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# GOVERNANCE MECHANISMS AND FIRM OUTCOMES IN NIGERIA'S PETROLEUM DOWNSTREAM SECTOR

**Chukwuemeka Gabriel Okonji**
Department of Business Administration, Faculty of Management Science, Dennis Osadebay University, Asaba, Nigeria.
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**Abstract:** This study focuses on the effects of regulation process on firm performance of the downstream sector in the Nigerian petroleum industry. The specific objectives are to examine the effects of legal framework on firm performance, to examine the effects of monitoring process on firm performance, to ascertain the effects of price fixing process on firm performance and to determine the effects of evaluation process on firm performance. The descriptive survey research design method was adopted. The population of this study consists of major petroleum marketers and tank farm owners in the South-South region of Nigeria; Matrix Energy, Rain Oil, Nepal Oil and Gas, Mainland Oil and Gas, Dozzy Oil and Gas, Masters Energy, Delmar Petroleum and their employees. The sample size of three hundred and sixty-two (362) was obtained using Krejcie and Morgan table. A stratified sampling technique was used to know the different subgroups or strata of employees in the selected firms of the study. The study was driven by primary and secondary data. The data were analyzed using correlation and regression analysis as analytical tools. Findings revealed that legal framework has significant effect on firm performance with ($\beta$= .136, P =.001 <.05), monitoring process has significant effect on firm performance with ($\beta$= .259, P =.000 <.05), price fixing process has significant effect on firm performance with ($\beta$= .075, P =.002 <.05), evaluation process has significant effect on firm performance with ($\beta$= .130, P =.001 <.05). The study concluded that the proxies of regulation (legal framework, monitoring, price fixing and evaluation) have significant effects on the performance of the downstream sector in the Nigerian petroleum industry. The study concludes that if the sector is fully deregulated, it will enable market forces of demand and supply to determine petroleum products prices; rather than the Federal Government fixing them. The study recommends that refineries should be made to work at full capacities to meet up with our daily fuel consumption capacity in the country through turn around maintenance. To end subsidy regime, it requires strong political will, sensitization of all stakeholder and Nigerians on the benefits of total deregulation in the sector. The study contributes to knowledge by demonstrating that the proxies of regulation process: legal framework, monitoring process, price fixing process and evaluation can predict firm performance and also it established a framework of regulation process dynamics and how they are related to firm performance.
**Keywords:** Regulation Process, Legal Framework, Monitoring Process, Firm Performance.

