collaborative strength of joint venture goal and expectations

Accordingly, some scholars suggested that transparency in reporting and disclosures uncovers corrupt practices, enables earlier identification and ratification of problems and builds trust in the system (Lahn et al., 2007: Manaf et al., 2016). Roychowdhury et al. (2019) found that a reduction in information asymmetry through reporting and disclosure, particularly from the regulatory agencies, opens room for economically constrained companies to upsurge their investment efficiency by tapping into new investment opportunities and also improves MOCs access to external capital. On the other hand, lack of proper reporting and disclosure and clarity of roles, goals, and responsibility suggests that the regulatory agencies do not have a single integrated structure dealing with petroleum operation related concerns in Nigeria. In that, Wahab and Diji (2017) pointed out that the inability of the Nigerian government to ascent the proposed Petroleum Industry Bill (PBI) into law prove to be a piece of solid evidence that goals and responsibility create more anxiety and tension in the discharge of duties by the regulatory agencies. Gil-Garcia et al. (2019) observed that relationship breakdown amongst the regulatory agencies creates tension and discord synergy because "ambiguity and complexities arise from multiple hierarchies and structures" towards interpreting a legislative document. Freeman et al. (2004) cautioned that Market Stakeholders might find it challenging due to the friction among the regulatory agencies, because lack of clarity of roles, goals and responsibility, which specifies rules of engagement and a sense of direction. A relationship breakdown and friction between the regulatory agencies provides a classic example of the challenges faced with

managing the inter-agency relationship. Thus, underscored the descriptive assumption of stakeholder theory. Most of the organisational puzzle are traced to the legislative framework used to regulate the petroleum industry.

The explanatory findings of the study also revealed a specific organisational behaviour puzzle believed to be utilised by the regulatory agencies. The explanatory findings further revealed that these organisational behaviour puzzles, particularly policy summersault, regional oil extraction monopoly, and unaccountability, correspondingly undermined the confidence and relationship between the host government and the stakeholder investors. Most of the organisational puzzles are linked to the existing legislative framework the regulatory agencies use to manage and regulate their relationship with MOCs. Empirical evidence from the primary data of the qualitative study indicates that at number of instances, the regulatory agencies exhibited policy summersault due ambiguous nature of the legislative instruments. Thus, decision-making processes by MOCs may be affected due to the uncertainties surrounding the outcome of a specific petroleum policy on account of ambiguity in policy implementation. The game theory suggests that an uncertain situation would affect the oil game investment and lead to resource divestment to other oil provinces (Castillo and Dorao, 2012). Similarly, Amorelli and Carpio (2016) pointed out that the impact of continuous policy summersault can negatively impact future unitisation negotiations and make it difficult for the oil companies to re-invest because the oil companies are in a dilemma. The game theory assumed strategy and decision-making process as the tool that coordinates the relationship of game players (stakeholders) towards optimal projects payoff.

8.2.2 Unsuitable Petroleum Fiscal Regime Strategic Objectives

Host countries achieve the strategic objectives of their petroleum resources through a design of a petroleum fiscal regime, of which economic growth is a key. The quantitative findings of this study's primary data show a correlation between Nigeria's economic growth and petroleum fiscal regime policies. The qualitative data findings indicated that the good regulatory governance identified are directly proportionate to the petroleum fiscal regime strategic objectives that host governments achieve. For instance, the principle of good regulatory governance- clarity of roles, goals and responsibility, enablement to carry out assigned role, accountability and decision making, and transparency and accuracy of the information, requires political will to be implemented, with regulatory agencies adhering to status quo. The

organisational behaviour puzzles linked to regulatory governance mainly, policy summersault, regional oil extraction monopoly and unaccountability

The existing petroleum fiscal regime policy, which Nigeria's government refers to as strategic objectives, is based on a rule-based approach. An attempt to regulate the petroleum activities through entrenched legislative rules by allowing Nigeria's government to articulate and decide on their objectives, which is supposed to provide the petroleum investors with a balanced relationship objective with the host government. Most of the survey participants don't believe that the balance of objective relationship is suitable, confirming Nyoor et al., (2019) point that a country's petroleum strategic objective is suitable when the perspectives of all stakeholders are taken into consideration with a view to striking a balanced relationship between the government and the oil investors. However, the link between good regulatory practices and petroleum fiscal regime strategic objective policies supports Ogunleye (2015) assertion that, petroleum fiscal regime strategic objectives must create economic growth of the host country. Exploratory findings of the study also support the correlation between the regulatory governance issues and strategic objectives suitability in the quantitative study. For instance, the qualitative study findings indicate that the inconsistencies arising from regulatory operations revenue allocation formular affecting the balance of risk/reward relationship, unstructured operation and management of investment in the oil sector, bargaining/negotiating power affecting the development of national expertise, triggered the lapses of the suitability of Nigeria's petroleum fiscal regime strategic objective, which invariably affects economic growth in the petroleum industry.

However, the statistical findings directly linked Nigeria's petroleum fiscal regime strategic objectives with its low negotiating power with the multinational oil investors. For example, the government negotiating power fail to capture the development of national expertise in skills acquisition, the perceived youth unemployment, and optimal petroleum production as its objectives. Evaluating Nigeria's bargaining power from a game-theoretical lens: When a negotiating power by an oil player is lost, meeting an equilibrium in terms of a balance of objectives may not be possible (Amorelli and Carpio, 2016), and it discourages efficiency towards resource allocation that leads to optimal oil production.

