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# INVESTIGATING EMPLOYMENT IN THE NIGERIAN OFFSHORE OIL AND GAS INDUSTRY: IS GENDER A PREREQUISITE?

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**UNIVERSITY OF  
PLYMOUTH**  
Doctoral College

**INVESTIGATING EMPLOYMENT IN THE NIGERIAN  
OFFSHORE OIL AND GAS INDUSTRY: IS GENDER A  
PREREQUISITE?**

**BY**

**VICTOR OLUFUNMILADE APIAFI**

A thesis submitted to the University of Plymouth in partial  
fulfilment for the degree of

**DOCTOR OF BUSINESS ADMINISTRATION**

Plymouth Business School

**January 2022**

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## **Dedication**

I would like to dedicate this research to God for his steadfast love and for granting me strength throughout the difficult times during my research. Also, in memory of my beloved grandmother, princess Jubiline Ade Apiafi who guided me throughout my childhood and moulded me into the person I have become today.

To my dear parents, Victor and Alero Apiafi, and my dearest aunty professor Grace Apiafi for their inspiration, guidance, love, support, and encouragement in pursuing my dreams.

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## **Author's Declaration**

At no time during the registration for the degree of Doctor of Business Administration has the author been registered for any other University award without prior agreement of the Doctoral College Quality Sub-Committee.

Work submitted for this research degree at the University of Plymouth has not formed part of any other degree either at the University of Plymouth or at another establishment.

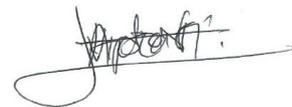
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Signed

A handwritten signature in black ink, appearing to be 'J. P. ...', written over a horizontal line.

Date 27<sup>th</sup> January 2022

## **List of Abbreviations**

### **Acronym - Full Term**

ADB: African Development Bank.

AfCoP: African Community of Practice.

AGO: Australasian Oil and Gas.

ANOVA: Analysis of Variance.

BP: British Petroleum.

CEDAW: Convention on the Elimination of all Forms of Discrimination against Women.

EU: European Union.

EEOC: Equal Employment Opportunity Commission.

FGR: Federal Republic of Nigeria.

GDP: Gross Domestic Product.

GDPR: General Data Protection Regulation.

GED: Group Executive Director.

H<sub>A</sub>: Alternative Hypothesis.

H<sub>0</sub>: Null Hypothesis.

HDI: Human Development Index.

H<sub>A</sub>: Alternate Hypothesis.

H<sub>0</sub>: Null Hypothesis.

IFC: International Finance Corporation.

ILO: International Labour Organisation.

ISF: Institute of Social Research.

IMO: International Maritime Organisation.

MDGs: Millennium Development Goals.

NNPC: Nigerian National Petroleum Cooperation.

OECD: Organisation of Economic Cooperation and Development.

SDGs: Sustainable Development Goals.

STEM: Science, Technology, Engineering and Mathematics.

UK: United Kingdom.

UNDP: United Nations Development Programme.

USA: United States of America.

UN: United Nations.

WEF: World Economic Forum.

WISE: Women in Science and Engineering.

HR: Human Relations.

**VICTOR OLUFUNMILADE APIAFI**  
**INVESTIGATING EMPLOYMENT IN THE NIGERIAN OFFSHORE OIL AND**  
**GAS INDUSTRY: IS GENDER A PREREQUISITE?**

**Abstract**

This study evaluates the factors influencing the inclusion of females into the Nigerian offshore industry. After extensive literature reviews, it is concluded that there is a shortage of females employed in this industry due to the patriarchal nature of Nigerian society. Evidently, the patriarchal nature of this country influences the rate of inclusion of females into the Nigerian offshore industry. Patriarchy in the Nigerian society also influences gender roles, male domination and gender discrimination, resulting in the limited inclusion of females into the Nigerian offshore industry.

In Nigeria, the social conception of females as naturally incommensurate to males has given rise to an unreasonable social development of gender roles and male domination among males and females. As a result, males are prioritised with daily agendas in society, thereby dominating the commercial and bureaucratic environment. Meanwhile, females are relegated to the domestic scene, entailing primarily of non-essential activities that do not yield financial and political enablement.

This study aimed to investigate and understand whether patriarchy has an influence on the shortage of females in the Nigerian offshore industry. Gender inequality has become an acute and persistent issue for global concern. Obviously, due to the expanding role that females perform in the community and the workplace, there is a crucial need to better perceive the inclusion of females in employment, especially in developing countries. This research argues that the shortage of females in the Nigerian offshore industry is due to the effect of patriarchy on gender roles, male domination and gender discrimination. Patriarchy is a traditional practice in Nigeria, resulting in a substantial negative impact on the inclusion of females' in the Nigerian workforce and the Nigerian economy.

For this study, gender inequality is modelled as the limited inclusion of females into the Nigerian offshore industry. This research involved the researcher developing a theoretical framework underpinned by the liberal feminist theory, using the quantitative analysis methodology, the survey method, and primary data collected via a survey questionnaire. This study used a convenience sample size totalling 173 individuals, comprising 131 male and 43 female respondents employed in the Nigerian offshore industry. Finally, descriptive and parametric inferential statistics were adopted to analyse the survey data from this investigation.

As the researcher is male, this research was steered with views from the liberal feminist perspective, and to avoid bias, the target population for this research were males and females employed in the Nigerian offshore industry. The individuals that participated in this research were sourced from labour groups and male and female organisations in the Nigerian offshore industry.

The results of this research confirmed that gender is a prerequisite for employment in the Nigerian offshore industry, patriarchy does exist in the Nigerian offshore industry, and it is the primary factor for the shortage of females in this industry. The roles in the Nigerian offshore industry are not gender-neutral, resulting in gender discrimination. Gender discrimination and patriarchy do co-exist in the Nigerian offshore industry, and the liberal feminist theory is appropriate to address gender inequality in this industry.

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# **1. CHAPTER ONE. INTRODUCTION TO THE RESEARCH**

## **1.1 Background of this Investigation**

Despite the global call for female empowerment in the maritime, and offshore industry, the amount of females employed is still relatively low (International Maritime Organisation, 2019; Anyoha et al., 2015). Amon (2017) cite that the factors influencing females from gaining employment in this industry indicate that it is still a male-dominated industry. According to the United States Department of Labour (2019), a male-dominated industry is a sector where females account for less than one-fourth of the entire labour force. This signifies that sectors, including mining, and the oil and gas characteristically fall into this category, as females remain underrepresented across all levels of employment in these industries (Park et al., 2019).

Presently, gender issues in the workplace have become a very complicated and bewildering issue globally, and as a result, numerous investigations have been carried out on this subject in developed and developing countries worldwide (Oluwunmi et al., 2020). Ogbo et al. (2014) cite that discrimination in the workforce applies to everyone in the organisation, irrespective of demographic features. It relates to a host of distinct variances and resemblances that make all the employees and the establishment unique and different. In comparison, inequality in the workplace is not identical only to the workers' diversity, as it incorporates similarities and differences, indicating that addressing diversity in the workforce requires managing discrimination and inequality concurrently (Thomas, 2006).

According to Mathew et al. (2019), the most significant gender disparity globally is bureaucratic enablement. However, this being the most reformed sector, just 24.7% of the worldwide bureaucratic enablement disparity were addressed in 2020. A survey from the Bureau of Labour Statistics (2019) reports that in the United States, as of 2019, they had 57.6% of females in the labour force, compared to 69.2% of males. According to the United States Department of Commerce (2019), females fill close to half the workforce, but hold less than 25% of STEM jobs, and females with STEM degrees are less likely to work in STEM-related fields than their male counterparts. This is a growing concern as

nowadays, more females are graduating with STEM-related degrees but find it challenging to gain employment in a STEM-related role (Azuh et al., 2016).

Landivar (2013) cite that the root cause of gender inequality in employment was the absence of female protagonists, gender stigmatising, and the reduced family-friendly accommodativeness of the nature of STEM-related professions. In contrast, Amon (2017) cites social interactions rather than institutional policy as a limiting factor for females gaining employment in STEM-related roles. Landau and Lewis (2019) write about females becoming increasingly well qualified and even out-performing males in educational attainment. However, the employment rate of females remains lower than that of males globally.

According to Thom (2018), male workers continue to dominate the UK oil and gas industry, making up for 96.3% of personnel travelling offshore, while females represent only 3.7% of the total offshore workforce. This could be detrimental to a country's economy, as studies reveal that having females in the workforce have been identified to improve their economy. Oil & Gas UK (2012) cite that due to the demands for future skills in the offshore industry, there is a need to increase focus on the inclusion of female workers. An analysis of the UK offshore workforce demographic data between 2006 and 2012 confirmed that since 2006 the offshore industry had increased by 18.7%. However, it only accounted for a 0.15% increase of female workers employed offshore, relative to the total population of the UK workforce (Oil & Gas UK, 2013). Although there have been many emphases on improving gender employment in the global workforce, the offshore oil and gas sector is still lagging. According to Thom (2018;25), in 2017, only 1,681 females travelled offshore in the UK sector. This figure represents just over 3% of the total offshore workforce, compared to the national average of 47% of females in employment across all sectors of the UK workforce; thereby indicating a lag in the UK offshore workforce to integrate females into this sector, despite the efforts of companies trying to improve gender diversity.

Evidence from the oil, gas and mining extractive industries in Nigeria indicates that the Nigerian industry has historically been male-dominated, from leadership roles in significant establishments to jobs working in mines, oil rigs, and even none STEM roles (Landu and Lewis, 2019). Abou-Zeid and Maula (2017) mention

gender prejudice in allocating opportunities and rewards in these sectors as a factor for gender inequality.

Female's economic empowerment in the Nigerian offshore industry remains a phenomenon incompletely examined. Therefore, raising concerns about how little occupation formation, connected with role preference arrangement of labour demands, equates to supporting great heights of disparity in the Nigerian workforce (National Bureau of Statistics, 2018; Okeke, 2019; Abou-Zeid and Maula, 2017).

This research investigates inequalities faced by females employed in the Nigerian offshore oil and gas industry. This industry remains one of the most inconsequential gender diverse sectors in the Nigerian workforce, with sparse female representation across most roles (Anyoha et al., 2015; Landivar, 2013). Gender equality and employment possibilities are fundamental in the capital-intensive industry of Nigeria (Eziechi, 2014). However, Abou-Zeid and Maula (2017) suggest that there is a significant gender void in admittance to openings and prosperity to this industry in Nigeria.

Inequality in gender employment is not only particular to Nigeria. This issue has also plagued countries worldwide for centuries. It is understood that around the world, finding employment is much more challenging for females than it is for males, particularly in STEM roles, with a global gap of 75% males and 49% females in employment around the world in 2018 (International Labour Organisation, 2018). According to the UK Office of Statistics (2019), females in employment has increased over the years. By 2019, there were 72.1% of females in employment compared to 80.2% of males. However, there was still a low rate in the employment of females across STEM roles. Murry and Zhang-Zhang (2018) write about organisations being more dedicated to ensuring a varied workforce; further to the nationwide guidelines enforcing female worker allocation in organisations, the concept of gender impartiality remains a critical contest in a traditionally male environment. Even in the 21st century, females are stripped of their rights, especially in some middle eastern countries. 'In Saudi Arabia, females are not allowed to drive. In 2014, the embargo on driving led to the arrest

of two female rights activists that decided to drive into Saudi Arabia'. They were subjected to the special terrorism hearing for this offence (Mail Online, 2014).

The exclusion of females in Indian society is custom-based. Esteve-Volart (2004) cite that females employed away from home are considered improper, incorrect, and critical to their decency and female purity. She further highlights that when a family tries to advance their prestige, females remain at home to demonstrate their integrity and represent their financial stability. Even when wealthy and more sophisticated families educate their daughters, they are kept at home after their education, adhering to traditional practices.

Thelwall et al. (2019) argued that the gender imbalances in science in the USA was due to career choices with STEM-related roles. Generally, it is crucial to comprehend how an individuals' gender influences their professional ambitions. Their reports state that in the USA, the most common female roles in 2015 were non-STEM careers. In comparison, the most gender-influenced jobs included secretaries/administrators with 94.5% females, nursing with 89.4% females, preschool teachers with 96.8% females, elementary/middle school teachers with 80.7% females, drivers with 5.1% females, labourers with 2.9% females, carpenters with 1.8% females, car mechanics with 1.5% females, and electricians with 2.3% females.

Amon (2017) cite parenting as a factor for gender inequality, arguing that females may require longer career breaks due to childbearing and looking after children, particularly with a child under five, making males the primary breadwinners in homes. As a result, females tend to devote less period to employment, with some females eventually opting for early retirement (Thelwall et al., 2019).

After several years, the United Nations has made substantial development in evolving gender fairness, it comprises of revolutionary treaties such as the 1969 and 1979 (CEDAW) regulations. Irrespective of the successes in exposing these matters, its effect does not seem to be unvarying worldwide, as the developing countries are behind in fighting gender equality in their workforce (Azuh et al., 2016).

Nigeria is a signatory to the UN conventions. Also, the largest oil producer in Africa and the sixth-largest oil-producing country globally (NNPC, 2019), comes under the CEDAW agreement and also has other policies and employment acts in place. However, the country has not been able to embrace a positive gender balance regarding the Nigerian workforce (Anyalebechi, 2016). The Nigerian offshore industry is responsible for 10% of Nigeria's GDP and 86% of the total export revenue (OPEC, 2019). However, the Nigerian economy is still weak, and the country still records a high rate of poverty (The World Bank, 2019). Given this, employment inequality is a significant factor affecting the Nigerian workforce. There is a possibility that addressing gender inequality in the Nigerian workforce could promote the country's economy (Lawanson and Umar, 2019; Azuh et al., 2016). The World Economic Forum (2018) writes about the worldwide improvement of gender equality in the workforce still being a problem in developing countries, thereby triggering an impact on their economy. However, empowering females to build an economy, and encouraging production and development would aid these economies, but gender disparities are still profoundly engrained globally and still impacts economies worldwide (Bako and Syed, 2018; International Labour Organisation, 2018; Lawanson and Umar, 2019; Inmpey, Opara, and Iloh, 2019).

According to the EEOC (2019), the US federal law prohibits inequality throughout every stage of engaging an individual for work. However, despite the reaffirmation of the equivalent rights of males and females for the Universal Declaration of Human Privilege in 1948', many females still experience significant disadvantages and discrimination in the workforce. Globally females are underrepresented in all sectors of the labour market as gender-based employment discrimination still affects many females, especially in STEM roles (Wise Campaign, 2018).