## INTRODUCTION

An interesting paradox exists in the Nigerian energy sector; Nigeria ranks amongst best exporters of crude oil as well as best importers of refined petroleum products becoming a major importer of its export. With respect to crude oil production and exports, Nigeria occupies the ninth position in the world below Iran and second to none in Africa above Angola, Libya and Algeria (OPEC, 2018). Conversely, it imports about 75 million liters of refined petroleum daily, according to the Department of Petroleum Resources (DPR). There seems to be an unwritten conspiracy privy only to limited personalities drawn from the ruling and running of the state owned Nigerian National Petroleum Company (NNPC) which over the past years grounded Nigerian refineries and acting as a cog in the wheel of development of the petroleum sector. The interest and passion that usually characterize petroleum discourse in Nigeria is due to inexplicable deprivations and sufferings of Nigerians amidst plenty and abundance. Nigeria has abundant petroleum reserves and is a significant oil exporter in the Organization of Petroleum Exporting Countries (OPEC). Since oil was discovered in substantial quantities in Nigeria, it has yielded billions of dollars in revenue but this has not translated into any major or meaningful economic development. In order to address the issues that plague the petroleum sector in many nations, structural reforms have become necessary, resulting in the use of deregulation. Markets are deregulated, and the role of government in the sector is redefined (i.e. state interventions such as special treatment of state owned oil companies, price controls and monopolies are being broken up). As conceived in 2003, deregulation of the downstream sector of the Nigerian petroleum industry entailed the removal of government control over petroleum product prices, as well as restrictions on the establishment and operation of refineries, jetties, and depots, while allowing private sector players to participate in the importation and exportation of petroleum products and leveraging market forces to prevail. The downstream sector's operations include the conversion of crude oil into refined and petrochemical products, as well as gas treatment, transportation, and marketing of petroleum products. In order to oversee the deregulation of the downstream sector, the government established the Petroleum Products Pricing and Regulatory Agency (PPPRA) in 2003, led by President Olusegun Obasanjo, to implement the recommendations of the Special Committee on the Review of Petroleum Products Supply and Distribution (SCRPPSD), which was established in 2001 to look into the problems of the Nigerian petroleum downstream sector. As recent events in the petroleum industry unfold, deregulation becomes inevitable, as the downstream sector has been characterized by a number of challenges, including limited investment opportunities, large-scale smuggling of petroleum products, pipeline vandalism, low capacity utilization and refining activities in the nation's refineries, scarcity of petroleum products, mismanagement of petroleum revenue, and high level of corruption (Ehinomen and Adeleke; 2012). Previous administrations were unable to complete downstream deregulation, they simply tinkered with the pricing of petroleum products at the pump, which is one component of deregulation. Deregulation strategy, according to President Goodluck Ebele Jonathan, is the most effective way to combat corruption in the downstream sector and improve the Nigerian economy. Deregulation supporters argue that increased competition will lead to increased efficiency, reduced pricing and manufacturing costs, and more supply. Opponents of deregulation, on the other hand, argue that deregulation has negative consequences for society as a whole, such as decreased safety standards and salaries. Prior to deregulation, NNPC had monopolized the supply of petroleum products to the domestic market through its subsidiary, the PPMC, as well as being the sole operator of the government-built statewide integrated system of petroleum products pipelines, jetties, and product storage depots. For rapid and sustained economic growth and development, effective leadership and governance are essential. A country afflicted by inadequate leadership and governance, such as Nigeria, is certain to suffer widespread poverty and other socioeconomic ills. Bad leadership has afflicted Nigeria's downstream sector, with persons whose responsibilities and actions have hampered the sector's progress. One of the main reasons Nigerians oppose total deregulation is that individuals in positions of power, who are supposed to properly manage the country's natural resources for socioeconomic progress and development, consistently sabotage the sector. Leadership responsibilities are critical in every company, whether private or public, since how well or poorly they are carried out has a direct impact on the business's success. The notion of leadership is a difficult one to grasp. As a result, leadership positions are critical to the organization's survival, growth, and achievement of objectives. Decision-making, communication, motivation, selection and development of individuals to assist in the realization of objectives or policies are only some of the responsibilities of a leader. As a result of the foregoing, the research aims to investigate the impact of regulation on the downstream sector of Nigeria petroleum industry's company performance. Nigeria, a significant producer and exporter of crude oil, as well as Africa's purported behemoth, has been plagued by weak leadership and administration for many years. This is a concern, especially when considered in the context of the national governance structure and the petroleum sector. Low level of competition, smuggling of petroleum products, monopolistic tendency, sharp practices, non-stop petroleum subsidy, poor maintenance of infrastructural facilities, distortions in product supply and distribution, and inappropriate pricing are some of the characteristics that have led to deregulation of the downstream sector. In order to resolve the aforementioned inconsistencies in the sector, the government decided to implement a deregulation programmer. But, since the fourth republic's founding, no administration has been able to tackle the industry's problems through quasi-deregulation. The one-week countrywide strike that took place from January 9$^{th}$ to 16$^{th}$, 2012 highlighted important questions about the sincerity of intent, regulatory measures, and the petroleum business. The issues include an excessively high cost of governance, particularly among the executive and legislative branches of government; a high level of fraud and corruption in the petroleum sector; mismanagement of the country's oil wealth; a lack of transparency and accountability in governance and leadership; and mismanagement of fuel subsidies by all parties involved. Clearly, the aim of petroleum subsidies has been thwarted due to leadership issues shown in petroleum resource management and inconsistencies in policy. Since the beginning of the federal government's quasi-deregulation, numerous regimes have been proposed and implemented, including the issuing of licenses to the private sector for building of refineries and storage depots, which had previously been a federal government-exclusive domain. On the other hand, various regimes have consistently fixed petroleum products prices, such as PMS, which has hampered the private sector's success because the federal government's regulation policy would not allow them to determine and fix their own prices. This too, is a significant challenge to the petroleum industry's continued development and improvement. The general objective of the study is to examine the effects of regulation management process on firm performance of the downstream sector in the Nigerian petroleum industry. The specific objectives are to:

i. Examine the effects of legal framework on firm performance of the downstream sector in the Nigerian petroleum industry.

ii. examine the effects of monitoring process on firm performance of the downstream Sector in the Nigerian petroleum industry.