8.2.3 Uncertainty of Petroleum Industry Legal Framework

The global players in the petroleum arena employ a legislative framework to regulate their petroleum operations with a goal to exploit and strengthen their crude oil resources. Similarly, Nigeria's petroleum industry legal framework has been adopted as the guiding bylaws for petroleum operation for nearly five decades. Evidence from the primary data empirical findings revealed specific issues that affect Nigeria's petroleum industry legal framework. The overall findings from both the statistical and thematic analysis suggest that Nigeria's petroleum legislations are obsolete to confront the present-day petroleum operations challenges. Also, the findings of the interviews further reaffirmed that the obsoletion of the petroleum industry legislation paved the way for corrupt practices in the oil industry through political interference. Corruption played a role in revenue leakages and contributed to high operating cost and incentive abuse in the petroleum value chain. The obsoletion of the legislative instrument is linked to the concern about the none-review of petroleum legislation in Nigeria. However, the maturity of the oil field becomes increasingly difficult and less cost-effective to explore, posing investment opportunities to be tighter and technically rigorous. For instance, the existing petroleum legislation has been promulgated since the Petroleum Act 1969, about five decades ago. As a result, the obsoletion of the legislative instruments is in tandem with manipulations of the existing petroleum fiscal regime to a great extent through corrupt practices and revenue leakages.

Another key finding of the qualitative study suggests that Nigeria's government lacks a defined legislative framework, contributing to a number of inconsistencies and uncertainties of petroleum operations. Some of the inconsistencies are caused by the complex nature of the bylaws, which are in bit and pieces. For instance, the NNPC Act 1997, the Petroleum Act 1969, the Oil and Pipelines Act 1990, the Petroleum Profit Tax Act 1959, the Petroleum Products Pricing Regulatory Act 2003 and Petroleum Act CAP. 350. LFN. 1990 and 2004, as amended, have different interpretations. These complexities of the legislative framework fail to meet the guiding principles of simplification for an effective petroleum industry legal framework. Consistent with the findings above, Oyebimpe and Iledare (2019) argue that a starting point in reviewing Nigeria's fiscal regime would be to aim for simplification. The finding further supports the view of Chandler (2020) that legislation serves as the guiding principles of petroleum operation in the oil industry. Thus, the host government expected to ensure the petroleum legislations are up to date to match the growing concern and checkmate any inconsistencies in the petroleum industry. Accordingly, Hunter (2016) suggests that the

performance of petroleum fiscal regimes of a host country depends on its petroleum industry legal framework, which includes laws and regulations.

Evaluating the petroleum industry legal framework in the light of stakeholder theoretical framework, it can be argued that the relationship between the legal framework and good regulatory governance is theoretically inefficient. The relationship fails to match the main objective of the stakeholder theory, which underscored the firm's survival and reflects wealth-creation for the firm and the entire stakeholders. However, the inconsistencies of corruption and revenue leakages in Nigeria's petroleum industry directly impact negatively on nonmarket stakeholders such as the general public (the citizens). On the other hand, the complexities of the legal framework can create uncertainties on the market stakeholders such as the MOC and local investors in decision-making processes due to the intricacies of the different petroleum laws. Also, reflecting on the descriptive assumption of stakeholder management highlights the bylaws that bound Nigeria as the host government and the MOCs. The salience of legal framework (Petroleum Industry Bill) towards the transition of distinct contracts such JVs, PSCs and RSCs from the past, the existing and the amendments (review) as the way forward for the future.

8.3 Contribution of the study

This study explores good regulatory governance practices focusing on the petroleum legal framework within Nigeria's upstream regulatory agencies. The study's key significance is specifically on the empirical data collection and the findings based on the primary data analysis in chapter six and seven.

Considering the dominance of secondary data and quantitative studies on business studies, specifically good governance, Albassam (2014) suggests that good governance literature could have more significance in employing additional qualitative or mixed-methods research instruments, which provides a robust insight into good regulatory governance practices in the Nigeria's petroleum Industry. More so, a quantitative study does not present an explanation of findings drawn from a statistical test and less likely to shed on the insight of "Why" a social phenomenon occurs (Creswell, 2014). Hence, this research offers a suitable and specific contribution to empirical findings using primary data collection. Using a mixed-method strategy (questionnaires and semi-structured interviews) in this study provides a more robust approach to analysing complex and dynamic phenomena regarding the petroleum good

regulatory governance framework. This study also revealed how different research approaches applies successfully to petroleum studies.

The adoption of multiple-theoretical frameworks in this study contributes to the literature towards interpreting and explaining the empirical findings, which underscored the focus of the study using the researcher's terminologies underpinned by a formal theory in answering the research questions. Therefore, the application of Game and Stakeholder theories in this study is the first to adopt multiple theories on Nigeria's upstream regulatory governance and would aid other researchers to apply them to other sectors and different countries to understand the strategies played and the value of stakeholders. More so, the adoption of the multiple-theoretical framework responds to the recent calls for complementary theories in empirical studies.