Females have recently advanced in STEM-related roles in the USA after being overrepresented in non-STEM careers for years. Although many females have STEM-related degrees, most of them are not employed in STEM-related jobs compared to their male counterparts. Generally, females in STEM roles are more likely to cite discrimination in recruitment and hiring than their male counterparts, blaming it on the difficulty of balancing work and family life with STEM roles. This

results in females being reluctant to work in STEM-related fields (Funk and Parker, 2018; Amon, 2017).

## **1.2 Conceptual Framework for Gender Inequality in the Nigerian Offshore Oil and Gas Sector**

Discrimination against females in a contemporary culture is represented in many ways nowadays. Females are in an underprivileged position worldwide, and not just in Nigeria alone. According to Azuh et al. (2014), gender encompasses variances between males and females, these differences range from genetic/physical to societal. It symbolises informally built and informally gained behaviours and potentials accompanying males and females, while discrimination is an inexcusable undesirable behaviour towards a particular group (OECD, 2018). Gender discrimination is considered to affect males as well. Therefore, gender equality must be understood as an active organisation entrenched in a growth development that investigates its actions, giving both females and males equal opportunities to participate and benefit in the society (Azuh et al., 2016). Dealing with workplace variety requires the mixing of the shared variances and sameness of individuals. Therefore, they must be properly examined, determined, and established to understand gender inequalities in the Nigerian offshore industry (Ogbo et al., 2014).

The conceptual framework developed within this research shows how this research is explored, identifying the relationship between this research aims and objectives, the research questions, the theoretical framework, and the methodology and methods from a liberal feminist perspective (Adom et al., 2018). Conceptual frameworks within a research assist in identifying and constructing the worldview of the phenomenon under investigation (Grant and Osanloo, 2014; Jabareen, 2009). This research aims to use the liberal feminist theory to investigate the effect of patriarchy on females in the Nigerian offshore, gender roles, male domination and gender discrimination regarding the inclusion of females into the Nigerian offshore industry.

This research is underpinned by liberal feminist doctrine, which advocates for equal opportunity through dialogue and policies (Holmes, 2008). It is governed

by the objectives of females attaining employment, being paid and achieving career growth in a conventionally male-dominated environment (Lewis, 2019; Hughes, 2002; 33). The concepts of this research generally indicate the researcher's ideas for investigating this research, exhibiting its association of the research topic with feminism, and the concepts that this research can be studied from the liberal feminist point of view. Feminist research is a method of social investigation that uses detailed subdivision approaches and selected topics to challenge feminist theories to enhance the position of females in society. According to Payne and Payne (2004;89), "feminists claimed that *as we are all born equal, we should all then be treated as equal*". Hence, the primary concern of the feminist is the liberation of females from oppressive social practices and ideologies (Lewis, 2002; 185).

### **1.3 Aims and Objectives**

This research aims to ascertain if patriarchy in the Nigerian society influences the inclusion of females into the Nigerian offshore, gender roles, male domination and gender discrimination regarding the shortage of females in the Nigerian offshore industry. It will be achieved by developing a theoretical framework centred on feminism. By applying the liberal feminist theory to understand this phenomenon in this industry, primary survey data will be collected with the survey questionnaire method, and the survey data will be analysed employing descriptive and a parametric inferential statistical analysis.

The objectives of this research are as follows.

- I. To determine if patriarchy, gender discrimination and gender roles are the factors for the low rate of female employment in the Nigerian offshore industry.
- II. To determine if patriarchy leads to gender discrimination and gender roles in the Nigerian offshore industry.

- III. To use the liberal feminist theory to understand if gender discrimination and patriarchy co-exist in the Nigerian offshore industry.
- IV. To contribute to knowledge on gender inequalities in the Nigerian offshore industry.
- V. To recommend solutions from the result of this research that will encourage more females to seek employment in the Nigerian offshore industry and undertake more STEM roles.

This research will leverage policies, guidance tools, capacity building, and mentorship for targeted technical assistance to gender equality opportunities. It seeks to contribute to knowledge and consider if the existing literature surrounding research on gender inequality in the Nigerian workforce can be applied to the Nigerian offshore industry.

By addressing diverse challenges encountered by females employed in the Nigerian offshore industry, this research's findings will seek to encourage more females to pursue employment in this industry.

#### **1.4 Research Questions**

The research question section is a vital section of this investigation because the development of the research questions for this investigation will have a direct impact throughout the entire investigation. The research questions usually perform the role of the interface between the prevailing information and the research problems (Grant and Osanloo, 2014). The research questions for this research were developed after extensive literature reviews surrounding gender studies globally and also in the Nigerian workforce. These reviews indicate that there is a shortage of females in the Nigerian workforce as a result of the traditional practice of patriarchy in the country.

The purpose of this research was to identify how studies focused on STEM roles in the Nigerian workforce compares to the Nigerian offshore industry. Most literature reviews identified patriarchy, cultural and religious biases as the

significant factor for gender inequalities in the Nigerian workforce (Matthew et al., 2019; Eneji and Nwagbara, 2019). However, there is insufficient information regarding gender inequalities in the Nigerian offshore industry, emphasising the requirement for scholars to prioritise investigation on this topic in this sector in Nigeria (National Bureau of Statistics, 2018).

Allanana (2013), Inmpey et al. (2019), Okeke (2019), Eneji and Nwagbara (2019), and Matthew et al. (2019) all concluded that patriarchy in the Nigerian society is the primary factor for gender inequality in the Nigerian workforce, particularly STEM roles. Ezenwa-Ohaeto (2015) cite that patriarchy is commonly acknowledged and extensively experienced throughout Nigeria. She writes about patriarchy vigorously underpinning females existence and their business model in the Nigerian society. In Nigeria, the patriarchal culture lays more priority on males than females, making females inferior to males, and resulting in inadequate privileges, unequal chances, and unequal careers. The patriarchal tradition of the Nigerian society's limits female roles to domestic chores, while males to paid employment (Bako and Syed, 2018). According to Matthew et al. (2019), females are as important as males in any society but are not treated fairly in the Nigerian society. Matthew further argued that females should be awarded equal opportunities and privileges as their male counterparts to aid economic development in the Nigerian society.

On the contrary, the United States Department of Commerce (2019) cite the absence of female representations, gender labelling, and STEM roles been less family-friendly as the root cause of gender inequality in the USA, while Amon (2017) write about females identifying social interactions to limiting their professional opportunities more often than institutional policy in STEM careers in western countries.

The research questions for this research are.

RQ1 - Is gender a prerequisite for employment in the Nigerian offshore industry? Anyoha et al. (2015), Mathew et al. (2019), Owoyemi et al. (2014), Umukoro, (2014).

RQ2 - Is patriarchy the factor for gender inequality in the Nigerian offshore industry? Allanana (2013), Inmpey et al. (2019), Okeke, (2019), Eneji and Nwagbara, (2019), Matthew et al. (2019), and Makama, (2013).

RQ3 - Are the roles in the Nigerian offshore industry gender neutral? Adegoke et al. (2016), Inmpey et al. (2019), Okeke, (2019), Aigbokhan, (2017), Eneji and Nwagbara, (2019), and Matthew et al. (2019).

RQ4 - Does gender discrimination and patriarchy co-exist in the Nigerian offshore industry? Anyoha et al. (2015), Mathew et al. (2019), Owoyemi al. (2014), Umukoro, (2014).

RQ5 - Is the liberal feminist theory appropriate to address gender inequality in the Nigerian offshore industry? Sam, (2014), Mathew et al. (2019), Emeke, (2015), and Osunde et al. (2014).

Williams (2019) concluded that job insecurity due to layoffs results in gender disparity in STEM and the offshore industries in the USA. Williams further argues that males are considered more worthy of being employed or keeping their jobs than females during employment or downsizing. He referred to this as the deserving professional. Park et al. (2019) cite detrimental traditions and misconceptions to impede females' admission in the South American workforce. According to Park et al. (2019), a superstition is held in South America that the mine would dry if a woman went near the mines. This notion requires the South Americans to be educated on this outdated tradition, and to open employment opportunities to all capable females in this region. For example, in Colombia, females were prohibited from working in the emerald mines because of unlawful exclusions and manliness views that females brought bad luck in the mines (Park et al., 2019; 23). Park et al. (2019) also cite an investigation in Papua New Guinea, stating that traditional beliefs, regarding property possession tradition, and organisational practices disseminate barricades that hinder females from seeking employment in the offshore industry.

Findings from a research carried out by the AOG (2017) in Australia identifies several important sections of concern, together with the overall absence of entree

to patronage, mentorship and interacting for culturally diverse females, as factors explaining the prevalence of fewer females in the offshore sector in Australia. It supports gender and cultural biases, and contributes to the cultural diversity and lack of female careers and prospects in the offshore industry. Their report also emphasised that leadership responsibility was absent regarding diversity presence and flexible average professional exercise.

The ILO writes about the low quality of employment for females. They cite that females want to be in paid employment, but they have difficulty finding a job compared to their male counterparts. They claim that it was mainly due to a persistent set of socio-economic barriers and pressure to conform to traditional gender roles, especially in Northern Africa and Arab states where female employment rate is very low, accounting for only 16% of the workforce (International Labour Organisation, 2018). Williams (2013) argues that females working in a male-dominated profession encounter a glass ceiling that prevents their ascension into the top jobs. It is also considered to be a factor that discourages qualified females from participating in the offshore industry, because females feel there might be no room for career advancement.

Williams et al. (2014) cite that although key US establishments have incorporated gender diversity as an administrative strategy such as focused employment, employment and advancements guidelines, shadowing plans, empathy assemblies and diversity training to raise the number of females in top jobs, the issue of gender discrimination persist, citing that these management strategies inconsistently support gender disparity and male supremacy in the workforce. Williams et al (2014) argued that organisations should become more complete in reality than in principle, by applying policies to practice.

This research would be carried out from the feminist perspective, employing the Liberal feminist philosophy to address equal opportunities for females in the Nigerian offshore oil industry (Heaney, 2019).

## **1.5 The Rationale for the Research**

The rationale for this research has been broken down into three sections below; 1). The research problem, 2). The research purpose, and 3). The research significance.

### **1.5.1 The Research Problem**

The research problem is the rationale for this study. This research resolves to identify why there is a shortage of females in the Nigerian offshore industry and to contribute to knowledge to enable gender diversity in this industry. It is the most critical part of this research, as it establishes an interaction of the issues that produce a predicament or difficulty that is the cause for this investigation. It identifies the origin as well as the issues and theories essential to the research problem, it also recognises a sector requiring additional investigation, assisting in resolving it, while addressing the existing problem in this industry (Grant and Osanloo, 2014).

Extent literature reviews have established that the patriarchal culture of the Nigerian society is the root cause of gender inequality in the Nigerian workforce (Allanana, 2013; Onwutuebe, 2019; Idike et al., 2020), and this tradition has been embedded into the Nigerian culture allowing men to dominate every aspect of the Nigerian society and females to remain their subordinate (Ezenwa-Ohaeto, 2015). The dogma of patriarchy has negatively impacted females and the social-commercial and bureaucratic advancement of Nigeria. According to Ezenwa-Ohaeto (2015), patriarchy in a society commends males' power and reign over females in all scopes of human activities.

This research studies the discrimination and inequalities faced by females employed in the Nigerian offshore industry. As stated in the previous section, this research would be based on the primary data collected through a survey method using survey questionnaires designed around the perception of males and females in the Nigerian offshore oil industry.

Ogbo et al. (2014) argue that many organisations throughout Nigeria are unsure how to effectively manage diversity in the Nigerian workforce. Their excuse is partly because top management of these companies lately grew into the awareness of the combined need and relevance of addressing this subject. The major problem with gender difference in the social world is that humans do not know how to think of individuals neutrally, but instead always differentiate between people based on their gender (male or female). Therefore, affecting how people are interacted with as individuals (Holmes, 2008). For instance, just having a social gathering, males and females act and react differently when they meet the opposite gender, as compared to when they are just meeting up with individuals of the same gender. Generally, individuals get confused about how to react to gender differences, mainly in working environments. This results in a build-up of gender discrimination, as females are mostly subconsciously treated differently from their male counterparts (Ezenwa-Ohaeto 2015).

Holmes (2008;4) explains that we live in a world centred on the notion that females and males have different attributes and capabilities, and different needs and desires. These differences in traits most times determine the type and nature of employment that individuals can undertake. As a result, until date, many professional careers, including the sporting world are still gender-driven (Onwutuebe, 2019).

Ogob et al. (2014) write about common barriers that need to be addressed to manage workforce diversity effectively. These barriers include incorrect labels and preconceptions. The barricade establishes itself with transformations that are observed as feebleness. Nevertheless, they promote the opinion that diversity employment will mean forfeiting aptitude and excellence.

There is also an absence of political shrewdness on varied employees' employment in the Nigerian workforce. According to Onwutuebe (2019), females do not advance in an organisation because they do not get involved in the establishment's politics. It could be as a consequence of the patriarchal tradition of Nigeria, as most Nigerian females are not ready to confront the tradition of the male always in the lead, as a result, many investigations have concluded that this is why females are omitted from organisational systems (Ely and Thomas,

2001:229). The struggle of harmonising occupational and domestic chores is also a problem because females continuously shoulder the responsibility of raising children, making it more difficult for females to work late, take random shifts, and regularly go on a business trip once children are involved. Even without children, domestic chores take more of a females time than males (Kanter, 2004). Finally, fighting for a change and successfully dealing with diversity requires substantial organisational and personal change. A critical feature for an establishment's triumph is how it manages diversity. According to Londen (2006), establishments are guaranteed to fail, except the administration candidly addresses diversity in its environment.

Gender-based employment discrimination is considered to affect many females worldwide, especially in STEM roles (Amon, 2017; Landivar, 2013). According to Onwutuebe (2019), people of different gender have been stereotyped to act and behave in a certain way in the Nigerian workforce, thereby affecting their employability and career growth. Most often, this happens without even identifying their competencies (Amon, 2017). Jackson and O'Callaghan (2011: 69) terms this as the glass ceiling criteria, stating that this happens when judgement rises in severity while ascending the professional hierarchy, resulting in growing discrimination over an individual's career. Jackson and O'Callaghan conclude that the glass ceiling criteria still occurs, arguing that females, people of colour and ethnic minorities were still subjected to it in the USA. Their findings also indicate that few people of ethnic minority got promoted to senior levels, and that their promotion was only after acquiring the appropriate human capital, showing high aptitude through a merit-based presentation, and sustaining a high level of job approval. However, their research did not identify how long it took these few individuals to attain their promotions to senior-level positions. If they were overqualified or if their promotion was long overdue, it was also understood that the female who rose in their careers needed to work twice as hard to achieve their promotion.

According to Adams (2016), female workers are under-represented and receive biased appraisals in the workplace due to negative stereotyping. Davies and Thomas (2000) cite that the dispute relating to being the same and different in

comprehending gender impartiality and human resources management system is a significant beginning for equal opportunities.