## REVIEW OF RELATED LITERATURE

### Regulation Process

Individuals, corporations, and other organizations must follow particular standards or directions when it comes to what they may and cannot do. Regulation, like law in general, consists of rules with consequences, but it is law designed expressly to prevent wrongdoing by corporations and other groups, and it is implemented largely by specialized government agencies. They are the primary vehicle with which agencies implement specific laws and general agency objectives (Coglianese & Kagan, 2007). Taken together, regulation process is conceptualized as the procedures and set of framework an entity uses for reforming and enacting regulations in an effective and logical way (McMahon, 2015). The authority to issue regulation usually flow from the constitution. The Constitution grants the legislative arm of government the power to pass laws. The executive and judicial arms are tasked with administration and adjudication, respectively. Over time, the line between executive and legislative authorities is blurred, and executive arm agencies are regularly given authority by the national parliament to write, administer, and enforce rules (or administrative laws). Although governments have regulated economic activities since ancient times, the regulatory state grew enormously in most economically advanced democracies in the twentieth century, spurred by rapid technological and economic change and political demands for protection against monopolistic power and the risks of industrial activity. Over the past 50 years, regulatory agencies and the rules they promulgate have become prominent components of contemporary legal systems, often eclipsing legislative and judicial rules in their economic and social effects. Regulatory inspectors now make up a large white-collar police force in most countries, enforcing rules on workplace safety, financial security, air and water pollution, fire and accident prevention, earthquake protection, health and elders care delivery, food and drug quality, and proper maintenance of aeroplanes, elevators, school buses, and railroad tracks, among other regulations (Coglianese & Kagan, 2007). The Nigerian economy is highly controlled in several areas. The oil and gas industry is one of these. While certain regulatory requirements are one-time only, others must be renewed after a set length of time in order to continue operating in that industry. Under the current Petroleum Act of 1969, the Minister of Petroleum Resources has broad jurisdiction to issue rules, as well as award and revoke oil licences and leases (Resolution Law Firm, 2021). The Petroleum

(Drilling and Production) Regulations, 1969 ("the 1969 Regulations") were revised by President Muhammadu Buhari in his position as Minister of Petroleum Resources. The 1969 Regulations provide, among others, guidance on the implementation of provisions of the Petroleum Act regarding applications for oil exploration and prospecting licenses and guidelines on oil drilling and extraction operations. The Petroleum (Drilling and Production) (Amendment) Regulations, 2019 (the Amended Regulations), which has a commencement date of October 9, 2019 as stated in the official gazette, amended the 1969 Regulations in order to "review certain fees payable under the Regulations and to introduce new fees for certain applications and approvals under the Petroleum Act 13." The Amended Regulations revised several fees in the 1969 Regulations that were no longer reflective of current economic realities by increasing some by as much as three hundred percent (300 per cent). For instance, the fees payable for the application for a permit to carry out geophysical or geotechnical data survey in any concession area and those for the approval to commence the drilling of a borehole or well were increased from N5,000 per the 1969 Regulations to N1,500,000 per the Amended Regulations. Regulation process is the process of creating regulations to guide actors of a particular industry. It can also be referred to generally as "rule making" process (Ekhator, 2016). The regulation process in Nigeria is not that simple because at the national level, Nigeria practices bicameral legislature while in state and local government, unicameral legislature is adopted. Nigeria operates a federal legislative system, therefore a law can be made at the National, State, and even the Local government levels. But we shall be focusing on the national level that is of relevance to this study. As earlier stated, Nigeria operates a bicameral legislature at the national level. This means that the national legislative activities is shared between two separate assemblies- the senate and the house of representative. Both chambers make up what is called the national assembly, and it is the primary law making body in Nigeria. The President is currently the de-facto Petroleum Minister, acting under advice from the Minister for State, Petroleum. The National Assembly as the Legislative arm of government is empowered to pass legislation on Petroleum matters – which is on the Exclusive Legislative List. Federal Ministry of Petroleum is responsible for formulating and implementing Government policy. Department of Petroleum Resources is the Regulatory arm of the oil and gas industry. Nigeria operates a Federal Legislative system, and therefore a law can be made at the National, State, and even at the Local Government level. This article focuses only on laws that are made at the National level. Nigeria operates what is known as a 'Bicameral Legislature. This means that the National legislative responsibility is shared between the two separate assemblies - the Senate and the House of Representatives. Both chambers make up what is known as the National Assembly, and it is the primary law making body in Nigeria.

**Firm Performance**

For emerging countries, successful businesses are a vital component. Many economists compare them to an engine in terms of determining the economic, social, and political growth of a country. Every company should function under performance criteria to thrive in a competitive business climate. Firm performance is becoming a common dependent variable in strategic management studies. Despite the fact that it is a widely held idea in academia, there is little agreement on how to define and quantify it.

Performance is conceptualized for the key stakeholders as the degree of achievement of objectives or the possibility for success considering the main attributes of an organisation (Krause, 2005). Performance is therefore principally specified through a multidimensional set of criteria. Bates and Holton (1995) defined the concept of performance as ″a multidimensional abstract concept whose measurement depends on a variety of factors″. Performance may refer to both enterprise ″organizational performance ″and and activity / a department / a manager / a performer. The authors say it is important to determine whether the measurement objective is to assess the effects of performance or the performing behaviour. The drawback of this definition is that it does not contain a rating that would have a downwards applicability. The general definition given by Bates and Holton to performance underlines its ambiguous nature, whose measurement depends on a variety of factors.