Both the Nigerian petroleum regulatory agencies and the Multinational Oil Companies are concerned with a strategy efficient enough in making investment decision in the petroleum industry. This study, therefore, contributes to the literature on energy policy and regulation given the challenge regulators encounter towards a design of strategies that encourage investment.

This study's finding contributes to the growing literature on the global petroleum governance debate. Contextually, the study provides evidence from Nigeria regarding the relationship between petroleum regulatory governance, legal framework and petroleum fiscal regime policy. Despite Nigeria's significance in the global petroleum arena, studies on its petroleum fiscal framework concerning governance are paid little attention.

Apart from the academic contributions through the empirical findings mentioned above, the findings of this study contribute to the good regulatory governance practices in the petroleum industry. The application of principles of good governance- Royal Institute of International Affairs (RIIA), Chatham House Principle of Good Governance" across regulatory agencies provides a criterion to synergise and integrates the industry-academic relationship that could ensures quality of knowledge, theory and practice. Thus, policymakers in the Nigeria's petroleum industry and elsewhere could find the voluntary reporting and disclosure beneficial in achieving goodwill. The study also outlined the importance of suitable policies as prerequisites for attracting investors in Nigeria

8.4 Summary

The findings of the study both from quantitative and qualitative study were discussed in relation with the research objectives and research questions. Based on the research findings and their discussions above, contributions of the study were drawn. The next chapter concludes the study and providing the limitation of the study as well as the recommendations for further research and policymaking.

<div align="center">

Chapter Nine

Conclusion, Limitations and Recommendations

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9.0 Introduction

This chapter concludes the study. Additionally, the chapter provides limitations for the study and also states the areas of recommendations for future research and for policymakers. The research aims to investigates the Nigeria's regulatory governance, focusing on its petroleum fiscal regime strategic objectives. The result from the empirical findings highlights that the petroleum regulatory governance in Nigeria faces a number of challenges, issues and problems that hinder development in the oil sector. However, the chapter is structured as follows; 9.1 conclusion, 9.2 limitations of the study and 9.3 recommendations.

9.1 Conclusion

This research is believed to achieve its aims according to the research objectives and questions. Also, the research has made a number of contributions that are both relevant to the literature and industry and also serve as a knowledge based for academicians & practitioners. However, based on the empirical findings from the primary data, It can be asserted that the petroleum regulatory governance in Nigeria faces a number of challenges, issues and problems that hinder the development in the oil sector.

The impact of good regulatory governance on petroleum industry legal framework in Nigeria have not only highlighted its significance on institutions and regulatory agencies of host governments, also it has synchronised a distinction in global governance practices to differences in the petroleum fiscal regimes. However, this study asserts that the requirement of petroleum industry legal framework that underscores the functionality of its petroleum fiscal regime deserves as much attention as those channelled of principle of good governance. The rationale of the argument is that the functionality of the petroleum regulatory agencies is considerably determined by the structured and compliance level of principles of good governance. Accordingly, the existence of differences amongst the petrostates with regards to the level of governance principles sophistication underpins the emergence of varying regulatory outcomes in the petrostates. Hence, emerging economies like Nigeria are challenged to persistently seek to improve their legal framework which underpins the regulatory

governance, otherwise the significance of the petroleum industry, will continue to propose a theme of debate.

Following the above challenges, it opens a motivation to evaluate the significance of regulatory agencies towards good regulatory governance. The outlook of this thesis highlights that the regulatory agencies only do matter on the scope to strengthen the compliance level of the governance principles. This thesis asserts that the mainstream legal framework requires strengthening In order to achieve the strategic objectives of the Nigeria's petroleum fiscal regime. Although, the achievement of good regulatory governance is a journey, this thesis posits that a sound strategic process must be established that is capable of to address the governance challenges both in the medium term and longer run. In acknowledging the medium term, efforts should be devoted to ascent the PIBs, whilst in the longer run, the regulatory agencies should ensure proper implementation and compliance of the bill. Also, the oil stakeholders ought to acknowledge the significance of regulatory agencies functionality through adherence of the bill.

The standpoint and the arguments promoted in this thesis are geared towards establishing an empirical evidence of the number of issues and challenges affecting the regulatory governance towards implementation of the Nigeria's petroleum fiscal regime strategic objectives and enhancing knowledge on the theoretical relevance of the principles of regulatory governance with focus on Nigerian upstream sector. Seemingly, the overriding standpoint of the literature indicates the existing regulatory governance of Nigeria's petroleum industry is a reflection of ineffectiveness of regulatory bodies in the country. In contrast, this research identifies the depth of the specific factors that exacerbated failure of regulatory governance in the country. Whilst a number of factors were identified in the research, the policy somersault, unstable fiscal environment and lack of reporting and disclosure across the oil value chain are acknowledged as antithetical of the principle of good governance in the petroleum industry. In order to improve the good regulatory governance in the country, it is therefore paramount at the outset to emphasise the need for the regulatory agencies to resuscitate the mandate that is vested upon them, that ensures control and enforcement of petroleum activities across the value chain. This can be achieved using the objective-based legislative system that simplify the petroleum legal framework.