According to Ely and Meyerson (2000; 142), the community observes gendered themes in the system of male and female contrasts, which have become extremely entrenched in organisations of gender inequality to be normal because they are entrenched in males everyday involvements, these traditions incline to be very beneficial to males, resulting in a disadvantage to females. It also affects their ability to perform to their maximum at work, which means that there could be a possibility that people of a particular gender have been stereotyped to behave in a certain way without identifying their abilities (Anyalebechi, 2016).

### 1.5.2 The Research Purpose

This section is used to identify and define this research's purpose and outlines its outcomes (Grant and Osanloo, 2014). As stated in Section 1.3, the goal of this investigation is to recognise if patriarchy influences the rate of females employed in the Nigerian offshore, gender roles, male domination and gender discrimination and if it is the reasons for the shortage of females in the Nigerian offshore industry. The envisaged outcome contributes to existing knowledge, and adds to existing literature regarding approaches to combat gender inequality in this industry (Onwutuebe, 2019).

According to Ely and Meyerson (2000), females' progress into top roles has been lethargic and mainly limited to males. Those who have advanced frequently do so by integrating awkwardly into a male-dominated organisation. However, due to organisation inertia, it renders these females who ascend to this top position as relatively disempowered. This issue of organisational inequality could be a result of the organisation's negligence to query and change predominant concepts about what establishes the most suitable and efficient ways to express and complete work by females, distinguish and recompense their ability, and comprehend and elucidate the behaviour of all employees (Ezenwa-Ohaeto, 2015).

### 1.5.3 The Research Significance

The significance of this research is the justification of this investigation, why it was essential to undertake this research, who would benefit from it, and why would the public be intrigued by this study (Grant and Osanloo, 2014).

The significance of this research is to investigate the inequality faced by females in the Nigerian offshore oil and gas industry and to enlighten the Nigerian public about any discrimination in gender employment in this industry. There is no doubt that nowadays, many females have made progress in attaining roles that a few centuries ago were considered to be only male positions. According to Ely and Meyerson (2000), from 1995, more females have been employed by Fortune 500 companies, making them among the higher 5% earners. Nowadays, the majority of these establishments have at least one female in top management. However, many females, especially in developing countries, still suffer from gender discrimination in the workplace (Onwutuebe, 2019).

The significance of this research indicates the strength of this research and how it would contribute to the frame, philosophies and sections of this investigation. The significance of this research also supports in identifying its audience, and it specifies why a specific research route is chosen (Grant and Osanloo, 2014).

According to Landau and Lewis (2019), the increased recognition of the different challenges females face in the workplace, and the benefits of gender equality are assisting society with the comprehension on prioritising females' participation and leadership within the workforce.

By developing an appropriate theoretical framework, this research will investigate whether patriarchy affects the inclusion of females into the Nigerian offshore oil and gas industry. It will also identify how changes could be applied based on the outcomes of this research to encourage more females to seek and gain employment in this industry.

## 1.6 Research Structure

This research has been organised and is presented in nine chapters, starting with Chapter One, the introduction. This chapter was used to outline the introduction. It portrays an insight into the background of the research, with views on gender employment and inequality in the offshore industry. This chapter also highlights the conceptual framework for this research and the notion behind it. This chapter then discusses the aims and objectives, the research questions, the rationale for this research study, and concludes with the structure of this research.

Chapter Two presents the literature review with an overview of employment in the Nigerian offshore industry. This chapter discusses the concept, theories and practice of the offshore oil and gas industry, and sustainable development goals, with the relationship between sustainable development goals, and the oil and gas industry, focusing on SGD 4). Quality education, and SDG 5). Gender equality as applied to the Nigerian offshore oil and gas industry.

Chapter Three presents the philosophical perspective for this research, also identifying the research route, elaborating on the Saunders Research Onion as a vital tool for choosing the research path. It further discusses the theoretical framework adopted for this research. It examines the research theory alongside the rationale for choosing the liberal feminist theory, and discusses the history of feminism, including the objective and types of feminism. This Chapter investigates the evolution of the theoretical framework for inequality in the Nigerian offshore industry. It also elaborates on how the liberal feminist theory applies to gender inequality in this industry, and the alignment between the liberal feminist theory and the theoretical framework for gender inequality.

Chapter Four presents the research methodology, methods and data collection adopted for this research. It commences by identifying the available paradigms of inquiry, and then selecting an appropriate paradigm for this research. It elaborates on the research methodology, with emphasis on the survey strategy, and moves on to the research methods chosen for this research, the sample size requirement, sample size, and the pilot test carried out for this research. The ethical considerations, including the data management plan and approval for this

research, the survey questionnaire design, data type, and data coding were also covered in this chapter. This Chapter then concludes with the normality test, and its benefit for this research.

Chapter Five discusses the data analysis method, emphasising on the descriptive and inferential statistics data analysis adopted. This Chapter captures results from the survey questionnaire carried out, and illustrates the analysed results for both the descriptive and inferential statistics. This Chapter also introduces the null hypothesis, hypothesis testing and concludes with a recap of the descriptive and inferential statistics results.

Chapter Six discusses these research findings. It examines, discusses, and summarises the descriptive and inferential statistical analysis results. It also elaborates on the results of descriptive and inferential statistical analysis, and concludes with how the liberal feminist theory aligns with the theoretical framework for this research.

Chapter Seven presents the overall conclusion for this research. It starts with the critique of the liberal feminist approach, limitations of the liberal feminist theory, and an overall conclusion of this research. This chapter also highlights the theoretical and practical implications to knowledge, the limitations of this research and concludes with the recommendations for future research, and the researcher's reflection.

Chapter Eight contains a list of academic references employed during this research, it includes references of the books, journals, academic papers and the worldwide web consulted during this research.

Chapter Nine contains the appendices for this research. This chapter is made up of five appendices, comprising of 1). The researchers GDPR certificate, 2). The University of Plymouth ethical approval letter, 3). The research data management plan, 4). The survey questionnaire of this research, 5). Result in percentage for both male and female respondents together from strongly agree to slightly and, 6). Result in percentage for male and female respondents separately from strongly agree to slightly agree.

## **2. CHAPTER TWO. LITERATURE REVIEW**

### **2.1 An Overview on Gender Employment Inequality in the Nigerian Workforce**

Umukoro (2014) write about gender inequality in employment as a progressive issue from the creation of Nigeria in 1914. Notwithstanding the years of determined attempts to attain gender neutrality, females are still under-represented in economic development and the political systems in the country. According to the Nigerian National Bureau of Statistics (2018), there is an estimated 193 million people in Nigeria, constituting 49.2% females and 50.8% males, but females only account for 38.16% of the Nigerian workforce. These statistics list the various jobs females undertook in the different employment sectors, except for roles in the Nigerian offshore industry, indicating that there is limited information regarding gender employment in this industry in Nigeria.

Previous studies into inequality in gender employment in the Nigerian workforce identified patriarchy, cultural, and religious biases as the main origin of employment inequalities in the country (Allanana, 2013; Para-Mallam, 2010; Okeke, 2019). Allanana (2013) mention that the Nigerian society has remained patriarchal, which is a significant characteristic of a long-established culture, and a framework of material-based public relations, permitting males to control females. In most cases, Nigerian females are not allowed to acquire formal education, are neglected, and are perpetually kept at home to take care of home chores, while males are engaged in paid employment. Allanana (2013) cite that patriarchy generally validates the relegation of females in educational, economic, employment, bureaucratic, and domestic societies.

According to a survey carried out in Nigeria by the ILO and Gallup in 2016, 48% of females agreed that they should engage in paid employment, and at the same time care for their families and homes, compared to 47% of males, while 32% of females agreed that females should only participate in paid employment, compared to 28% of males, and 17% of females agreed that females should only stay home, to carry out domestic chores and care for families, compared to 22% of males. Globally females have been known to be able to juggle work with family and care responsibilities, and the Nigerian females are no exception, accounting

for the 41% of females in Nigeria agreeing to accept paid employment, and care for their families and homes at the same time.

Enfield (2019) considered early marriage of females, the gender gap in education, lack of education, (including marginalisation from schools and skills acquisition programmes), and religious barriers to be among the factors limiting females from participating in the Nigerian workforce. Olowa and Adeoti (2014) cite that level of education significantly affects females participation in the Nigerian labour market, and due to the patriarchal nature of the Nigerian society, females are not encouraged to have an education because of the traditional acceptance which is for females to stay at home as housewives. According to Obiukwu (2019), up to 40% of girls are out of school in Nigeria, and those that make it into school have an average school life expectancy of 9 years, as against 17 years in developed countries.

Obiukwu further narrates that Nigerian politics is one of the areas in great need of gender reform. According to the UN before the country's election in 2019, the country had one of the lowest rates of female representation in parliament across Africa, globally Nigeria ranks 181st out of 193 countries. He mention that the Nigerian government in 2019 only included 7 females into the political office, accounting for just above 16% of the federal ministers. A very poor representation of females, considering Nigeria is a country where more than 49% of the population are females.

Nigerian females still face the glass ceiling effects as females are scarce in senior executive positions and on company boards in the country, many Nigerian companies are unaware of the benefits of a gender-diverse board as research has shown that there is a positive correlation between females in senior corporate roles, and a company's financial performance (Obiukwu, 2019). Ogbo et al. (2014) suggest that the discriminatory attitude in the Nigerian workforce diminishes self-esteem, with an undesirable accomplishment indicator when gender roles are the focus, at the detriment of the structural goals. As a result, purposes and commercial effectiveness decline because the essential ethics of diversity is not yoked appropriately.

According to Egbuta (2018), males and females face many challenges as they advance through careers in the Nigerian workforce. However, females are reported to encounter higher barriers than males, as well as greater difficulties in being awarded development assignments, and geographical mobility opportunities. For instance, in the Nigerian National Petroleum Corporation (NNPC), it was only in 2014 that a female attained the status of Group Executive Director (GED) for the first time since its incorporation in 1977, indicating a glass ceiling effect in this sector of the Nigerian workforce.

The WEF (2019) ranked Nigeria 128 out of 153 countries worldwide, and 27 out of 34 in the Sub-Saharan African region on global gender gap ranking in 2020. It indicates the concern of enormous gender inequality in the country. The first three top-ranking countries globally were Iceland, Norway, and Finland, respectively. At the same time, the top three in the sub-Saharan African sector were Rwanda, Namibia, and South Africa respectively. The WEF cites that as of 2019, no country worldwide had achieved complete gender equality.

The Nigeria 1999 constitution offers females impartiality, assures privileges, and defends females' interests regarding the outdated, religious, and communal customs on which the country was founded. The 1999 constitution was put in place to combat gender inequality amongst all states in Nigeria. This rule introduced a democratic, organisational, and economic togetherness for healthier agreements, regulations, and constancy. Nevertheless, traditional customs, including religious beliefs and patriarchy, greatly influences gender equality in the country (Para-Mallam, 2010). Although the Constitution of 1999 bans impartiality of any kind, the culture of patriarchy, which is deeply embedded in the Nigerian culture is a powerful determinant of male dominance and discrimination over females in the country. In the Nigerian culture, the family name and lineage are supposed to be upheld by males, while females are supposed to be wedded out to attend to domestic chores in their household. Thus, the Nigerian males are groomed to lead and take on professional roles, while females are confirmed to carry out domestic chores, with little or no opportunity for formal education, thereby limiting their employment ability (Olaogun et al., 2015).

Eneji and Nwagbara (2019) write about the variance amid sex roles and gender roles. They cite that sex-role is biological, while gender roles are the responsibilities that society assigns to males and females, indicating that male jobs are habitually related to jobs requiring strength. In contrast, feminine roles are linked regularly to tolerance and empathic roles. Aigbokhan (2017) argues that some level of discrimination is necessary to tolerate a suitable encouraged framework in an organisation. The disparity in revenue echoes different aptitudes and efforts between individuals, and it is expected that the benefits of commercial advancement would drip to the low-income individuals. Nevertheless, gender impartiality is essential, it is a requirement for the health and growth of families and cultures and it is also a driver of a country's commercial development (Ezenwa-Ohaeto, 2015).

Aigbokhan (2017) mention that in the 1960s and 1970s, there was a compromise amid discrimination and development. She argues that disparity is suitable for development. Suggesting that providing revenue to the upper-income individuals would be advantageous for everyone, predominantly the low-income earners, because it would lead to additional development, and reimbursements that would trickle down. Despite the disappointment of the trickle-down theory, this opinion succeeded in the 2000s. However, gender discrimination has added to the loss of the 'human development index'. The HDI of a country is an instantaneous quantity of human growth. It is grounded on three elementary possibilities: 'an extended lifespan of individuals, accessibility to information, and a balanced lifestyle (Aigbokhan, 2017). The HDI is a method of gauging a country's attainments from different directions (Olaogun et al., 2015).

Generally, female empowerment increases access and opportunities for females to reduce gender differences and loss of human wealth advancement potentials. OECD (2015) argue about the impossibility of making poverty a thing of the past without substantial and quick development in the lives of females and girls. Generally, females' influence on the economy must be acknowledged. Therefore, females' economic enablement should be recognised worldwide.

Despite the demands for gender equality in the Nigerian workforce, it remains male-dominated (Lawanson and Umar, 2019). There is an understanding that

Nigerian females are still underrepresented in the general workforce. Especially in STEM roles, which is a disadvantage to the Nigerian economy (Nigerian National Bureau of Statistics, 2018), as the advantages of reducing gender gaps in the labour force could substantially boost a country's global GDP (International Labour Organisation, 2018). According to Lawanson and Dominic (2019), employment inequalities negatively impact a country's inclusive growth, and improving gender equality can reduce poverty. Boyi (2019) supports the possibilities of a more remarkable development in society if females are empowered adequately.

According to Aigbokhan (2017), the importance of reducing gender inequality in the Nigerian workforce will aid poverty eradication, and boost the country's prosperity. Fighting gender inequality entails growing wealth. It calls for an efficient workforce, which is possible by narrowing the gender gap in the Nigerian workforce. Generally, the empowerment of females, and the increase in access to opportunities for females could reduce gender disparities, and avoid the loss of human capital (Bako and Syed, 2019).

## **2.2 The Concept, Theories and Practice of the Offshore Oil and Gas Industry**

Gender-based employment discrimination is still considered to affect many females globally, especially in the STEM sector (Wise Campaign, 2018). It is a belief that females are not treated fairly or given equal opportunities regarding employment and senior roles, especially in the offshore industry. Generally, many females claim that they find it difficult to gain employment in this industry, especially after obtaining a degree in the relevant profession. The concept of gender discrimination is not just a modern practise but has been in existence over time. For instance, as far back as 1918, females were not even allowed to vote in the parliamentary elections in the United Kingdom. It was only after the war in 1918, females over 30 were allowed to vote due to the movement by the national union of female's suffrage society, and later in 1928, females were given equal right to vote, same as males over 21 (BBC, 2014). Although in 1945, "*equal rights of male and female*" was adopted by world leaders in the fundamental principle

of the United Nations Charter, millions of females worldwide still suffer discrimination (United Nations, 1948).