Annick Bourguignon (1997) fails to define the concept of performance in one way and therefore identifies three main senses of the word performance:

1 Performance is success. Performance does not exist in itself. It varies by representations of the ″success″ of businesses or actors.

2 Performance is the result of action. This meaning contains only value. In the context of a process or activity, performance measurement is defined as an evaluation of accomplished outcomes.

3 Action is what constitutes performance. In this sense, performance is a process rather than a result that occurs at a specific point in time. According to Didier (2002), performance is the consequence of a comparison between the outcome and the aim, rather than a simple discovery of an outcome. In contrast to other authors, he believes that this term is actually a comparison between the outcome and the aim. The author's description is a bit hazy, as both outcomes and aims vary a lot from one field to the next.

Future-oriented performance is defined as that which is meant to represent the unique characteristics of each organization/individual and is based on a causal model that links components and products (Michel Lebas; 1995). He defines a successful firm as one that will achieve the management coalition's goals, rather than one that has already accomplished them. As a result, performance is influenced by both capabilities and the future. Michel Lebas, unlike previous authors, recognized the distinction between "a performances," "performance," and "being perform ant." A performance is often subject to a measured outcome that is higher than that expected or resulting from past results. As a result, the term "performance" always has a positive meaning. Performance refers to prior results and can be both favorable and poor. Alam (2013) posits that organizational performance is a multidimensional construct that consists of four elements. Customer-focused performance, such as customer satisfaction and product or service performance; financial and market performance, such as revenue, profits, market position, cash-to-cash cycle time, and earnings per share; human resource performance, such as employee, organizational effectiveness, such as time to market, level of innovation, and production and supply chain flexibility.

**Legal Framework Process and Firm Performance of the Downstream Sector**

The major challenges with listed laws are weak enforcement by the regulatory authorities in the sector. Lack of clear guidelines on the exercise of the Minister‟s discretionary powers such as consent on oil transactions or license transfers and absence of time frame for the exercise of such discretionary powers have given room for abuse of power. Also, there are various Environmental Guidelines and Standards for the Petroleum Industry issued by the Department of Petroleum Resources with the force of law for the regulation of environmental quality control and pollution abatement in the sector. There are insufficient incentives for downstream petroleum businesses to comply with legislation. Compliance and efficiency in the sector have been harmed as a result of this. In the case of Idoniboye-Obu v. NNPC (2002) FWLR (Part 84) 11, the court held that regulatory agencies must assure the supply of petroleum products and maintain a credible databank to assist policymakers in the passage and implementation of different petroleum policies in Nigeria. The Petroleum Product Pricing Regulatory Agency (PPPRA) is to regulate price and distribution of petroleum products through the Code of Conduct issued to regulate petroleum operators in the sector and to set the pricing template for marketing of petroleum products such as petrol and kerosene. The Act should be amended to expunge areas of conflict on the roles of the Nigerian National Petroleum Corporation (NNPC) and PPPRA in the areas of pricing, distribution and marketing of petroleum products which has hindered efficiency of PPPRA in the sector. There is the need to eliminate bureaucracy among the various institutions regulating the sector to combat corruption and inefficiency. There is also the need for strong political will to entrench transparency and accountability in the sector through stringent enforcement of the downstream petroleum laws. The Nigerian National Petroleum Corporation (NNPC) was created in 1977 as national oil company by the Nigerian National Petroleum Corporation (NNPC) Act, Cap 320, Laws of Federation of Nigeria to participate on behalf of the Federal Government in all stages of upstream and downstream sectors to enhance the petroleum industry efficiency and to undertake other activities that are expedient in giving full effect to the provisions of the Act. Noncompliance with the law's requirements owing to lax enforcement by the Corporation, which is both a participant and a regulator in the field, allows for conflicts of interest and legal violations. Due to the lack of private logistic facilities or infrastructure in the sector, the Corporation's monopolies in terms of petroleum infrastructure and logistic facilities such as depots and jetties have hampered the activities and participation of other petroleum marketers in petroleum product importation. There is a need to de-monopolize the downstream petroleum industry through comprehensive deregulation in order to enable private or independent marketers to import petroleum products, which will benefit Nigeria's economy. Similarly, the Petroleum Products Pricing Regulatory Agency (PPPRA) Act of 2003 established the Petroleum Products Pricing Regulatory Agency to determine petroleum pricing policy and to regulate supply and distribution by setting benchmark prices through modulation mechanisms in order to promote oil sector stability. The agency's efficiency has been hampered by the inefficiency of the product transportation system; aging pipelines, activities of pipeline vandals, poor road networks, poor remuneration of petroleum truck drivers and other sharp practices arising from the corruption in the sector. The Petroleum Equalization Fund Management Board, which is in charge of unifying the pump prices of petroleum products across the country is ineffective. The organization is in charge of overseeing the repayment of petroleum marketing businesses for losses suffered in Nigeria as a result of maintaining uniform petroleum products pricing. Its activities are rife with corruption, resulting in a waste of financial resources. Government's involvement in downstream petroleum activities render law enforcement weak and ineffective. Due to widespread corruption in the field, there appear to be discrepancies between this legislation and what really occurs in the sector. The Petroleum Equalization Fund should be abolished as a government entity, and the rules governing the industry should be examined for effectiveness. Through Board approvals, the Nigerian Content Monitoring Board (NCMB) regulates and manages the growth of Nigerian content in the oil industry. The court concluded in Bamidele Aturu v. Ministry of Petroleum Resources in Unreported Suit No: FHC/ABJ/CS/591/2009 that the term "downstream" is not recognized in Nigerian law. As a result, it is critical that this phrase be given legal weight in Nigeria's legal structure.