In the seeming attainment of the objective above, this study suggests that reduction in information asymmetry by mean of proper reporting and disclosure, explicitly from the regulatory agencies can be used to improve regulatory governance awareness and cognizance in such a way that economic players acknowledged their operational confines. In this, this research argues that since regulatory governance in Nigerian upstream petroleum sector is associated with attitudinal issues that includes ethics, moral and values, allowing rational and psychomotor constituents only would not be able to combat unethical behaviour at work. Hence, it is argued that adequate reprimand of defaulters should strengthened, that serves as detrends to other defaulters. Whilst the proposed suggestion aimed at erecting the principle of regulatory governance amongst the regulators, it is also of paramount importance to enhance a capability of the operators towards effective operation by adhering to the strict guidelines and the industry legal framework. In Nigeria, the challenge about the operators is that Nigeria's petroleum legislations are obsolete to confront the present-day petroleum operations challenges. For instance, the obsoletion of the legislations paved way for corrupt practices in the oil industry through political interferences. To this end, this study suggests that an independent body such as NEITI should be capable of withstanding the pressure from the political actors and more driven towards corporate governance.

Notwithstanding how daunting the issues and challenges raised above might seems, yet the consequences of the regulatory misgovernance obliged all stakeholders, especially the Nigerian government. This is because, even though Nigeria is well endowed with non-renewables resources such crude oil, but the corporate failure of Dutch and also the Enron and 2008 global recession among others, highlights the menace of misgovernance. However, in the wake of rising competitiveness in the global oil and gas arena, one best way that Nigerian government can enhance its petroleum industry presence is to continuously improve its regulatory governance and its PFR strategies. Thus, regulatory governance improvement enables risk averse by the MOCs, enhances public acceptance and image, and more importantly, promotes commercial triumph and perpetuity. Nonetheless, the spate of regulatory of governance of Nigeria's petroleum industry experienced during the past decades require a regulatory governance reawakening within the country's commercial atmosphere. To this end, it is posited that the regulatory governance represents the outlook of the Nigeria's petroleum industry. Furthermore, by means of mixed method, the research can be concluded to be unique.

9.2 Limitation of the study

It is reasonable to posit that the key findings of this study adequately addressed the objectives set for this study. Nonetheless, the study acknowledged some limitations as follows:

This study adopted primary data source via questionnaire-based survey and interviews as the main research methods. It's typical to acknowledge inherent limitations when using a questionnaire-based survey, such as the possibility of dishonest response, non-response bias, unqualified participants pretending to be eminently qualified, and the interviewee's possibility's sincerity or bias, which can impact the result of the findings. For instance, some respondent may conceal relevant which their organisation considered as classified information. However, all feasible steps were taken to minimise these limitations by carefully selecting credible participants with a high level of expertise and integrity. At the same time, on a balance scale, the advantages of adopting these research methods supersede their downsides.

More so, the interview used a relatively small number of participants. The study may benefit from more information with a larger sample size. Nonetheless, the researcher prolonged the interview from the proposed 20mins session to 50mins to gain deeper information. Also, the time taken for most of the respondents to complete and return the questionnaires is yet another limitation. A considerable number of questionnaires took over four weeks to respond, and in some instances, some questionnaires were not returned while others were not thoroughly answered. The researcher resolves this limitation by proposing a new date for collection, while MCAR tests were employed to mitigates the incomplete questionnaire, which produces missing values (see chapter 5).

9.3 Recommendations
9.3.1Recommendations for further research

During the analysis, the study's findings are believed to appropriately address the research questions' scope. However, other areas relating to regulatory governance in the petroleum industry can further be investigated. Specifically, this research highlighted vital areas that could require particular focus for future research.

Firstly, the overall concerns encountered in Nigeria's upstream sector are related to the confusion around the petroleum industry practices amongst and within regulatory agencies. In some instances, these confusions are triggered as results of a number of inconsistencies that

occur at the level of regulatory agencies. The broad findings of the survey supported by primary data using questionnaire and semi-structured interviews suggest dissatisfaction regarding adherence to principles of good governance. It would be of paramount importance for a future study to investigate the compliance level of regulated oil companies the same way regulatory agencies are investigated and checkmated. Regulated companies are expected to observe compliance to regulations for effective governance in the upstream sector.

Secondly, the theoretical framework employed in this study (Game and Stakeholder theories) is driven towards strategic interaction leading to payoff and value/management of stakeholder relationship. Further research is recommended to investigate the extent to which the regulatory governance practices of Nigeria's upstream regulatory agencies are affected by issues surrounding the delegation of responsibility between principal and agent. One key finding of this study reveals that regulators in the upstream sector fail to be monitored, which results in revenue leakages. Evidence suggests the possibility of political interference, which results in a conflict of interest.

The third recommendation should look into a comparative study between Nigeria's upstream regulatory agencies and regulatory governance practices in other oil economies. The comparison would illuminate mechanisms for improving Nigeria's regulatory governance practices.

9.3.2 Recommendation for policymakers

Apart from the recommendation for further research above, the following recommendations can be utilised by the policymakers with a view for a well desirable change.

(a) **A design of petroleum industry legal framework:** the research findings discovered that the Nigerian government has no integrated petroleum industry legal framework, which results in confusion on clarity of role and responsibility. On this note, it is recommended that Nigeria's legislators prioritise ascent the Petroleum Industry Bill (PIB) into law. Passing the Bill into law to would ensure all loopholes, uncertainty, and unclarity relating to upstream regulation are closed. Also, would enable the regulators to implement good regulatory governance objectives.