In view of the offshore industry, with regards to jobs that require some degree of physical activities, or longer time away from home, it is understood that employers are reluctant to employ females on the basis that they may not be able to spend the required number of days away, due to caring for children and other family commitments, or they may not be physically capable of carrying out some of the manual tasks offshore. In an interview by Saner (2013) from the Guardian, Sophia Kellas-McKenzie, a 28-old offshore field engineer among the few females to have found her way offshore, she stated that *"One or two men have told me I could not possibly help them with a physical task because I must be too weak, even though I am probably stronger than a lot of them"* (Saner, 2013).

According to KPMG (2014) The Nigerian oil and gas industry has been vibrant since the discovery of crude oil in 1956 by Shell Group. However, it is largely dominated by male employees, and there is still little evidence of the ratio of females employed in this industry (Nigerian National Bureau of Statistics (2021). The marginalisation of females in the Nigeria society is a long and existing problem that has impacted economic and social activities through all sectors in the country. However, it varies across job roles and sectors in the country. Bako and Syed (2019) cite that 15% of females in academics are reported to experience discrimination. Umukoro (2014) also mention the under-representation of females in the political front in Nigeria due to patriarchal practice, while Bako and Syed (2019) further report a steady rise in gender gap unemployment between males and females in Nigeria over the years. Other areas where females lagged include land ownership. The Nigerian females are denied land, or a loan facility for agricultural purposes, which is also a large source of Nigeria's income, accounting for about 41% of the nation's total GDP (Ojo, et al., 2015). This can also be blamed on the cultural practice of patriarchy in the Nigerian society that supports gender discrimination, requiring females to be subordinate to males. According to Mofoluwawo (2014), females are the producers of over 70% of the nations' food, as well as playing the important roles of childbearing and rearing, along with being the community organisers among other home chores.

On the other hand, more females have made it to the top of some Nigerian companies as CEOs, and chairpersons of boards than in some G20 countries. However, there are still persistent gender gaps at the company workforce level, which impacts females ability to participate equally as males in the organisation. The financial sector in Nigeria was ranked the highest for gender inclusion, with a total average score of 38%, while the consumer sector came in next with a total average score of 29% (IFC, 2021). According to IFC (2021) females in the Nigerian workforce represents 7% of CEOs, 17% of CFOs and 17% of board chairs.

### **2.3 The Relationship between Sustainable Development Goals and the Oil and Gas Industry**

According to Esquivel and Sweetman (2016), a 2030 agenda for sustainable development goals was adopted by the UN and member states which include Nigeria in September, 2015. The United Nations Sustainable Development Goals contain a set of 17 actions to aid sustainable development across many areas in a society (Azeiteiro et al., 2018). The goal was to provide countries with a global framework for advancing sustainable development in three areas of their organisation, these areas include the following: 1). Social, 2). Economic, and 3). Environmental sections.

These 17 SDGs were a replacement for the MDGs that was operational between 2000 to 2015 (Abata-Ebire et al., 2017). These SDGs were developed with greater aspirations and visions as compared to the MDGs, and a potential to achieve a wider scope than the MDGs (Alamu, 2017). SDGs are founded on the commitment to combatting human rights, and they recognise the connection between inequality, marginalisation, and poverty.

The UNPD, the IFC and IPIECA partnered together to develop an Atlas that explores the connections between the oil and gas industry, and the 17 SDGs to seek, and enable a shared understanding of how the industry can most effectively support the achievement of the SDGs see Figure 2.1. This Atlas presents the 17 SDGs goal by goal, focusing on how they can contribute to the oil and gas industry once integrated into its core operations, while also identifying

opportunities for the oil and gas companies to join forces with stakeholders. This Atlas was also designed to assist the oil and gas companies, and their stakeholders in developing a shared comprehension of how the industry manages environmental and social challenges while maximizing economic benefits. Thereby, presenting examples of good practices in the oil and gas sector that can be combined with existing knowledge and resources on sustainable development to assist, and make useful contributions to this industry.

According to IPIECA (2019), SDGs provide an excellent framework to view an industry's contribution to sustainable development globally, they also indicate where it can have an impact on a different dimension of the workforce. Figure 2.1 below illustrates a map of how the 17 SDGs relate to the oil and gas industry. By achieving these SDGs in this industry, the oil and gas industry can improve economic and social development by providing access to affordable energy, opportunities for decent employment, and business and skills development. Generally, fiscal revenues, and infrastructure can be improved by applying the replated SDGs in the oil and gas industry.

According to IPIECA (2019), in combination with the available resource, the local context, the stage of oil and gas activities, and the input received from local communities and stakeholders, the atlas mapped towards the oil and gas industry identified the following SGDs that the industry can use to apply important contributions to the different sections in the society as, 1). Affordable and reliable energy (SDG 7), 2). Climate action and life on land and in water (SDGs 13, 14 and 15), 3). Economic development and innovation (SDGs 8 and 9), and 4). Health and access to clean water (SDGs 3 and 6), but as industries and nations embark on addressing SDGs, individual analysis needs to be performed on each SDG to understand how they can individually make an impact in the society, and their organisations. In reference to these research goals and based on the literature review in the Nigerian offshore oil and gas sector, it is ascertained that SDG 4 (Quality education), and SDG 5 (Gender equality) are most relevant to the Nigerian oil and gas sector at its current stage.

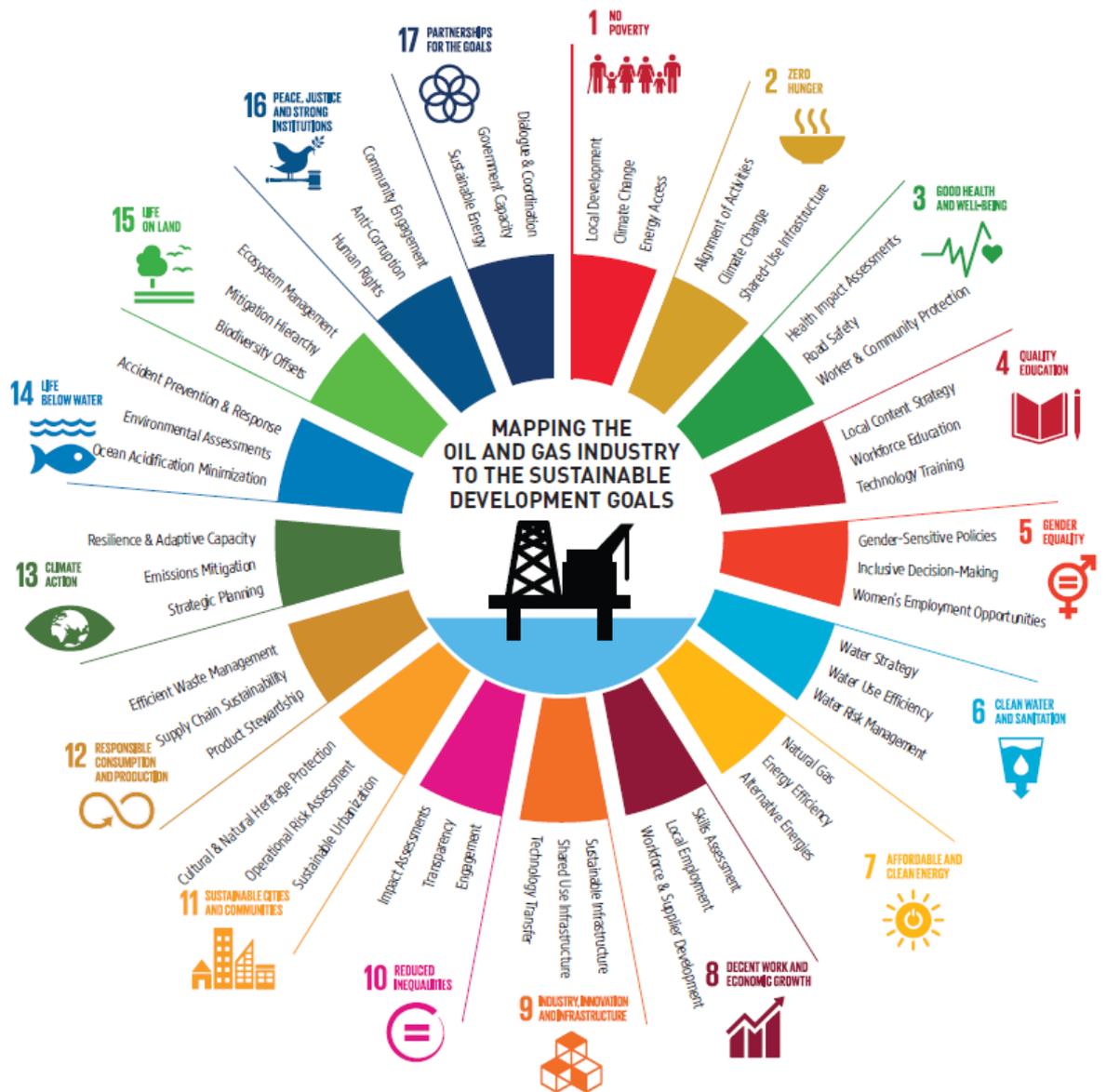


Figure 2.1. Matching SDGs to the Oil and Gas Industry  
 Source: (Adapted from IPIECA, 2019:3).

## 2.4 Relevance for Gender Equality in the Nigerian Oil and Gas Industry regarding Sustainable Development Goals

Although it is the primary responsibility of the Nigerian government to implement policies to aid the SDGs within the Nigerian oil and gas industry. It is also the responsibility of oil and gas companies, and stakeholders to adhere to the laws, respect human rights, and minimize the negative impacts of their operations (Adejumo and Adejumo, 2014). They can also contribute to the SDGs by understanding and prioritising the SDGs and aligning their organisational

operations with the relevant SDGs centred towards the Nigerian oil and gas industry, because it will create opportunities, and maximize positive contributions to the Nigerian society (IPIECA, IFC and UNDP, 2017). Generally, stakeholders and organisations in Nigeria are expected to be proactive in understanding the priorities in the Nigerian oil and gas industry, to align with the priority SDGs that makes strong and meaningful contributions to the Nigerian society.

Although Uwem (2018) mention that with careful planning and implementation, the Nigerian oil and gas industry can contribute positively across all the 17 SDGs, only SDG 4 and 5 will be discussed regarding this research based on this investigation due to their connections with this study. Uwen's theory is based on the notion that the SDGs are frequently interlinked.

#### 2.4.1 **SGD 4: Quality Education**

The target areas for SGD 4 includes 1). Local content strategy, 2). Workforce education, and 3). Technology and training. According to Uwem (2018), these can be integrated into the Nigerian oil and gas industry by the following

- i. Establishing a company's strategy for local content to promote sustainable development.
- ii. Investing in workforce education, training and technical programmes.
- iii. Investing in education and training in responsible energy use and modern technologies.

Obiukwu (2019) cite that up to 40% of girls are uneducated in Nigeria, and the average school life expectancy for Nigerian girls was the age of 9, compared to 17 years in developed countries. According to the ILO, females with secondary education in developing countries are less likely to be in employment, as they do not have the basic requirement for most professional positions in their country.

Enfield (2019) cite that pathways in employment in the Nigerian society is mostly determined by the circumstances surrounding one's birth, where they live, their gender, and the occupation of their parents, indicating that less privileged females

will have difficulty attaining an education, even if they wanted one, thereby limiting their employment ability.

According to Funk and Parker (2018), females have recently advanced in STEM-related roles in the USA due to the encouragement in understanding STEM-related degrees, this has allowed for the integration of more females into the oil and gas industry in the USA, and other developed countries compared to developing countries. Due to the patriarchal tradition in the Nigerian society, many years ago, Nigerian females were not even given the opportunities to attain formal education, especially in STEM-related degrees. It is the responsibility of the Nigerian government to advocate policies that will bar this traditional belief, and enable females to seek education in any career of their choice, especially in STEM-related degrees that will lead to offshore employment in the Nigerian oil and gas industry. Stakeholders in the Nigerian oil and gas industry on the other hand, have the responsibility to support in-country education and skills development regarding STEM and offshore roles.

According to Ely and Meyerson (2000), from 1995 more females in developed countries have been employed by a Fortune 500 company, making them among the higher 5% earners as a result of educational freedom in this region. Bangura and Sheka (2014) revealed that nations that underinvest in females are linked to lethargic poverty reduction, and economic development, while those that invest in females, providing them with top-level administrative prospects record strong economic development. The main goal of SDG 4 is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all globally, especially in developing countries by 2030 (Barbier and Burgess, 2017).

#### 2.4.2 **SDG 5 Gender Equality**

The target areas for SGD 5 includes 1). Gender-sensitive policy, 2). Inclusive decision making, and 3). Female employment opportunities, these can be integrated into the Nigerian oil and gas industry by adopting the following.

- i. Developing gender-sensitive local content policies.

- ii. Supporting full and effective participation of females at all levels of decision-making.
- iii. Increasing employment opportunities for females, and the representation of females in management.

According to Obiukwu (2019), females still face difficulties, especially with climbing the career ladder due to gender inequality in the Nigerian workforce, Onwutuebe (2019) argue that many females, especially in developing countries, still suffer from gender discrimination in the workplace. It is the responsibility of the Nigerian government and stakeholders to provide policies, and make firm decisions to support gender equality in the Nigerian oil and gas industry. This can be achieved by addressing the negative social impacts from stereotypes, and enhancing the use of STEM roles to promote, and empower females in this industry.

Landau and Lewis (2019) cite that the increased recognition of the different challenges females face in the workplace, and the benefits of gender equality are assisting the society with the comprehension on prioritising the inclusion of females within the workforce. It is argued that a critical feature for an establishment to triumph is how it manages diversity. Londen (2006) cites that companies are guaranteed to fail, except their administration truly addresses gender diversity in its environment. Matthew et al. (2019) also argue that equal opportunities and privileges in a workforce lead to economic development in its society.

Gender equality in a country's workforce leads to economic growth. According to Olonade et al. (2021), countries will fail to develop without objective gender equality, irrespective of their prevailing justice and political systems. Therefore, for the realisation of sustainable development in Nigeria, it is essential to attain gender equality in the Nigerian workforce, including the oil and gas sector. Achieving gender equality is a vital part of a development plan with intentions to enable individuals, both males, and females, to reduce their poverty level and improve their standard of living.