Olusola, Oluwatosin, and Olujobi (2020) conclude that the legal framework for the regulation of Nigeria's downstream petroleum sector is insufficient, resulting in statutory conflicts between the Petroleum Minister, the Nigerian National Petroleum Corporation (NNPC), the Midstream and Downstream Petroleum Regulatory Authority (NMDPRA), the Petroleum Products Marketing Company (PPMC), and the Petroleum Products Pricing and Regulatory Agency (PPPRA). This has hampered effective petroleum pricing since it prevents market forces from determining the price of petroleum products. The functions of government agencies in the downstream petroleum industry should be clearly specified in enabling legislation. The Petroleum Products Pricing and Regulatory Agency (PPPRA) announced the outright removal of fuel subsidies on January 1st, 2012, but it was revised after much protests by Nigerian Labour Unions, without considering the benefits of total deregulation and removal of fuel subsidies, which has allowed for corruption in Nigeria's downstream petroleum sector. If effectively implemented by regulatory bodies, deregulation of the downstream petroleum sector will convert the sector into a competitive, market-driven enterprise. According to the report, if the industry is fully deregulated, market forces will set petroleum products pricing rather than the Federal Government.

**Monitoring Process and Firm Performance of the Downstream Sector**

The Federal Ministry of Petroleum is responsible for formulating and implementing Government policy. The Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA) is the Regulatory arm of the oil and gas industry. NMDPRA is vexed with the power to monitor activities in the petroleum downstream sector. Lack of proper control in the petroleum downstream sector has caused a lot of harm to the industry (Ogunjubi, 2011).

The Midstream and Downstream Petroleum Regulatory Authority (NMDPRA) is responsible for the day-to-day monitoring of the petroleum industry and for supervising all petroleum industry operations such as; monitors the operations of oil companies, sets and enforces environmental standards, collects royalty and rents, supervises and ensures compliance with oil industry regulations, issues licenses and permits and ensures the protection of all oil and gas investments. Governments take involvement in oil and gas operations through the Nigerian National Petroleum Corporation, which uses a variety of contractual structures to produce oil and gas resources (such as concession agreements, traditional joint venture agreements, service contracts, production sharing contracts, and sole-risk contracts). The Midstream and Downstream Petroleum Regulatory Authority (NMDPRA) recently launched the Downstream Remote Monitoring System (DRMS) to improve openness and accountability in the country's petroleum transportation. The initiative, according to NMDPRA"s Chief Executive Officer Sarki Auwalu, is part of the company's endeavor to improve the downstream oil and gas industry. The e-station is an inventory and regulatory equipment that monitors product levels in retail stores and depots. The technology also keeps track of goods flow from warehouses to retail locations. The Nigerian oil and gas sector is undergoing a digital revolution that will improve transparency, accountability, and domestic energy security, as well as ministerial goals for product sufficiency and availability. DRMS was a real-time inventory management solution for petroleum products supply and distribution. Since the inception of this present democracy, the downstream sector has witnessed a lot of investors with large storage facilities (Tank Farms), providing services, employment and development to the Nigerian economy. Most of these storage facility owners have haulages and trucks for transportation of petroleum products to all parts of Nigeria. They have succeeded in eliminating barriers associated with transportation of petroleum products. Odigure, Abdulkareem and Adeniyi in their study finds out that the slow development witnessed in the petroleum downstream sector was due to government regulation which does not give room for the forces of demand and supply to determine the prices of petroleum products. They also argue that lack of proper monitoring has caused a lot of price differences in some parts of the country.