(b) **Economic growth:** the research findings indicates that one of the main Nigeria's petroleum strategic objectives is economic growth. This study recommends that for

the economic growth to be achieved, the regulatory agencies should be free from political interference. The regulators should be fully autonomous i.e. the Department of petroleum resources should be independent from federal ministry of petroleum resources. Also, federal inland revenues service as the main country's tax authority should be in charge of collecting and remitting the petroleum profit tax and all the incidental royalties.

(c) **Strengthening the tax tribunal and legal institutions:** the findings of the study identified revenue leakages by some regulatory agencies. Also, some companies conspire with government officials to commit fraud such as tax evasion. This study suggest that the tax tribunal and the legal system of the country should have sufficient capability and competence to reprimand any misconduct irrespective of their position in government or companies. The reprimand serves as deterrent to others and also shape up the accountability concerns.

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Appendices

Appendix 1: UREC Approval

19th September 2018

Dear Aslam,

Project Title:	**Petroleum Technology Development Fund (PTDF)**
Principal Investigator:	**Dr Slawomir Raszewski**
Researcher:	**Aslam Kaitah**
Reference Number:	**EXP 1819 06**

I am writing to confirm the outcome of your application to the University Research Ethics Committee (UREC), which was considered by UREC on **Tuesday 18th September 2018.**

The decision made by members of the Committee is **Approved**. The Committee's response is based on the protocol described in the application form and supporting documentation. Your study has received ethical approval from the date of this letter.

Should you wish to make any changes in connection with your research project, this must be reported immediately to UREC. A Notification of Amendment form should be submitted for approval, accompanied by any additional or amended documents:
http://www.uel.ac.uk/wwwmedia/schools/graduate/documents/Notification-of-Amendment-to-Approved-Ethics-App-150115.doc

Any adverse events that occur in connection with this research project must be reported immediately to UREC.

Approved Research Site

I am pleased to confirm that the approval of the proposed research applies to the following research site.

Research Site	Principal Investigator / Local Collaborator
Nigeria: Abuja, Lagos and Port-Harcourt	Dr Slawomir Raszewski

Approved Documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	Version	Date
UREC application form	2.0	17 September 2018
Participant Information sheet for interview	1.0	11 September 2018
Participant Information sheet for Questionnaire survey	1.0	11 September 2018
Consent form for interview	1.0	11 September 2018
Consent form for Questionnaire survey	1.0	11 September 2018
Invite letter	1.0	14 August 2018
Interview protocol	1.0	14 August 2018
Semi-structured interviews	1.0	14 August 2018
Questionnaire	1.0	14 August 2018
Gatekeeper email from NNPC T owers	1.0	14 August 2018
Gatekeeper letter from Department of Petroleum Resources	1.0	14 August 2018
Gatekeeper letter from Federal Inland Revenue Service	1.0	14 August 2018
INEC schedules 2019 General elections	1.0	14 August 2018
The Guardian Nigeria Newspaper page	1.0	14 August 2018

Gatekeeper letter from Shell Petroleum Development Company of Nigeria Ltd	1.0	11 September 2018
Gatekeeper letter from ExxonMobil	1.0	11 September 2018

Approval is given on the understanding that the UEL Code of Practice in Research is adhered to.

The University will periodically audit a random sample of applications for ethical approval, to ensure that the research study is conducted in compliance with the consent given by the ethics Committee and to the highest standards of rigour and integrity.

Please note, it is your responsibility to retain this letter for your records.

With the Committee's best wishes for the success of this project.

Yours sincerely,

Fernanda Silva
Administrative Officer for Research Governance University Research Ethics Committee (UREC)
Email: **researchethics@uel.ac.uk**

Dear Aslam

Application ID: ETH1920-0126

Original application ID: EXP 181906

Project title: Petroleum Resource Governance in Nigeria: Policy objectives and Regulations through Fiscal Regime

Lead researcher: Mr Aslam Kaitah
Your application to Business and Law School Research Ethics Committee was considered on the 23rd of March 2020. The decision is: **Approved**

- ***Due to the Corona virus crises the Committee asks that you to use online platforms to carry out the interviews interview such as Skype for business or Microsoft Teams. For further information please visit the Public Health website page*** ***https://www.gov.uk/government/organisations/public-health- england***
- ***If you have any queries regarding your research projects, you should consult your Director of Impact and Innovation or Chair of SREC for direct advice you should contact your Research Degree Leaders.***

The Committee's response is based on the protocol described in the application form and supporting documentation. Your project has received ethical approval for 2 years from the approval date.

If you have any questions regarding this application, please contact your supervisor or the secretary for the Business and Law School Research Ethics Committee.

Approval has been given for the submitted application only and the research must be conducted accordingly.
Should you wish to make any changes in connection with this research project you must complete 'An application for

approval of an amendment to an existing application'.
Approval is given on the understanding that the UEL Code of Practice for Research and the Code of Practice for

Research Ethics is adhered to.
Any adverse events or reactions that occur in connection with this research project should be reported using the

University's form for Reporting an Adverse/Serious Adverse Event/Reaction.

The University will periodically audit a random sample of approved applications for ethical approval, to ensure that the research projects are conducted in compliance with the consent given by the Research Ethics Committee and to the highest standards of rigour and integrity.