The main goal of SDG 5 is to ensure, and achieve gender equality, eliminate all forms of discrimination against females in the workforce, and empower females globally by 2030 (Barbier and Burgess, 2017). Development in the Nigerian oil and gas industry is impossible without gender equality, and as long as females are excluded from partaking in this industry, the country's economy will remain weak.

## **2.5 Benefits of Diversifying Female's Employment in the Nigerian Workforce and the Nigerian Oil and Gas Industry**

Nigerians consider unemployment as the greatest challenge facing the country, and it is even ranked above poverty, although it is estimated that one-third of Nigerians live in poverty (Enfield, 2019).

According to AfCoP (2017), females makeup 60% of the global workforce, but earn an average of 10–30% less than their male counterparts in comparable jobs. A report by ActionAid (2015) indicates that gender inequality accounts for \$9 trillion economical loss worldwide annually. Gender inequality not only drags down economic opportunities for females in developing countries like Nigeria, but also causes stagnation in the country's economic growth (UN Women, 2015a). It has been reported that females earn less pay than males, and also have less stability in the workforce. Although, it has also been reported that females execute 66% of the work globally, also producing 50% of food, but yet they still earn only 10% of global income and own only 1% of property worldwide (OECD 2015).

The importance of diversifying females' economic empowerment in the Nigerian oil and gas industry cannot be overemphasised, but achieving this requires comprehensive policies, a holistic approach, a long-term commitment, and gender-specific perspectives (UN Women 2015a). According to AfCoP (2017), the participation of females in business in Africa is low, especially in the oil and gas sector as it is still male-dominated. Due to economic growth in Africa and numerous discoveries of oil and gas fields in recent years, female's participation in the oil and gas industry is very important for Africa to achieve inclusive economic growth. The Africa Progress Panel forecast a 10-fold increase in power generation in Africa by 2030. Globally, not many females are employed or are

engaged in business activities in the oil and gas sector, despite their number. In addition, the earlier transformation and developments in the Nigerian oil and gas sector did not include females due to the patriarchal nature of the country. The inclusion of females into the Nigerian oil and gas sector, could benefit the country, increasing economic growth as well as infrastructural development.

## **2.6 Summary**

This chapter signifies that extant literature reviews indicate that there is a gross amount of gender inequality in the Nigerian workforce. Many studies indicate that it occurs because of the patriarchal tradition embedded in the Nigerian culture. Patriarchy is an issue that has been affecting females in all walks of life in the Nigerian society before the amalgamation of Nigeria in 1914. This traditional issue has plagued Nigerian females from domestic duties to the employment environment, subjecting them to unpaid home chores as their duties, and males to paid employment as their entitlement. Thereby limiting the number of females in employment in the Nigerian workforce, particularly the Nigerian offshore industry.

This Chapter also signified that SGD 4 and SGD 5 apply to this research, indicating that quality education for females, and gender equality in the Nigerian oil and gas industry will improve the country's economy as well as the inflow of females into this industry.

### **3. CHAPTER THREE. PHILOSOPHICAL PERSPECTIVE AND THE THEORETICAL FRAMEWORK**

#### **3.1 Introduction**

This chapter is used to discuss the philosophical perspective, research route and the theoretical framework for this investigation. It starts by discussing the reasons for selecting the research route, the theoretical viewpoint from the liberal feminist view, also identifying the paradigms of inquiries, methodology and methods that underpin this investigation. This Chapter discusses the relevance of theory and the theoretical framework for the Nigerian oil and gas industry, this Chapter then explains the feminist theory, the origin of feminism, the objectives of feminist theories, and types of feminism, finally the design of the theoretical framework for this research, and how the liberal feminist theory underpins gender inequality in the Nigerian offshore industry.

Pettigrew (1996) describes social science theories as answers to puzzles arising from engagements between observation, and their current understanding of the social world. Pettigrew suggests that it is the theories that social scientists engage with to comprehend the social world, that governs their investigations, and how their results are interpreted. A social science research is often influenced by the choice and comprehension of available theories (Bryman, 2012; Casanave and Li, 2015). Rocco and Plakhotnik (2009) write about investigations emanating from the researcher's implicit or explicit theory of the phenomenon under investigation.

According to Grant and Osanloo (2014), the theoretical framework outlines the entire research. It serves as a template to shape and guide an investigation. It also delivers a skeleton on how a researcher should proceed with the research. A theoretical framework consists of the selected theory or theories that govern a researcher's thoughts regarding their understanding, and how they plan to proceed with their investigation (Grant and Osanloo, 2014). Yamauchi et al. (2017) cite that the exclusion of theory from an investigation could fail to investigate academically underpinned questions, and can produce results with inadequate values.

Punch (2009) explains that social science aims to build descriptive theories about individuals and their conduct grounded on, and verified against material from the physical world. These theories could either be associated with the inductive or deductive research approach. For this research, the deductive approach would be adopted. The research theory/theoretical framework will be developed by observing practical reality centred on gender inequality in the Nigerian offshore industry (Collis and Hussey, 2014; Wilson, 2014).

This research is developed around the liberal feminist theory to comprehend the effects of patriarchy on the admission of females into the Nigerian offshore, gender roles, male domination and gender discrimination regarding the shortage of females in the Nigerian offshore industry.

### **3.2 The Philosophical Perspective**

The philosophical perspective for a piece of research refers to the researcher's approach. For this research, a theoretical viewpoint was established by developing a theoretical framework from the liberal feminist view, and by identifying the paradigms of inquiries, methodology and methods that underpin the research (Lewis, 2019).

The liberal feminist perspective was adopted to investigate this research, with a view based on females' fairness in the workplace, education, and politics (Heaney, 2019). The principal ambition of the liberal feminist is gender impartiality in the community, with a view on the same rule to attain an educational, same wages, an end to employment exclusion, and an improved workforce for females (Lewis, 2019; Bradley, 2007; Delamont, 2003).

### **3.3 The Research Route**

The importance of a research route derives from its role as a critical connection between the theoretical framework, the philosophy that underpins the research, and the pragmatic data collected (Al Zefeiti and Mohamad, 2015). The research path for this study is shown in Table 3.1 below, this is adapted from the Saunders

research onion ring. The table shows the six stages essential to developing this research (Saunders et al., 2007).

The onion ring shows a comprehensive explanation of the stages, step by step that this research embarks upon, providing a detailed description and progression on each stage (Melnikovas, 2018). The purpose of the onion ring is to provide the researcher with the opportunity to identify properties on a path to selecting a particular research design over another (Onwutuebe, 2019).

Just like viewing an onion from the external, the respective laminates of the onion will provide a comprehensive step for this investigation. Saunders et al. (2007) suggest that the investigations process from the onion's perspective should be understood just by unwrapping an onion layer by layer. To view the innermost layer, the outermost layer must first be unwrapped.

In order to accomplish the goal of this research, the exemplary steps must be undertaken accordingly with the idea of unwarping an onion ring layer by layer from the outside first, proceeding to the inner layers until the innermost central core of the onion ring (Al Zefeiti and Mohamad, 2015).

	<b>Research Approach</b>	<b>Layers</b>
<b>1</b>	Research Philosophy	Positivism
<b>2</b>	Research Approach	Deductive
<b>3</b>	Research Strategy	Survey
<b>4</b>	Research Choice	Mono-Method (Quantitative)
<b>5</b>	Research Time Horizon	Cross- Sectional
<b>6</b>	Techniques and Procedures	Survey Questionnaire, Descriptive and Inferential Statistics

Table 3.1. Onion Ring Table

According to Saunders and Tosey (2012), the researcher's comprehension and related choices concerning the outer layers of the onion ring offer the framework and limitations in which the data gathering methods and data analysis procedures will be employed in this research (Al Zefeiti and Mohamad, 2015).

These six stages of the research onion are discussed step by step in the next section. For this study, the onion is peeled from the outermost layer, thereby offering an overview of the research philosophy; peeling back each of the subsequent layers reveals the different paths the research can follow.

### 3.3.1 **Research Philosophy: Positivism**

The research philosophy is the first stage of the onion ring to be peeled. The positivism philosophical view was chosen for the research because, the researcher is interested in generalising, and transferring results from similar research studies on gender inequality in the Nigerian workforce to the Nigerian offshore oil and gas industry. According to Saunders and Tosey (2012), the positivist is concerned with observing the analysed outcomes. The positivist views are underpinned by scientific methods used to recommend and test a hypothesis with highly controlled and computable data. Therefore, the researcher's opinion does not influence the investigation (Melnikovas, 2018). Positivist research typically involves collecting large samples of quantitative data followed by carrying out hypothesis testing (Saunders and Tosey, 2012).

The research philosophy is the researcher's views about the world, his expectations of human information, and the type of realism met. These ideas unavoidably are the framework for this research design, and underpins the research questions (Saunders and Tosey, 2012).

The choice of the philosophical approach for this research defines the expected knowledge under investigation for this study. A research philosophy refers to principles regarding the type of realism examined (Bryman, 2012).

### **3.3.2 Research Approach: Deductive**

The research approach is the next stage of the onion, and it is underpinned by the researcher's choice of the outer layer (Melnikovas, 2018). Therefore, it is essential to fully comprehend the research philosophical stance before deciding on the research approach. According to Al Zefeiti and Mohamad (2015), the deductive approach focuses on using literature to recognise philosophies and concepts that the investigator will examine empirically. Generally, the investigation starts with an existing theory, then poses a question, then the research hypothesis, followed by data gathering, and then hypothesis testing to accept or reject a prevailing hypothesis (Melnikovas, 2018).

The deductive method was selected for this research because the researcher used an established philosophy to develop an hypothesis, and then designed a theoretical framework to examine the pre-existing theory (Silverman, 2013). This research study focuses on hypothesis testing. First, the researcher will develop a theoretical framework to test all the pre-existing hypotheses identified during the literature review. This process reinforces the notion that the present study is deductive. The deductive approach is predominantly appropriate to the positivist tactic, allowing the building of hypotheses and the numerical analysis of anticipated outcomes to an acceptable likelihood (Snieder & Lerner, 2009; Al Zefeiti and Mohamad, 2015; Melnikovas, 2018).

Deductive studies levels on the use of survey questionnaires to understand observation for comparing people's responses through pragmatic data. The data collection techniques also assist in approving or rejecting this research hypothesis (Melnikovas, 2018).

### **3.3.3 Research Strategy: Survey**

The research strategy is the third layer of the onion. The research strategy for this investigation defines the investigator's anticipated work process (Saunders et al., 2007), research strategy comprises of several research methods, including experimental, action, case study, interviews, and surveys.

The survey strategy was adopted for this study. The survey strategy is mainly connected to the deductive research approach. It is the most economic research strategy to collect rich and reliable data (Saunders and Tosey, 2012). Surveys are typically applicable to quantitative investigations requiring a sample of a demonstrative percentage in a community (Bryman and Bell, 2011). Fundamental variables between a set of data are normally detected by adopting the Survey strategy.

#### **3.3.4 Research Choice: Mono-Method**

The fourth layer of the onion is the research choice; it is at this stage that the research method is selected. This is the stage where it is determined whether to combine methods (quantitative and qualitative) or to adopt just one technique. According to Saunders et al. (2007), the three choices available at this stage are 1.) Mono, 2). Mixed, and 3). Multi-method research method.

Although it might have been beneficial to combine methods to comprehend and compare the results from different methods and avoid bias, the mono quantitative method will be chosen for this research. It is decided to use the mono quantitative method due to time constraints during this investigation. The mono method enabled the researcher to focus purely on one method to collect rich, and valuable research data. This method consists of the researcher collecting quantitative survey data. This investigation adopted the survey questionnaire data collection method, developed around gender inequality in the Nigerian oil and gas industry, and analysed statistically using the descriptive and the inferential statistical analysis (Saunders and Tosey, 2012).

#### **3.3.5 Research Time Horizon: Cross-Sectional**

The fifth layer of the research onion is the research time horizon stage. This layer defines the time essential to complete the research. The cross-sectional and the longitudinal horizon are two types of time horizons detailed inside the onion (Saunders et al., 2007).

The cross-sectional time horizon underpins this research. The cross-sectional time horizon highlights the time horizon when the research is undertaken. According to Saunders and Tosey (2012;59), when a piece of research is undertaken to answer a question or address a problem at a specific time, that snapshot is referred to as cross-sectional, and it is likely to use surveys or case studies methods. On the contrary, when answering a question or addressing a problem that necessitates data collection for an extended period, the research is longitudinal, and more likely to use the experiment, action research, grounded theory and archival research methods (Abdu, 2017).

Generally, the cross-sectional horizon is adopted when the research is focused on studying a specific issue at a precise time frame. A cross-sectional study will be adopted for this research because of time constraints, and the complications to access essential data relevant to this research topic. Survey questionnaires formulated around this research topic were sent out to individuals in the Nigerian offshore industry to gather their perceptions at a given point in time regarding this investigation.

#### **3.3.6 Techniques and Procedures: Questionnaire, ANOVA**

The final and innermost core of the onion ring specifies the data collection and analysis techniques applied for this research. This section is very significant to the research as it contributes to its overall consistency and strength (Saunders et al., 2007). Here the researcher pinpoints the data source for the research (primary, secondary or both). The researcher also identifies the sample size and the most appropriate statistical data analysis method that underpins the research (Melnikovas, 2018).

This research will adopt the primary data collection method making use of the six-point Likert type survey questionnaire, data from this investigation will be analysed with descriptive and parametric inferential statistics.

### 3.4 The Feminist Theory

A feminist study is a social science investigation that applies a specific sub-set of methods and selected topics intending to challenge methodologies developed by males (Hughes, 2002; 33). Feminists have made it a global goal to enhance the position of females in the society. Generally, feminists argue that “*we should all be treated the same as we are all born equal*” (Payne and Payne, 2004;89). Extant literature have concluded that the Nigerian society is highly biased due to the traditional culture of patriarchy which is still practised in the country (Allanana, 2013; Para-Mallam, 2010; Okeke, 2019). With regards to the goals and ideals of the feminist doctrine, females in the Nigerian society, and the offshore oil and gas industry can benefit from applying this doctrine to fight against this patriarchal culture experienced in the nation.

According to Lorber (2005; 1), feminism is a social movement with the fundamental goal of attaining equality between females and males. Jaggar and Rothenberg (1993; 81) cite that the goal of feminism as a political movement is to make females and males more equal, legally, socially, and culturally. The feminist theory is based on assumptions that males and females have different experiences, and that the world is not the same for males and females. It is also based on the assumption that female oppression was not a smaller part of some other social relationship. Thus the argument that females would not be oppressed if the class system is destroyed. Jaggar and Rothenberg disagreed on feminism, and reported that female’s oppression is an entire gathering of social difficulties that are not to be accepted as a subject of class or any other structure. They further indicated that feminist theory assumes that the oppression of females is part of the way the structure of the world is organised, but it is crucial to study and understand how and why this structure has evolved (Delamont, 2003).