## THEORETICAL FRAMEWORK

### Sustainable Development Theory

Sustainable Development Theory stems from the 1972 Stockholm Conference on Human Environment, which argues that countries should utilize their downstream petroleum resources in a sustainable manner for development that meets current demands while not jeopardizing future generations' capacity and needs. The theory aids the study in comprehending the need for efficient utilization of the downstream petroleum sector, the course of financing the thrust of technological innovations, and the institutional legal framework in accordance with international best practices for humanities and nature sustainability. The approach highlights the necessity to deregulate downstream petroleum resources, among other things, for the sake of current and future generations' well-being while avoiding ecological damage. As a result, thorough deregulation is required to eliminate subsidy payments, ensure adequate petroleum product supply in Nigeria, and improve energy sector efficiency through regulatory changes that foster healthy competition among petroleum marketers for the common welfare of all Nigerians. This viewpoint corresponds to the study's main goal.

### Empirical Review

Abdurrahman, and Shuaibu, (2021), the long-run and short-run dynamics of petroleum downstream deregulation: An ARDL Approach. This paper investigates the application of ARDL Technique to determine "The long-run and short-run dynamics of petroleum downstream deregulation Spanning the period 1991-2014: Secondary data were used and econometrics models were analyzed through the application of Augmented Dickey Fuller in testing the stationary of the time series. Based on the findings of the study, the results of the unit root indicate that the variables have mixed degree of integration I(0), I(1);The bound test integration procedure revealed the presence of long-run relationship among the variables. The study revealed that importation of refined premium motor spirit (PMS) grossly affects the GDP of the economy negatively both in short and long run; the study therefore recommends total deregulation of the downstream sector must be gradually and consistently pursued to deliver maximum result to all stakeholders and the nation. While that is being pursued, adequate infrastructure, especially refineries should be put in place. In their paper, Olujobi, Olujobi, and Ufua (2020) examined the legislative foundation for deregulation of the downstream segment of the Nigerian petroleum industry. The study aims to investigate the need for total deregulation of the Nigerian petroleum industry's downstream sector in order to address inefficiencies and promote adequate supply of petroleum products through regulatory reforms and by drawing on the experiences of other relatively advanced jurisdictions in order to strengthen Nigeria's downstream petroleum sector laws. The study takes a conceptual approach, drawing on existing material and using the doctrinal legal research technique. The research also consults main and secondary legal sources, such as statutes and judicial rulings. The major finding is that the Federal Government's overpowering presence in the industry, as well as incorrect petroleum product pricing have rendered the sector unappealing to private investors owing to heavy regulation. The study presented a plan to prevent the inexorable rise in petroleum prices. The study concludes with recommendations based on the findings, including the need for a sophisticated mix of regulations and no regulatory incentives for investments in the sector, as well as the passage of the Petroleum Industry Governance Bill as soon as possible to encourage private investors and eliminate the subsidy regime as a source of corruption in the sector. Oil and gas regulation in Nigeria: the Petroleum Industrial Bill 2012 was investigated by Wolemi, Damilola, Chinedu, and Olaniwun (2014). The Petroleum Industrial Bill 2012 (PIB), which was recently passed by the National Assembly, was investigated in this study. It looks at the key sections of the PIB and compares them to important provisions of existing petroleum sector law, as well as the PIB's aims, institutions, and provisions dealing to the upstream and downstream petroleum industries. It examines proposed rules in the areas of gas policy, health, safety, and the environment, taxes and accounting, and indigenous petroleum firms. It goes on to enumerate the repeal and savings measures before closing with the impact of the PIB's delayed implementation on Nigeria's future economic prospects. Adeoye and Wissink (2017) did a study titled Public Sector Performance in Nigeria's Downstream Oil Sector: A Critical Reflection. Despite repeated attempts to increase Nigeria's institutional ability to efficiently manage the downstream oil industry, the country's public institutions remain ineffective, inefficient, wasteful, incapacitated, incompetent, unprofessional, and uninspired to drive downstream oil sector change. The administration of the downstream oil sector has been overseen by public institutions unsuccessfully in the past. The function of public institutions in the distribution and marketing

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divisions of the oil sector is examined in this article, which uses innovative public management theory and unstructured interviews. It concludes that poor public sector performance is responsible for the crisis in the oil industry that led to subsidy cuts and efforts to deregulate the downstream oil sector.