Please note, it is your responsibility to retain this letter for your records. With the Committee's best wishes for the success of the project

Yours sincerely

Fernanda Silva

Administrative Officer for Research Governance

Annex 2

The Business and Law Research Degrees Sub-Committee on behalf of the Impact and Innovation Committee has considered your request. The decision is:

Approved

Your new thesis title is confirmed as follows:

Old thesis title: Petroleum Resource Governance in Nigeria: Policy objectives and Regulations through Fiscal Regime

New thesis title: Petroleum Regulatory Governance: An Analysis of Nigeria's Petroleum Fiscal Regime and It's Strategic Objectives

Your registration period remains unchanged.

Appendix 2:

Participant Information Sheet for Questionnaire Survey

UNIVERSITY OF EAST LONDON

University Research Ethics Committee (UREC)

Applications for the Approval of Experimental
Programmes Involving Human Participants

University of East London
School of Business and Law
University of East London
Stratford Campus,
London E15 4LZ.

University Research Ethics Committee
If you have any queries regarding the conduct of the programme in which you are being asked to
participate, please contact:

**Catherine Fieulleteau, Research Integrity and Ethics Manager, Graduate School, EB 1.43
University of East London, Docklands Campus, London E16 2RD
(Telephone: 020 8223 6683, Email: researchethics@uel.ac.uk).**

**The Director of Studies
Dr Slawomir Raszewski
s.raszewski@uel.ac.uk**
University House, Stratford Campus
College of Professional Services
UH 1.05, Water Lane, London E15 4LZ

**Doctoral Researcher
Mr. Aslam Kaitah**

School Business and Law, University of East London
Stratford Campus, London E15 4LZ
(**Telephone:** +44 (0), **Email:** a.kaitah@uel.ac.uk)

<div align="center">

Consent to Participate in a Research Study

</div>

The purpose of this letter is to provide you with the information that you need to consider in deciding whether to participate in this study.

<div align="center">

Project Title:
Petroleum Regulatory Governance: An Analysis of Nigeria's Petroleum Fiscal Regime Strategic Objectives

Project Description

</div>

This research is sponsored by Petroleum Technology Development Fund (PTDF) as part of its mandate in Building Capabilities and Capabilities of Nigeria's Oil and Gas Industry Through the development of Human Capabilities, Institutional Capacity Development as well as the promotion of Research and Acquisition of Relevant Technologies. In addition, the project has been approved by the University Research Ethics Committee (UREC).

<div align="center">

Risk Involved

</div>

There is no identifiable risk associated to the questionnaire survey. However, if participants experience any form of discomfort while responding to questionnaire survey process, please do not hesitate to inform me and perhaps, suspend the process, you could have a break and continue or terminate the exercise.

<div align="center">

Confidentiality of the Data

</div>

Once the questionnaire surveys are duly completed, the researcher will delete all participants' identifiable information and replace each with a unique number. Therefore, retrieved surveyed questionnaires will be kept safe in a pass-worded document and can only be accessible by me, my supervision team and examiners. However, the information you provided is subject to legal limitations in data confidentiality (e.g. disclosures that are subject to duty of care). Duly signed consent forms would be kept in separate locked filing cabinets.

Furthermore, once the research project is completed, all questionnaires and other related information will be destroyed. The researcher will destroy anonymized data gathered after three years. In sum, all collected information regarding this research project will be safe guarded with the strictest confidence from the commencement of the study to completion.

Finally, at completion, questionnaire surveys data would be analysed and written up into a PhD thesis, to be submitted to UEL and I would publish chapters of the finished work in peer-reviewed journals. Furthermore, activities with the data might include conference presentation, internal report, presentations to relevant stake holders and other publications.

<div align="center">

What will be expected of participants

</div>

After you agree to participate, I would then ask you to sign the consent form, which requires your name on the form. However, the consent form would be set separate from the questionnaire feedback, because of the anonymity of the survey. Accordingly, I will send you an electronic questionnaire via survey monkey to complete. Survey Monkey is an online survey platform development cloud-based software that provides customizable surveys as well as a suite of paid back-end programmes that include questionnaires, data analysis, sample selection, bias elimination and data representation among others. Once the electronic questionnaires are duly completed, please just submit and it will be saved on the survey monkey platform and I can see your feedback.

The research procedures would include responding to a questionnaire survey. The research process involves collecting participants' demographic details (e.g. your name, age, gender and state of origin) and information about their experiences in Nigeria's oil and gas industry, particularly with regards to government policy and regulation on petroleum fiscal regime of the country. This information will not

be used to identify you but will be used to get a clearer idea about the kind of people who took part in the survey.

Additionally, the questionnaires are particularly designed to explore the effectiveness and competitiveness of government policy objective and various regulations with regards petroleum fiscal regime seeking the perception of multinational oil companies, government regulatory agencies, tax authorities and transparency initiative-aligned professionals as stake-holders in Nigerian Petroleum Industry. It may take participants about 10-15 minutes to respond to the questionnaire.

Location

The questionnaires could take be completed at participants' convenience either at a confidential office spaces and quiet rooms in libraries or at home.

Remuneration

There is no payment for participating in this research.