Different feminist theories are used to combat gender inequalities worldwide. Among these theories includes the Liberal, Radical, and Marxist/Socialist feminist theories (Onwutuebe, 2019). Although they all have their unique notions on how they fight gender inequality (Egbuta, 2018), they all affirm that exploitation and discrimination are based on gender inequalities in society. However, they all differ in their approaches to combating these societal imbalances (Bako and Syed,

2018; Samkange, 2015). The literature review section in Chapter two attest to a gross imbalance of privileges between males and females in the Nigeran society, it indicates a reduced number of females in the workforce, education and the political system. This research is focused on the liberal feminist theory, identifying the significant features of this philosophy, and deliberating on regulations, laws, and guidelines developed by the Nigerian government that would aid in combating gender disparities in the Nigerian oil and gas industry.

### **3.5 The History of Feminisms**

Lorber (2005) explained that feminism first arose in the ninetieth century in Europe and America in response to the significant inequalities experienced between the lawful positions of females and males of western industrialised countries. She further explained that the first-wave feminists of the nineteenth and early twentieth centuries between (1848 to 1918) fought for rights taken for granted today, including the privileges to vote (suffrage), to own property and capital, to inherit, to keep the money they earned, gain education, become a medical doctor, lawyer or a jury'. The first wave of feminists believed that female core values could make the world a better place (Delamont, 2003; Evans, 1995).

The theory for equality that feminists of the nineteenth century used to fight for female's rights came out of liberal political philosophy, stating that everyone should be equal under the legal system and that no one should have special privileges (Lorber, 2005;1). Lorber (2005) cite that the second wave feminist movement, which was post World War II between (1918 to 1968), began with a broadcast of Simone de Beauvoir's "*The Second Sex*" in France in 1949, allowing for females in the western world to argue that males establish the rules, and that female were subordinates, while males were dominant, and that females being subordinates were not biologically motivated, but socially created. However, it was not until the 1960s that the second wave of feminism developed into an organised movement. The second wave of feminists fought for the social reorganisation in the employment sector, the privilege of family planning, and eradicating gender inequality in the society (Delamont, 2003; Bradley, 2007).

Currently, the world is in the third wave of the feminist movement (1968 to present). These third-wave feminists are revolting about communal problems such as ending gender discrimination during recruitment of female employees, privileges to a retirement fund, bank loan, same pay, and other present issues. This third wave feminist has also fashioned a revolution in academics grounded on discipline (Delamont, 2003). Basically, the emancipation of females in the society between the nineteenth and twentieth century generally occurred in the western world, thereby leaving females in developing countries like Nigeria behind (Lorber, 2005).

### **3.6 The Objectives of the Feminist Theory**

The objective of the feminist theory was to fulfil several purposes regarding the emancipation of females globally. The feminist theory was used to comprehend the power discrepancy between males and females, how it originated, and why it remains a global problem especially in developing countries (Jaggar and Rothenberg, 1993).

The feminist theories were developed to understand female's oppression, how it evolved, changes over time, how it relates to other forms of oppression, and how to combat the oppression faced by females globally (Jaggar and Rothenberg, 1993). The feminist theories were also developed to fight and overcome oppression, whereby the philosopher needs to draw out the consequences of the theory, and use life experiences as a part of the foundations of understanding to provide feedback into its amendment and development (Jaggar and Rothenberg, 1993). The Nigerian government can assist in the fight against gender inequality by understanding the roles that patriarchy plays in influencing the relegation of females in the Nigerian offshore oil and gas industry, and it can seek to introduce policies in line with employment and admittance of females freely into this industry.

Generally, the feminist theories view gender balance as the solution for promoting gender equality, where both males and females are valued equally according to their human potential. This thereby goes against the patriarchal traditional practised in the Nigerian society as well as the Nigerian workforce, where males

are encouraged as born leaders, to dominate and rule, while females are subjected to domestics chores and kept away from formal education or engaging in formal employment (Egbuta, 2019).

### **3.7 Types of Feminism**

Feminism has taken on various approaches over time, beginning with the first wave to the third wave feminist movement, these feminist movements addressed inequalities ranging from politics to academics, privileges to vote, same wages, to employment inequality which is the focus of this investigation (Anyalebechi, 2016).

Holmes (2008) described three types of feminists as 1). The liberal feminist 2). The socialist and Marxist feminist, and 3). The radical feminist. These three feminists were distinguished from the early 1970s (Delamont, 2003;7; Freedman, 2001), and they all acknowledge that oppression and inequality based on an individual's gender do exist globally, but the essential distinction between these feminist theories was the focus on how they advocated for social changes to improve female's status and everyday lives (Delamont, 2003), indicating that they all have a deferent comprehension on how to combat these imbalances within the society (Samkange, 2015).

#### **3.7.1 Liberal Feminism**

Liberal feminism arose due to liberation as a political and logical opinion. It encourages the philosophy of equal opportunity and the notion that individuals have privileges, including the freedom to have a say in their lives, voting rights, and freedom to gain employment (Holmes, 2008), but due to the patriarchal culture of the Nigerian society, the Nigerian workforce, including the oil and gas industry have limited females. This culture limits females to domestic chores, thereby allowing males the privileges to paid employment. By applying the liberal feminist theory which applies a dogmatic reform by seeking legislation to effect communal change, this research seeks knowledge on implications that should reform the Nigerian oil and gas industry, allowing the admittance of more females into this industry. According to Delamont (2003: 8), the liberal feminist does not

require that theory should be female-centred, or that a research method must be feminist, but the primary goal of liberal feminism is the belief in the prospect of a communal reform in the balanced verdict on the issues of gender differences in society (Bradley, 2007; Delamont, 2003).

The liberal feminist adopts Mary Wollstonecraft's approach towards the emancipation of females. According to Holmes (2008), Wollstonecraft firmly supported the importance of reasoning and argued that females were equal to males and the law should be recognised as such (Holmes, 2008; 72). This was generally a liberal call for independence (Bradley, 2007). According to Bradley (2007; 39), Wollstonecraft argued that being deprived of rights, and always dependent on males lead to deformation in the human potential of females, especially those from the advantaged class, forcing them to adopt a personality of being docile, innocent, sexually dormant, obedient and soft engrossed in insignificant and playful activities designed to make them more attractive to men. Wollstonecraft argued that females' engagement in the pursuits of insubstantial goals weakened their attitude; as a result, it reduces their capabilities to preserve their duties domestically, also decreasing their efficiency to teach children (Lewis, 2019).

The liberal feminist advocated that no individual should be at an advantage from gender variances because both males and females are significant in the growth of humanity, so they should all be treated similarly. They further advocated that no society can flourish when half of its capital is abandoned (Mpu and Adu, 2019). Liberal feminists argued that females subservience is a result of universal notions that are not biological, but focused on identical chances for males and females in every aspect of society (Azuh and Amodu, 2017).

The researcher has chosen to adopt the liberal feminist approach for this research. It was decided in conjunction with the literature review and the evolution of the theoretical framework. This theory will be used to comprehend if the policies set by the Nigerian government are sufficient to address the issue of gender disparity in the Nigerian offshore industry.

### 3.7.2 Social and Marxist Feminism

The social and Marxist feminists of the 1970s viewed gender inequality mainly as a system of inequality and oppression in the labour market, making it a vital Marxist theory. This manifested due to class and is related to inherent exploitation in capitalist societies where the property-owning entrepreneurs or the bourgeoisie and the propertyless proletariat or working class were forced to sell their labour to capitalist employers. The connection that labour-power took by the bourgeoisie and generated profit was what Karl Marx understood as exploitation, which was Marxist theory (Bradley, 2007; Holmes 2008). Adu (2019) cites that Marxist feminism comprehends that commercial disparity, depending on a male, bureaucratic misrepresentation, and unnatural communal interaction amongst males and females were the origin of females maltreatment in the society.

During the second-wave feminist movement, the Marxist feminist analysed female labour and the ability of capitalists to squeeze a worker into producing more goods for the same payment or less to enable them to produce more profits. It then made the Marxist feminist focus on studying labour and labour-power of females, how was employed in the society, and how it differs from males employment, striking up theoretical debates regarding the lower value put on female's labour (Bradley, 2007; Holmes 2008).

The Marxist feminist used the strategy of seeing gender inequality as a system of oppressive relations and related it to capitalism. It led the Marxist feminist to build on the subjection and oppression of female and ethnic minorities due to capitalism (Delamont, 2003; Freedman, 2001).

According to Johnson (2001), the goal of capitalism is to turn money into more money in the most profitable manner, without the consideration for moral or ethical values, enabling the capitalist to generate an enormous amount of wealth, thereby increasing the level of inequalities in the workplace, and allowing for a few numbers of individuals to possess a considerable amount of the world's wealth. This ideology stems from gender inequalities, subjecting females to low paying jobs in the workforce.

The capitalist form of inequality is to mentally enslave individuals into believing that they were done a favour by providing them with a job. However, the capitalist only pays them enough wages to afford some of their essential needs. Therefore, not having the ability to invest in other ventures, but instead making them keep coming back to a dead-end job (Johnson, 2001).

Although this theory identifies gender inequality in the workforce, the researcher has decided that this theory is inappropriate for gender inequality in the Nigerian offshore industry. This research aims to investigate the effect of patriarchy on the shortage of females in the Nigerian offshore industry. On the other hand, the social and Marxist theory is focused on the inequality faced by females due to capitalism in a society (Adu, 2019).

### 3.7.3 Radical Feminism

According to Holmes (2008; 74), the radical feminist argued that male control over females' due to their gender was the critical factor in females' oppression. The myth of objectivity for the radical feminist is specific to males, making it a male world. Males developed science and invited independence expressly to ignore females and validate their intelligent (Delamont, 2003; 8; Heaney, 2019).

Radical feminists are revolutionary in combatting gender inequality compared to the other feminists (Onwutuebe, 2019). The objective of the radical feminist is to annihilate patriarchy instead of adjusting the system through legal reforms, unlike the liberal feminist that advocates for a social reform, but like socialist and Marxist feminism, the radical feminists also fight to decrease injustice in the society or class system (Lewis, 2019). According to Delamont (2003; 9), radical feminist has the most cynical idea about humans because patriarchy is the oldest form of oppression in the world, their notion is that it is unlikely that men can change even if they wish to change because the views of male domination have been embedded in them over centuries, indicating that a female's best chance of safety and accomplishment is by evading the male intuition, and remain with the comprehension that instead of cohabiting in a patriarchal community, it is beneficial for females to stay in all-female gatherings (Oluwatosin, 2018; Li, 2018; Azu and Amodu, 2017).

### **3.8 The Theoretical Framework**

In order to comprehend if patriarchy influences the admission of females into the Nigeria offshore, gender roles, male domination and gender discrimination, it is necessary to develop a theoretical framework underpinned by gender inequality for this industry.

This research adopts the feminist movement as a framework to expand its awareness on the subject. The feminist movement arose from females' complete understanding of the maltreatment and prejudice they faced under males. It is centred predominantly on females' ancient segregation and damaging characterisation (Nehere, 2016). For ages, feminists have been locked in a battle for liberation pitched toward redeeming societies from all forms of gender preconception and restrictions. From the liberal feminists of the 19th century until the present feminists, lawful investment and academic reorganisations have been their main focus (Onwutuebe, 2019).

The feminist movement provides the viewpoints for a more profound valuation, reinterpretation, and comprehension of social interactions among males and females by concentrating on problems faced by females in modern societies, thus creating queries about their privileges (Heaney, 2019). The radical feminists questioned the justification for separating professions based on gender, the relegation of females to domestic duties, and the reign of males in society (Onwutuebe, 2019). Notwithstanding the zones of discrepancies essential in several forms of feminism, and the determination to amend methodical prejudices channelled at females due to patriarchal exclusions as the primary mission of feminism.

The principal significance of feminism worldwide is the strength to address trials presented by patriarchy. Patriarchy in the Nigerian society is understood to promote male dominance in the Nigerian workforce, relegating females to non-paid duties. It establishes inequity against females in the Nigerian society, and it is the root from which other forms of inequalities like male domination, gendered roles and gender discrimination are created and replicated. Feminists oppose patriarchal traditions in the society for gendered roles, and gender discrimination,

that undermines females' efficiency, increasing their hardship, and making them feel subordinate to males (Turner and Maschi, 2015). In order to challenge gender inequity, feminists should promote a community consciousness of the relegation of females because the superiority relished by males over females is fundamentally the purpose of patriarchy (Ezenwa-Ohaeto, 2015).

### **3.9 Developing a Theoretical Framework for Inequality in Gender Employment in the Nigerian Oil and Gas Industry**

The liberal feminist approach underpins the theoretical framework for this investigation. Thereby, the researcher seeks to comprehend the phenomenon under investigation from a liberal feminist perspective. The liberal feminist approach is underpinned by the notion that everyone is brought into the world equally, therefore, everyone should be assigned equal chances (Mpu and Adu, 2019). This approach is applied to ensure that all decisions encouraging employment and development in the Nigerian offshore oil and gas industry should be reached through the equitable local participation of males and females in this industry. The liberal feminist approach for this research is developed from extant literature reviews surrounding the Nigerian offshore oil and gas industry.

For this study, the researcher considered the Nigerian workforce as large scale, and generally focuses on individuals employed in the Nigerian offshore oil and gas industry. The feminist theory accepts that gender disparities occur as a resourceful way to create a separation of labour or a social scheme, in which sections are accountable for specific individual labour performances to maximize resources and efficiency (Boyi, 2019).

Liberal feminists choose to address gender inequality by advocating for peaceful reform. This is approached by applying guidelines and regulations in the fight against gender inequalities in the workforce, and disregarding the traditional Nigerian patriarchal norm that females are to take care of the home, while men work to provide for the family (Ezenwa-Ohaeto, 2015). The liberal feminist philosophy of impartiality is based on the notion that all humans could be rational, and that any inequality must be combated rationally. The theory argued that

females are intellectually subordinate due to substandard education, resulting in their discrimination rather than validation (Azuh and Amodu, 2017).

Gender employment discrimination in the Nigerian offshore oil and gas could adopt various structures based on the establishment, the social structure of the country, and the traditional background of any group within that sector (Lorber, 2005). Even though gender disparity could be of biological origin, it is normally a disadvantage for females compared to males. For example, according to the literature review, patriarchy, cultural and religious biases were identified as the significant factor for employment inequalities in the Nigerian workforce (Allanana, 2013; Para-Mallam, 2010; Okeke, 2019).

Figure 3.1 shows this researcher's theoretical framework. This framework was designed to investigate gender inequality from the liberal feminist view, aiming to understand whether the laws, policies and legislation advocated by the Nigerian government are adequate to combat the inequalities faced by females in the Nigerian offshore industry.