**METHODOLOGY**

The research design method that was adopted for this study was survey research design method. The population of the study is limited to the following major petroleum marketers and tank farm owners in the South-South region of Nigeria; Matrix Energy, Rain Oil, Nepal Oil and Gas, Mainland Oil and Gas, Dozzy Oil and Gas, Masters Energy, Delmar Petroleum and their employees. The population was drawn from the above listed firms. From informal interview on the company's website sources and with key personnel who are privy to the employees‟ registers in their respective companies, the population figure is estimated at six thousand eight hundred (6,800). The Krejcie and Morgan in Olannye (2017) provided a table for determining sample size from a given population; where N is the population and S is the sample size. From the Krejcie and Morgan table, every population figure has a corresponding sample size figure. For population (N) of 6,800 the corresponding sample size (S) is 362. Therefore, the sample size for this study based on the population is 362 employees. Specifically, stratified sampling technique was adopted for the study.

Table 1

Reliability Coefficients of Study Constructs

| Dimension of study constructs | Number of items | Cronbach‟s Alpha coefficient |
|---|---|---|
| Legal Framework Process | 4 | 0.751 |
| Monitoring Process | 4 | 0.811 |
| Firm Performance | 4 | 0.842 |

Source: Output of Pilot Survey Data, 2025.

**RESULTS AND DISCUSSION**

Table 2

Respondents Profile

| S/N | QUESTION | RESPONSE | RESPONDENTS | PERCENTAGE (%) |
|---|---|---|---|---|
| 1 | Gender | Male | 169 | 59.3 |
| | | Female | 116 | 40.7 |
| | | Total | 285 | 100 |
| 2 | Age | Below 30 | 111 | 39.0 |
| | | 31 – 40 | 87 | 30.5 |
| | | 40 and above | 87 | 30.5 |
| | | Total | 285 | 100 |
| 3 | Educational Qualification | OND/NCE | 97 | 34 |
| | | HND/B.Sc | 113 | 40 |

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| | | | | |
|---|---|---|---|---|
| | | Masters | 59 | 21 |
| | | Other | 16 | 5 |
| | | Total | 285 | 100 |
| 4 | Marital Status | Married | 182 | 63.9 |
| | | Single | 103 | 36.1 |
| | | Total | 285 | 100 |

Source: Analysis of Field Survey, 2025.

From table 2 above, 169 (59.3%) were males and 116 (40.7%) were females. This indicates that females were more in number than the male respondents. From table 2 above, the age distribution of respondents which was spread across various age brackets show that the highest concentration of respondents fell within the age bracket of Below 30 years with 111 (39.0%) of respondents. The categories of respondents between 31– 40 years accounts for 87 (30.5%). 87 (30.5%) of the respondents fell under 40 year and above. It shows from the above table showed that greater part of the respondents OND/NCE holders account for 97(34%), those respondents that possess HND/B.Sc were 113 (40%). 59(21%) of the respondents indicated that they were Masters Holders and those other educations accounted for 16(5%) of the respondent. It also indicates the marital status of the respondents. It was observed that 182 (63.9%) of the respondents were married while 103 (36.1%) were single.

Table 3

Correlation Matrix Studied Variables

| | | Firm performance | Legal framework process | Monitoring process |
|---|---|---|---|---|
| Firm performance | Pearson correlation | 1 | | |
| | Sig.(2-ailed) | | | |
| | No. | 285 | | |
| Legal framework process | Pearson correlation | .507** | 1 | |
| | Sig.(2-ailed) | .000 | | |
| | No. | 285 | 285 | |
| Monitoring process | Pearson correlation | .222** | .450** | 1 |
| | Sig.(2-ailed) | .000 | .000 | |
| | No | 285 | 285 | 285 |

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

*Correlation is Significant at the 0.05 level (2-tailed)

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From the above table 3, it indicated positive correlation coefficients of the indicators of firm performance, an indication that they are good measures of regulation process. The findings indicated that legal framework process correlated positively with firm performance (r= .507**, 0.01). The second variable being monitoring process correlated positively with firm performance (r= .222**, 0.01) and lastly with legal framework process (r= .450**, 0.01). Table 4

Multiple Regression Analysis of Coefficients [a]

| Model Coefficients | Unstandardized Coefficients | Standardized | | t | Sig |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| 1 (constant) legal monitoring | 6.678 | 1.875 | | 3.562 | .000 |
| framework | .143 | .066 | .136 | 2.155 | .001 |
| process | .266 | .068 | .259 | 3.892 | .000 |

a. Dependent Variable: firm performance

Table 5 Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .978[a] | .956 | .914 | 1.8948 |

a Predictor: (constant) legal framework, monitoring process.

b Dependent variable: firm performance

The multiple regression analysis was adopted to test the relationship of legal framework, monitoring process, price fixing process, evaluation process and firm performance. The results were shown in table 5: From the data shown, the correlation R=.978 means that the two (2) factors have high relationship with firm performance. In this regression, the independent variables at 91.4% (R square= 0.914).