Disclaimer

You are not obliged to take part in this study and should not feel coerced. You are free to withdraw at any time. Should you choose to withdraw from the study you may do so without disadvantage to yourself and without any obligation to give reason(s). It is also worthy to note that participants can withdraw their data prior to the analysis period.

Participants are free to ask me any question. If you are happy to continue you will sign a consent form before participating in the research. Please, kindly retain this invitation letter for future reference.

If you have additional questions or concerns about how the study has been conducted, please contact the Director of Studies:

Dr. Slawomir Raszewski
s.raszewski@uel.ac.uk
University House, Stratford Campus
College of Professional Services
UH 1.05, Water Lane, London E15 4LZ
(Tel: +44 (0)20 82233896. Email: @uel.ac.uk).

Appendix 3:

Consent Form to Participate for Questionnaire Survey

<u>UNIVERSITY OF EAST LONDON</u>

Consent to Participate in a Programme Involving the Use of Human Participants.

Title: Petroleum Regulatory Governance: An Analysis of Nigeria's Petroleum Fiscal Regime Strategic Objectives

I have read the information leaflet relating to the above programme of research in which I have been asked to participate and have been given a copy to keep. The nature and purposes of the research have been explained to me, and I have had the opportunity to discuss the details and ask questions about this information. I understand what is being proposed and the procedures in which I will be involved have been explained to me.

I understand that my involvement in this study, and particular data from this research, will remain strictly confidential. Only the researchers involved in the study will have access to the data. It has been explained to me what will happen once the programme has been completed.

I hereby freely and fully consent to participate in the study which has been fully explained to me and for the information obtained to be used in relevant research publications.

Having given this consent I understand that I have the right to withdraw from the study at any time without disadvantage to myself and without being obliged to give any reason.

Participant's Name (BLOCK CAPITALS)
…………………………………………………………………….

Participant's Signature
…………………………………………………………………………..

Investigator's Name (BLOCK CAPITALS)
…………………………………………………………..

Investigator's Signature
……………………………………………………………………………

Date: ………………………….

Appendix 4:

REQUEST FOR GATEKEEPER'S PERMISSION

Dear Sir/Madam,

Request for your organization to Participate in a Research Study

I am writing to invite you to participate in the above research study, which I am currently undertaking for my PhD research in Business and Law at the University of East London. The detailed information regarding the project is contained in the information sheet attached. In a nutshell, I would like to request a consent to interview five of your interpreting staff. The purpose of the interview is to understand challenges and success of government policy and regulation with regards Nigeria's petroleum fiscal regime.

Each interview will last approximately 50 minutes. I would be willing to conduct the interview within your office space to minimize disruption to your service.

The participants are not obliged to take part in this study and should not feel coerced. The interviewees are free to withdraw at any time, should they choose to withdraw from the study. All data will be anonymized, including the names of the organization taking part. The project has been agreed by the University of East London Research Ethics Committee (UREC), who have had sight of the project structure.

I would be happy to share the findings of my PhD research if required upon completion

I hope the information provided answers any questions you may have, if not please do not hesitate to contact me.

Yours sincerely,

Aslam Kaitah

Appendix 5:

Interview Protocol

Designing and Contextualising the Interview Questions

In order to reach the deserved information outcome in this study that cannot otherwise be obtained, interview become the most suitable way to gather further information, by filling up the integral drawback of questionnaires. However, the research question of the study was drawn, formulated and further conceptualized from the problem statement, while the objective of the study was established on the concept of policy, governance and regulation. Thus, to explore the concern associated with policy, governance and regulation in the petroleum sector, the underlisted interview questions were designed. Consequently, four questions are formulated, of which two questions are exactly covered by the questionnaire, while two other questions are stand-alone developed based on the researcher's efforts to test regulatory theory proposed.

Conducting of the Interviews

Below is a brief description on how the interview is intended to be conducted

Before the interview commences:
- Brief conversation with goal of getting familiarised with one another and build trust
- Restating the purpose of the interview
- Seeking for consent to record and use the data
- Reassurance of data confidentiality

   During the interview
- Introduction and brief description of the area of research
- Introduction by the interviewee

Feedback: email and phone contact would be provided by the interviewer and interviewee. This would allow a feedback in case where participants may   feel the need to discuss thoughts or feelings brought about following their participation in the research.

(questions follows)

Questions:

Annex 1:
Semi-structured interviews

1. Ministry of petroleum and DPR were established by law to govern, manage and regulate the operation of petroleum in Nigeria, to what extent do you think effective governance has been met with regards to petroleum fiscal regime?

2. Some scholars view fiscal regime as a government policy that contributes to economic and social development by attracting investors. Others view the policy as causing corruption and distortion. In your opinion, how do can you classified the Nigeria's petroleum fiscal regime?

3. In your opinion, are there any challenges that affected the success of petroleum fiscal regime administration in Nigeria?

4. How likely do you think the Nigeria's petroleum industry legal framework can shape up the confidence of Multinational Investors?

Appendix 6:

Questionnaire

Demographic

Personal Information

1. Please indicate your gender

   (a) Male ( )   (b) Female (   )

2. Please indicate your years of service

   (a) 1-5 years ( )   (b) 6-10 years (   )   (c) 11-15 years (   )   (d) 16-above ( )

3. Please indicate your age

   (a) 20-29 ( )   (b) 30-39 ( )   (c) 40-50 (   )   (d) 50-above ( )

4. Please indicate your qualification(s). More than one qualification is allowed to be selected

   (a) Below first degree (   )   (b) First degree ( )   (c) Masters (   )
   (d) PhD ( )   (e)Other,   (   )

   Please specify…………………………………………….