Based on the traditional culture within the Nigerian society, it was concluded through literature reviews that patriarchy is the root cause of gender inequality in the Nigerian workforce (Samkange, 2015; Allanana, 2013). Studies also show that patriarchy in the Nigerian society influences gender roles and gender discrimination, while gender roles influences females in the Nigerian offshore industry and male domination (Ezenwa-Ohaeto, 2015; Para-Mallam, 2010; Okeke, 2019).

Figure 3.1 illustrates the theoretical framework of the influence of patriarchy in the Nigerian society on gender inequality in the Nigerian offshore industry. This framework was developed based on extant literature identifying patriarchy as the principal origin of gender inequality in the Nigerian workforce (Okeke, 2019; Allanana, 2013; Para-Mallam, 2010; Okeke, 2019; Matthew et al., 2019). Extant literature reviews also identified that gender role, females in the Nigerian offshore industry, male dominance, and gender discrimination also influenced prejudice and discrimination in the Nigerian workforce (Inmpey, 2019; Amon; 2017; Mathew et al., 2019; Aigbokhan, 2017; Eneji and Nwagbara, 2019).

The theoretical framework for this research was underpinned by the research aims and objectives and the research questions. Studies carried out on this subject concluded that patriarchy leads to the roles in the Nigerian workforce being gender-driven, which in turn leads to females being discriminated against and male dominance prevailing in the Nigerian workforce. Studies have also revealed that patriarchy leads to gender discrimination in the Nigerian workforce (Gberevbie et al., 2014; Emeke, 2015; Obiora et al., 2019; Osunde et al., 2014). These concepts will be studied using the liberal feminist theory to understand whether it is adequate to fight against gender inequality in the Nigerian offshore industry (Allanana, 2013; Samkange, 2015).

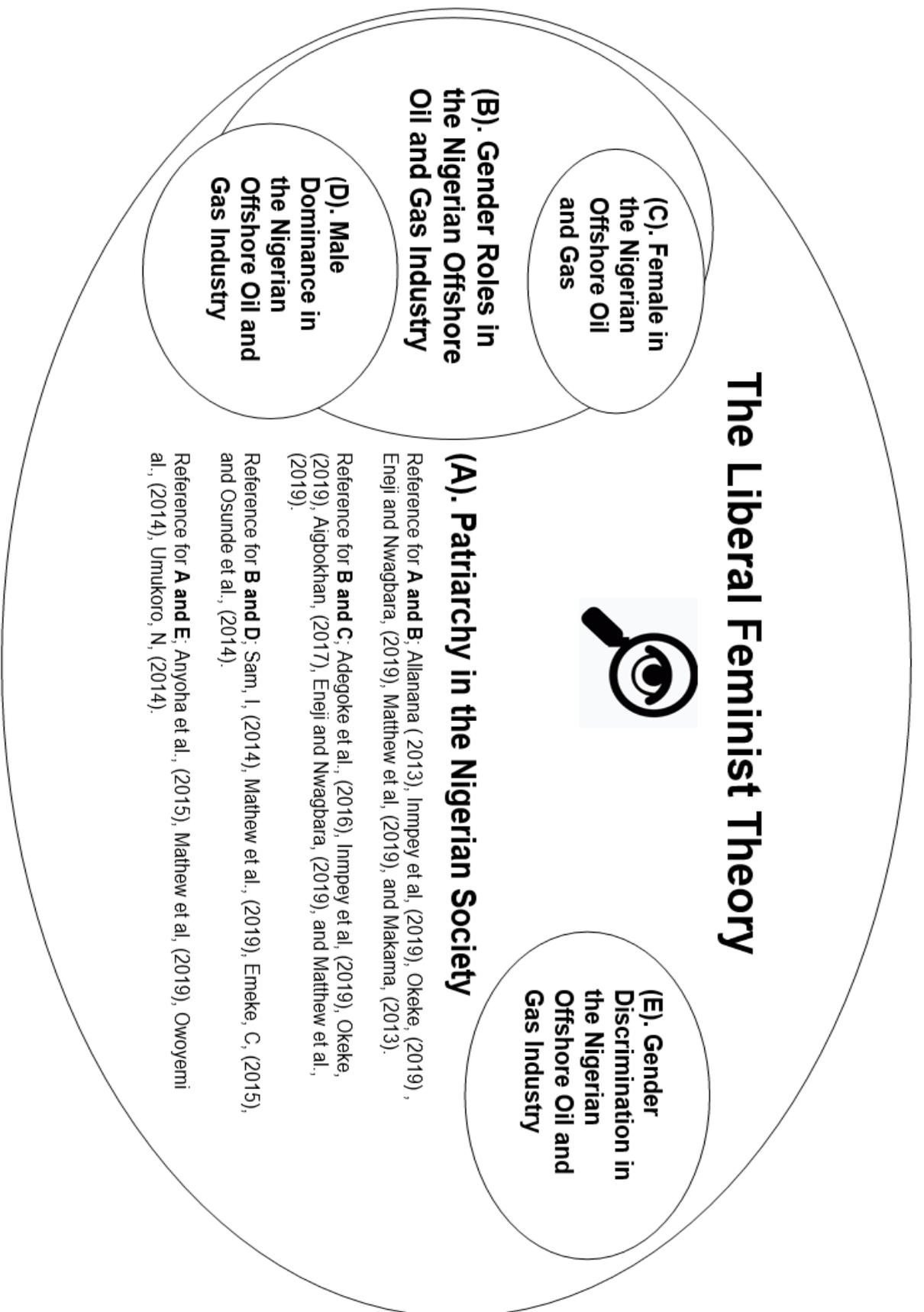


Figure 3.1. Theoretical Framework for Inequality in Gender Employment in the Nigerian offshore Industry

As discussed above, Figure 3.1 illustrates the theoretical framework developed for gender inequality in the Nigerian offshore industry. It shows that the liberal feminist theory was used to investigate the effects of (A) patriarchy in the Nigerian society on (B) gender roles and (E) gender discrimination, while (B) gender roles were used to investigate (C) females in the Nigerian offshore and (D) male dominance.

Table 3.2 below shows the relationship between the theoretical framework for this research.

Theoretical Framework Area	Influence Between Theoretical Framework Areas	Theoretical Framework Area	References
1. Patriarchy in the Nigerian Society.	A to B	Gender Roles in the Nigerian Offshore Industry.	Allanana, (2013), Inmpey et al, (2019), Okeke, (2019), Eneji and Nwagbara, (2019), Matthew et al, (2019).
2. Gender Roles in the Nigerian Offshore Industry.	B to C	Females in the Nigerian Offshore Industry.	Adegoke et al., (2016), Inmpey et al, (2019), Okeke, (2019), Aigbokhan, (2017), Eneji and Nwagbara, (2019), Matthew et al., (2019).
3. Gender Roles in the Nigerian Offshore Industry.	B to D	Male Dominance in the Nigerian Offshore Industry.	Sam, I, (2014), Mathew et al., (2019), Emeke, C, (2015), and Osunde et al., (2014).
4. Patriarchy in the Nigerian Society.	A to E	Gender Discrimination in the Nigerian Offshore Industry.	Anyoha et al., (2015), Mathew et al, (2019), Owoyemi al., (2014), Umukoro, N, (2014).

Table 3.2. Links and References for the Theoretical Framework for Employment Inequality in the Nigerian Offshore Industry

Below is a detailed description of the theoretical framework for this research, discussing the effects of (A) patriarchy in the Nigerian society on (B) gender roles in the Nigerian offshore industry, and (E) gender discrimination in the Nigerian

offshore industry, and (B) gender roles in the Nigerian offshore industry on (C) females in the Nigerian offshore industry, and (D) male dominance in the Nigerian offshore industry, and why it was decided to adopt the liberal feminist theory.

### **3.10 Discussion of the Theoretical Framework**

#### **3.10.1 A to B: Patriarchy in the Nigerian Society on Gender Roles in the Nigerian Offshore Oil and Gas Industry**

As discussed in Chapter 1.4, Allanana (2013), Inmpey et al. (2019), Okeke (2019), Eneji and Nwagbara (2019) and Matthew et al. (2019) all concluded that the patriarchy in the Nigerian society is the primary factor for employment inequality in the Nigerian workforce. However, there is insufficient evidence surrounding gender inequality in the Nigerian offshore industry (National Bureau of Statistics, 2018). This research aimed to explore if the hypothesis from the Nigerian workforce could be transferred to the Nigerian offshore sector.

Patriarchy is a major driving force in the Nigerian culture, Allanana (2013) argue that in Nigerian society, female are subdued to inferior community members. Hence, the harmony of a universal acceptance that females are better at domestic chores. Okeke (2019) write about the nature of the society which celebrates males as being unique, more potent and fit for the public space, while females are feeble and meant to stay within the confluence of the domestic areas (Inmpey et al., 2019; Eneji and Nwagbara, 2019; Matthew et al., 2019).

Eneji and Nwagbara (2019) cite that the Nigerian society is governed by patriarchy, which results in gender roles that lead to gender discrimination. According to the African Development Bank (2019), despite the call for female empowerment into the maritime industry, the number of females turning towards this sector for employment is relatively low. Amon (2017) agrees that there are still many factors influencing females gaining employment in this sector. She concludes that offshore is a male-dominated industry, resulting in gender discrimination.

### **3.10.2 B to C: Gender Roles in the Nigerian Offshore Oil and Gas Industry on Females in the Nigerian offshore Oil and Gas Industry**

Allanana (2013) concludes that patriarchy is a major driving force in the Nigerian culture. Okeke (2019) write about the nature of our societies which celebrate men as being unique, macho and fit for the public space while females are feebly meant to stay within the confluence of the private space (Inmpey et al., 2019; Eneji and Nwagbara, 2019; Matthew et al., 2019).

There is insufficient evidence regarding the actual statistics of females in the Nigerian offshore industry. Therefore, it is impossible to ascertain if the roles are gender-based. However, evidence from the oil and gas and mining extractive industries in Nigeria shows that these industries have historically been male-dominated at all levels (Trading Economics, 2018). Hence, suggesting a gender prejudice in the allocation of roles in this sector. Matthew et al. (2019) write that females have been as crucial as males but are not treated fairly in the Nigerian society. She concluded that females should be awarded the same equal opportunities and privileges as their male counterparts to aid economic development in Nigeria. Li (2017) suggest that there are assigned gender roles in all cultures, which may be the case with the Nigerian offshore sector, resulting in male dominance.

### **3.10.3 B to D: Gender Roles in the Nigerian Offshore Oil and Gas Industry on Male Dominance in the Nigerian Offshore Oil and Gas Industry**

Employment based on gender brings about a domination of the majority gender. As explained in Section 3.10.1 above, the Nigerian culture is underpinned by patriarchy, and this, in turn, leads to gender roles and therefore results in gender discrimination in the Nigerian workforce (Allanana, 2013; Inmpey et al., 2019; Okeke, 2019; Eneji and Nwagbara, 2019; Matthew et al., 2019).

According to the National Bureau of Statistics (2018), the Nigerian workforce is male-dominated. It is understood that the Nigerian society is governed by

patriarchy, allowing for males to dominate every setting, including the workforce, resulting in the creation of gender roles and discrimination. It is assumed to be transferred to the Nigerian workforce, including the Nigerian offshore industry resulting in the shortage of females in these industries (Trading Economics, 2018; Mathew et al., 2019; Anyoha et al., 2015; National Bureau of Statistics, 2018).

In the Nigeria society, there is a general awareness of females as instinctively mismatched with males. It gives rise to the illogical public development of gender jobs amongst males and females (Allanana, 2013). As a result, males come first in the system, while females are expected to be subordinate to males in the features of the workforce (Obiora et al., 2019). Therefore, males have supplementary privileges at home and in the community and more privileges to the ownership and control of many things in the society, including lands, which is a significant source and means of economic empowerment (Ajala, 2016). According to Azuh et al. (2016), gender roles are harmonized by gender discrimination. These are interactive actions accompanying males and females in a public and personal association, and these gender standards are strengthened in defining male and female characteristics. To comprehend how gender roles influence the shortage of females in the Nigerian offshore industry, the theoretical framework on how patriarchy is underpinned by gender discrimination will be investigated.

#### **3.10.4 A to E: Patriarchy in the Nigerian Society on Gender Discrimination in the Nigerian Offshore Oil and Gas Industry**

The Nigerian National Bureau of Statistics (2018) indicates that females only account for 38.16% of the Nigerian workforce, and due to insufficient evidence regarding the rate of females employed in the Nigerian offshore industry, the economic empowerment of females in the Nigerian offshore industry remains an area that is insufficiently explored. Therefore, raising the concerns on how low job formation, combined with a skills-prejudiced structure of labour, adds to preserving top levels of disparity in the Nigerian workforce (National Bureau of Statistics, 2018; Okeke, 2019). According to Olaogun et al. (2015), gender discrimination denotes the exercise of allowing or refusing privileges to an individual grounded on their gender. This kind of judgement results in prejudicial

action focused on an individual based on gender that deprives them of privileges, prospects, and funding in society (Olaogun et al., 2015). The Nigerian National Bureau of Statistics (2018) indicates that females only account for 38.16% of the Nigerian workforce. It shows evidence of low participation of females in the Nigerian workforce, resulting from gender discrimination in this industry, as concluded by (Matthew et al., 2019). Female's economic empowerment in the Nigerian offshore industry remains an area that is inadequately investigated. Therefore, raising concerns about low job formation contributes to the high level of inequality in this industry (Okeke, 2019).

According to Olaogun et al. (2015), it is not easy to build a homogenised workforce because gender discrimination is connected to stereotyping, and prejudice does occur in most establishments and remains unattended. It is typically established in chauvinist dialect, aggravation and discernment at work. Gender discrimination does exist in every society, but it seems to be a most common practice in African countries due to the patriarchal system they operate (Ajala, 2016).

Link Between Framework	Theoretical Framework Area	Theoretical Framework Area	Summary
1. A to B	Patriarchy in the Nigerian Society.	Gender Roles in the Nigerian Offshore Industry.	This link highlights the connection on how patriarchy in the Nigerian society affects women and the ratio of their admittance into this industry. This link focuses on the inequalities channelled towards females due to the patriarchal nature of the Nigerian society.
2. B to C	Gender Roles in the Nigerian Offshore Industry.	Females in the Nigerian Offshore Industry.	According to Trading Economics (2018), the oil and gas and mining industries in Nigeria have historically been male dominated at all levels, particularly leadership roles in major corporations. This suggest a gender bias in the distribution of roles within these sector.
3. B to D	Gender Roles in the Nigerian Offshore Industry.	Male Dominance in the Nigerian Offshore Industry.	Employment based on gender brings about a domination of the majority gender. According to the National Bureau of statistics (2018) the Nigerian work force is male dominated, but although there is not enough statistical evidence to show the ratio of female in the Nigerian offshore industry, it is understood that the Nigerian society is governed by patriarchy, allowing for male domination.
4. A to E	Patriarchy in the Nigerian Society.	Gender Roles in the Nigerian Offshore Oil and Gas Industry	This section is underpinned by the notion that the Nigerian offshore industry is influenced by gender roles, and therefore attracts more male employees, resulting to fewer females being admitted into this industry. Eneji and Nwagbara (2019) concluded that the Nigerian society is governed by patriarchy, which results to gender roles, thereby leading to gender discrimination.