Table 6

ANOVA

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 176.330 | 4 | 38.423 | 10.702 | .000[b] |
| l Residual | 925.733 | 280 | 3.590 | | |
| Total | 1102.063 | 284 | | | |

. a. Dependent variable: firm performance

. b. Predictors (constant), legal framework, monitoring process Source:

SPSS Version 23, 2023.

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The F-ratio in the ANOVA Table tested whether the overall regression model is a good fit for the data. The table showed that the independent variables (legal framework, monitoring process) significantly predict the dependent variable (firm performance), since $F(4, 280) = 10.702$, $p<.005$, the regression model is good for the data.

**Test of Research Hypotheses**

**Hypothesis One**

$HO_1$ Legal framework process has no significant effect on firm performance of the downstream sector in the Nigerian petroleum industry. From the coefficient table 4 legal framework process exhibited positively with firm performance given the Beta value ($\beta$=136, $p<.001$). The regression analysis for legal framework process and firm performance on the test of hypothesis one, table 4.8 indicated that the exact level of significant calculated (.001) is less than the probability of committing a type one error (.05). Giving the result, the null hypothesis is rejected to accept the alternate hypothesis thereby implying that there is significant positive relationship between legal framework process and firm performance.

**Hypothesis Two**

$HO_2$ There is no significant effect of monitoring process on firm performance of the downstream sector in the Nigerian petroleum industry. The coefficient table 4 showed the extent to which monitoring process positively affects firm performance. Given the Beta value ($\beta$=259, $p<.000$), the regression analysis for monitoring process and firm performance on the test of hypothesis one, table 4 indicated that the exact level of significant calculated (.000) is less than the probability of committing a type one error (.05). Giving the result, the null hypothesis was rejected to accept the alternate hypothesis thereby implying that, there is significant positive relationship between monitoring process and firm performance.

**DISCUSSION OF RESULTS**

**Legal Framework Process and Firm Performance**

From the results of data analyzed in table 4 it was reported that the overall positive correlation coefficient values among variables of legal framework process is indicative that they are appropriate indicators and dimensions of legal framework process. It showed the extent to which legal framework process accounted for change in firm performance ($\beta$= .136, $P< 0.01$). This shows that there is significant positive relationship between legal framework process and firm performance. Table 5 showed that the Adjusted $R^2$ reported 545 (54.5%) of the change in firm performance is explained by legal framework process. This result agreed with the finding of Petroleum Products Pricing Regulatory Agency (PPPRA) Act, 2003 which established the Petroleum Products Pricing Regulatory Agency to determine the pricing policy of petroleum products and to regulate supply and distribution by setting benchmark prices through modulation mechanisms to promote stability in the oil sector. The inefficiency in product transportation system has impeded the efficiency of the agency through ageing petroleum pipelines, pipelines vandalisation activities, poor road networks and poor remuneration of most petroleum truck drivers which have occasioned sharp practices, inefficiency and corruption in the sector.

**Monitoring Process and Firm Performance**

The result obtained from table 4 portrayed an overall positive correlation coefficient values among variables that measure monitoring process, and this point out the fact that they were all appropriate measures of monitoring process. It showed that the ($\beta$= .259, P< 0.00) indicates that monitoring process has significant positive relationship and accounted for variance in firm performance. Also table 5 showed that the Adjusted $R^2$ reported 545 (54.5%) of the change in firm performance is explained by monitoring process. This supports the findings of Odigure, Abdulkareem and Adeniyi (2020) as their study finds out that the slow development witnessed in the petroleum downstream sector was due to government regulation which does not give room for the forces of demand and supply to determine the prices of petroleum product. They also argue that lack of proper monitoring has caused a lot price difference in some part of the country.

## CONCLUSION

Legal framework process has significant effect on firm performance of the downstream sector in the Nigerian petroleum industry; the reform will turn NNPC to full commercial, viable legal entity that is profit driven with opportunities to raise cash from the capital markets through the provision of the Petroleum Industry Governance Act.

Monitoring process has effect on firm performance of the downstream sector in the Nigerian petroleum industry, lack of working refineries and heavy pressure on infrastructure from resultant importation has been a key cause of supply shortages.

**Recommendations**

The government should also increase the quantity of crude for domestic refining with a view to targeting some refineries as exporting refineries. This way, the country could attain to meet refined products needs of neighbouring Economic Community of West Africa States officially, this is important in relation to the issue of smuggling of petroleum products across the nation`s borders. The refineries should be made to work at full capacities to meet up with our daily fuel consumption capacity in the country through structured Turn around Maintenance (TAM). To end subsidy regime, it requires strong political will, sensitization of all stakeholders and Nigerians on the benefits of total deregulation in the sector. More petroleum marketing companies should be encouraged through tax incentives to participate in petroleum products importation and distribution.

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