5. Please indicate your organization

	Name of Organization	tick
A	Department of Petroleum Resources (DPR)	
B	Nigerian National Petroleum Corporation (NNPC)	
C	National Petroleum Investment Management Service (NAPIMS)	
D	Multinational Oil Companies (MOCs)	
E	Indigenous Oil Companies	
F	Nigerian Extractive Industry Transparency Initiative (NEITI)	
G	Oil and Gas Trade Unions	
H	Federal Inland Revenue Service (FIRS)	
I	National Assembly (NASS)	

Section A

Information on Nigeria's Fiscal Regime Policy objectives

This section is deals with the Nigeria's Fiscal Regime as a policy objective in attracting and sustaining oil investors within the country. To this end;

1. Kindly indicate your opinion from a scale of 1 to 5 to show the extent to which you agree with the following statements that deals with different aspects of the fiscal regime policy in the petroleum sector:

(1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree)

No	Statements	1	2	3	4	5
1.1	The adoption of contracts (PSCs) has increased government control within the petroleum sector.					
1.2	Increased acquisition of technological skills has been achieved through the bearing clauses contained within Production Sharing Contracts					
1.3	Learning and job opportunities for national entities has been achieved through Fiscal terms					
1.4	The fiscal system has created stronger economic links within the petroleum value chain					
1.5	An appropriate degree of project risk-sharing throughout life of a contract (JVs) has been established					

Should you wish to add any further comment on any agreement above, kindly write them in the space below:

………
……………………………

2. Kindly indicate the strength of your agreement that each of the following policy tools increases production as well as revenue take

(1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree)

No	Statements	1	2	3	4	5
2.1	Adoption of PFR has increase government share of revenue annually					
2.2	Adoption of PFR has increase petroleum production in the country					

232

2.3	Adoption of PFR through PSCs and JVs made distribution of oil revenue between the government and the MOCs equitable					
2.4	Petroleum production of 2millions brrls/day in relation to Nigeria's proved oil reserved of 37.1 billion barrels is sufficient enough					

Should you wish to add any further comment on any agreement above, kindly write them in the space below:

……
……………………………

Section B

Information in relation to effective utilization of fiscal allowances

3. Kindly indicate the strength of your agreement that each of the following features of fiscal regime increases the transnational competitiveness of the Nigerian fiscal system:

(1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree)

No	Statements	1	2	3	4	5
3.1	Sliding scale royalty rate applied base on water depth encourage deep-water-drilling					
3.2	Allowing losses to be carried forward indefinitely serves as tax relief to oil investors					
3.3	Investment tax credit for investment in research relating to oil field's development translates to increase in production					
3.4	An accelerated capital allowance that aims to enable the operators to recover their capital expenditure within a short period					
3.5	Accelerated capital allowance to encourage operators' fields development					
3.6	Tax holidays to encourage operation during periods of losses resulting low oil prices					
3.7	Guarantee by government to the oil operators that tax regime will remain stable during the contract periods					

Should you wish to add any further comment on any agreement above, kindly write them in the space below:

……
……………………………

4. Kindly indicate the strength of your agreement in the statement below:

(1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree)

no	Statements	1	2	3	4	5
4.1	PFR enables risk sharing between the government and oil investors					
4.2	PFR has an effective administrative framework to encourage compliance					

| 4.3 | PFR enables profit sharing between the government and the investors | | | | | |
| 4.4 | PFR enhances and guaranty investor's revenue rising potentials | | | | | |

Should you wish to add any further comment on any agreement above, kindly write them in the space below:

……
………………………………

Section C

Government regulations relating to reporting and disclosure

This section seeks your view on the government regulation relating to legislations and reporting disclosure in the petroleum industry.

5. Kindly tick the box that best reflects your opinion on each of the following statements;

(1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree)

no	Statements	1	2	3	4	5
5.1	DPR is conferred with the powers of oil regulation					
5.2	Existing provision of oil contractual arrangement are adhered to in petroleum industry					
5.3	Adequate knowledge and competence have been demonstrated by the fiscal regime policy makers in setting effective regulation for PFR					
5.4	political and other conflicting intrusion by the government regulatory bodies are separated from operational and commercial decisions					
5.5	DPR and other allied regulatory government agencies have the necessary technical skills to exert their mandate effectively					
5.6	Adequate Financial resources are in place to the regulatory agencies to carry out their duties effectively					
5.7	As a regulator, DPR ensures transparency towards reporting and disclosure with regards to petroleum production					
5.8	DPR ensures transparency towards reporting and disclosure in remittance of petroleum sales revenue to federation account					
5.9	DPR ensure transparency and disclosure with regards to cost of petroleum production					

Should you wish to add any further comment on any agreement above, kindly write them in the space below:

………
…………………………….

Definition of terms:

- Department of petroleum resources (DPR)
- Petroleum fiscal regime (PFR)
- Multinational oil company (MOC)

END OF QUESTIONNAIRE