Table 3.3. Discussion of the Theoretical Framework for Gender Employment in the Nigerian Oil and Gas Sector

### 3.10.5 The Liberal Feminist Theory

The liberal feminist recognises that there are gender inequalities in a society; but advocates of this doctrine believe that it is the individuals' responsibility to improve their situation (Samkange, 2015). According to Azuh et al. (2015), gender disparity is embedded in all walks of life, including homes, employment, community, and government. Therefore, the fight for gender equality requires socially and individual solutions. These solutions have been framed as feminist politics, and they emerge from feminist ideas about the causes of gender inequality in the society (Lorber, 2005). The liberal feminist 'believes that everyone is born equal. Therefore, equal openings must be awarded to everyone. Female discrimination arose because of the neglect and non-implementation of this doctrine (Mpu and Adu, 2019). The liberal feminist cautions that nobody should benefit from any standing gender variances as both males and females are essential in the organisation's growth, so they should be treated equally. 'It is also important to note that no society could prosper if half of its resources are abandoned' (Mpu and Adu, 2019).

The liberal feminist was trying to link the opening between males and females. They emphasise that females should be given identical privileges to contribute to day-to-day actions as their male colleagues. This theory also tries to eliminate sexism and stereotypical view towards females (Mpu and Adu, 2019).

This research is focused on investigating inequalities faced by females employed in the Nigerian offshore industry. This sector remains one of the least gender-diverse industries in the economy, with sparse female representation in STEM roles (Anyoha et al., 2015). The promotion of gender equality and employment possibilities is significant in the Nigerian offshore industries. However, there are significant gender gaps in entree to chances and wealth generated by this industry in Nigeria (International Labour Organisation, 2018; Lawanson and Umar, 2019; Inmpey, Opara, and Iloh, 2019).

Table 3.3 above summarises the theoretical framework for gender employment in the Nigerian oil and gas industry.

### **3.11 The Liberal Feminists Theory Applied to Gender Inequality in the Nigerian Offshore Oil and Gas Sector**

After an extensive study on this research subject, the liberal feminist perspective was chosen to address the inequalities faced by females in the Nigerian offshore industry. The liberal feminist approach focused on Mary Wollstonecraft ideas to ensure females have admission into segments of society that were primarily forbidden to them in the 18th century. It has been deduced that this is the most appropriate theory for this research study. The objectives of liberal feminists are to have entrees into the male-dominated workforce and receive equal wages and advancement in these organisations (Lewis, 2019).

The liberal feminist concept can be described as an original approach that focuses on females having impartiality by taking responsibility for their activities and decisions (Brookes, 2008; Samkange, 2015). Giddens (2001:692) argue that liberal feminism is an idea that accepts that gender inequality is generated due to limited admission of females to have the basic privileges or allocated communal amenities, including employment and education.

According to Lewis (2019), liberal feminism relies on the state and political privileges to achieve fairness. They view the government as the guardian of individual privileges. Liberal feminism supports confirmatory deeds and regulations necessitating organisations and other bodies to put notable efforts that embrace females into their range of interviewees, presuming that the historical and present discrimination might negate several qualified female applicants (Heaney, 2019).

Notably, the Liberal feminists felt that discrimination regarding gender and wages in employment was a method devised to eliminate females from the workforce. Their dogma is surrounded by the policy of anti-discrimination and the same chances for everyone. The liberal feminist claims that gender inequality mostly ascends from preconception (Bittman, 2001). By comprehension rather than viewing them around gender, Wollstonecraft critiqued Jean-Jacques Rousseau philosophy of defending privileges. Rousseau's notion was that females were

unable to think for themselves, and only males should be trustworthy to provide logical reasoning, implying that females were unreliable (Lewis, 2019).

Liberal feminist theory was centred on the belief that an individual's unawareness adds greatly to gender preconception. It is addressed by this individual comprehending the need to react and understand that a change is required in their ideology (Samkange, 2015). According to Bittman (2001), liberal feminism desires females to disregard the domestic life and partake completely in the workforce challenging males for obtainable commercial benefits by getting employment. It follows the outdated domestic separation of roles, where males are the sole breadwinner and females are the wives and mothers. It follows that the wife is economically more dependent on the breadwinner. The liberal feminist assumes that the requirement of the homemaker is on her as a spouse, and not her gender, is accountable for gender roles. This dogma implies that as soon as females attain financial liberation, gender impartiality at home will commence.

### **3.12 The Alignment between the Liberal Feminist Theory and Gender Inequality in the Nigerian Offshore Industry**

Although radical and liberal feminist approaches are among the most common methods to combat gender issues within society, they both apply different procedures. They both use different approaches in advocating for improvement in society. Radical feminists are certain that gender inequality results from the gender differences between males and females, and they call for a revolutionary means to fight this domination. In contrast, liberal feminists call for a political reformation to bring changes. Liberal feminist methods include laws and policies to fight gender inequality in the community (Samkange, 2015).

As explained in the previous sections, liberal feminists viewed gender inequalities as oppression driven against females in society. The goal was to fight discrimination and unequal opportunities against females (Bittman, 2001; Heaney, 2019).

Mary Wollstonecraft called principally for the privilege of females to have an education. She was certain that liberation could be achieved through education

(Lewis, 2019). Wollstonecraft did acknowledge that the female's province was in the home. During her time, it was claimed that she never segregated the home from community life as with many other philosophers of that era. Wollstonecraft assumed the community life and the home are connected and not detached. Hence, to form a basis for community and private life, she made the home vital. She further contended that the economic, or the community life, improves and aids both individuals and households life. She quotes 'that males and females have responsibilities to both the households and the community (Lewis, 2019).

Liberal feminism emphasised the mutual emotional and ethical abilities of males and females in a society. They requested that females leave their homes and be visible in the community to attain mutual benefits in the society (Tong, 2001). This research is based on Wollstonecraft approach of liberal feminism to understand female's oppression in the labour market regarding employment discrimination in the Nigerian offshore industry and not neglecting their homes.at the same time.

There is insufficient statistical data to indicate the ratio of males to females in the Nigerian offshore industry. However, records show the Nigerian workforce is still male-dominated, with females accounting for only 38.16% of the Nigerian workforce (National Bureau of Statistics, 2018). Due to the patriarchal nature of the Nigerian society, Eneji and Nwagbara (2019) concluded that there are fewer females in employment in this sector. However, they possess all the requirements required for employment; they are still limited when it comes to gaining employment (Matthew et al., 2019). Generally, for an individual to be liable for employment in any category of the Nigerian offshore industry, the appropriate qualification needs to be obtained for the related industry. The National Bureau of Statistics (2018) identifies that the 'gender disparity in the Nigerian educational system in 2016 was 47.50% for females, compared to 52.50% for males'. Although this percentage is almost comparable to their male counterparts, no mention is made regarding the percentage of the courses studied related to STEM roles.

According to Hekman (1990; 120), feminists have come to realise that the reason why there are few females in science, or few female scientists are due to discrimination, as science has been defined as a masculine activity and that

females, due to their feminine qualities are incapable carrying out this profession. This serotyping is still faced by females in the current world, indicating why fewer females are in a male-dominated profession, especially in the STEM and offshore industry.

Currently, workplace discrimination could be more stigmatised to an individual than being collectively gender-driven. However, new female employees in a male-dominated profession always need to work extra to demonstrate that they have earned and can keep their employment. Bottomore (1991) mentions two kinds of inequality globally: 'natural or physical' as generated by nature. It includes differences in 'age, sex, health, body strength and abilities of the mind. The second, 'moral or political inequality', rests on an agreement established and authorised by the consent of males. The second inequality could be termed privileges, providing specific individuals with a yardstick to become prejudiced against others based on ethnic class or gender.

Van Laer and Janssens (2011; 1204) write about the failure of established policies regarding inequality in the workforce to sufficiently examine the ratio of prejudiced actions encountered by stigmatising females in the workplace. To achieve a perfect workforce, the disparity ratio between gender needs to be eradicated.

Saunders (1996; 57) explains that ability and motivation are the keys to lower working-class success. It could as well be applied to females in the workplace. Ely and Meyerson (2000) concluded that gender matters in a workforce start with the concept that organisations are fundamentally gendered due to having been developed by males for males. This dominant male culture has been contained by cultural beliefs that systematise and clarify the organising of everyday life within and external the establishment. Liberal feminists recognise that female's labour is exploited, and they believe females are oppressed in the society (Marchbank and Letherby, 2007). It allowed feminists to fight for female's liberation and against oppressive social practices and ideologies (Lewis, 2002; Freedman, 2001).

### **3.13 Summary**

The investigator adopted a philosophical perspective focused on the liberal feminist views to investigate gender inequality in the Nigerian offshore industry. Implementing the Saunders Research Onion, the positivism philosophical view is adopted, employing the deductive approach and the mono quantitative questionnaire method, primary survey data will be collected in a cross-sectional time horizon. Finally, the survey data will be processed and examined adopting descriptive and parametric inferential statistics.

The theoretical framework developed for this investigation determined that the liberal feminist perspective was appropriate to investigate the effect that patriarchy in the Nigerian society influenced gender roles and gender discrimination in the Nigerian offshore industry, and also the effect of gender roles on the rate of females and male domination in this industry.

This section shows that the patriarchal nature of the Nigerian society underpins gender inequality in the Nigerian workforce, this tradition is embedded in the Nigerian society, including the domestic front and the workplace, thereby segregating females to unpaid domestic chores and males to professional paid employment.

The liberal feminist recognises and accepts that there are gender inequalities in the society, and they advocate for a peaceful reform by the adoption of policies and regulations to combat these ills. This section highlights that the investigator developed a theoretical framework underpinned by liberal views to investigate gender inequality in the Nigerian offshore industry.

## **4. CHAPTER FOUR. RESEARCH METHODOLOGY, RESEARCH METHODS AND DATA COLLECTION**

### **4.1 Introduction**

The research methodology section is the most critical chapter of this research. The goal of this chapter is to explain the specific path of the investigation.

The research methodology serves as the groundwork for this research. Collis and Hussey (2014) define a research methodology as a tactic to the research development surrounding the body of the methods used in the research. Therefore, choosing a suitable methodology for this investigation would influence the outcome. In order to select a suitable methodology for conducting this research, the researcher had to incorporate a suitable paradigm and a methodology underpinned by the paradigm selected (Creswell, 2003). Social science studies are usually driven by the theoretical approach, the philosophy, the paradigm of inquiry, the methodology and the methods chosen to carry out a research. Social science research normally follows the interpretivism/phenomenological paradigm of inquiry, while natural science research would typically lean towards a positivism paradigm of inquiry.

This chapter is designed to establish a suitable research methodology. It commences by explaining paradigms of inquiry from a positivism and the interpretivism views, and then selecting an appropriate paradigm of inquiry that underpins this research. According to Collis and Hussey (2014), the methodology chapter is a critical part of research in both the positivist and interpretivist study, but varies according to which paradigm of inquiry is selected.

This chapter also discusses the methods adopted to analyse the survey data received from male and female respondents in the Nigerian offshore industry. Before data collection, the data analysis method was investigated to ascertain that it was underpinned by the research study (Burgess, 2001; Kónya et al., 2016). Generally, to comprehend the primary outcome of an investigation, it is essential to establish the exact type of data that will be required early in the research development phase. The type of data collected for this research determined the most suitable statistical analysis that is selected, it also influences

the required sample size and the statistical power of this research (Lakens and Caldwell, 2019; Mathers et al., 2009). Burgess (2001) mention that the strength of the analysis of a research study depends on collecting good quality data, which results from a good design of the data collection instrument.

This research adopts the use of computer-aided software that supports parametric data analysis. Using computer-aided software, the researcher was able to save time, which resulted in greater accuracy and a lower probability of introducing any errors to the data (Birawani, 2018; Burgess, 2001; Mishra et al., 2019).

## **4.2 Paradigm of Inquiry**

A paradigm is an outline that directs how a piece of research is carried out grounded on the researcher's beliefs (Collis and Hussey, 2014). According to Denzin and Lincoln (2005), a paradigm is a set of beliefs that guides action, consisting of ontology, epistemology, methodology and methods.

Saunders et al. (2007) describe a research paradigm as the complete worldview that guides an investigation, in choices of methods, ontology and epistemology. Guba and Lincoln (1994) argue that questions about the research method are of lesser value than queries about the paradigms that apply to the research. Collis and Hussey (2009) state that the research paradigm assists in determining which methodology to accept and, in turn, recognises the data collection methods. Therefore, any paradigm of inquiry selected will have implications for the methodology selected and the consequence of the overall results. Guba and Lincoln (1994) stressed the importance of the paradigm of inquiry for a piece of research, stating that no researcher should research without having a clear understanding of what paradigm of inquiry underpins their research approach. Therefore, the researcher has extensively studied and compared paradigms of inquiries concerning the theoretical framework and has selected the appropriate paradigm of inquiry that best fits this research. According to Bell (2003), paradigms suggest a framework surrounding a recognised set of theories, methods, and data analysis.

The goals and philosophical perspectives for a piece of research typically determine the paradigm of inquiry used in a research. (Bryman and Bell, 2011; Strauss and Corbin, 2008). In order to accomplish the goals for this research, the researcher decided that the research will be underpinned by a positivistic view, supported by the critical theory paradigm of inquiry. The rationale for adopting this research tactic is because the positivism viewpoint denotes a set of notions regarding the type of realism explored (Bryman, 2012). The ontology and epistemology that underpins the critical theory paradigm of inquiry allow the researcher to investigate the existing phenomena, such as how the traditional history of patriarchy in the Nigerian society has shaped gender employment in the Nigerian offshore industry.

According to Collis and Hussey (2014;43), for hundreds of years, there was only one research paradigm called the positivism, which came into existence as a result of scientific achievements derived by Kuhn (1962) and stemmed from one source, which is today referred to as natural science. The development of social science brought about the birth of a second research paradigm called interpretivism.

The two main types of paradigm in business and management research are positivism and interpretivism (Maylor and Blackmon, 2005). These paradigms underpin the research methodology and methods. It is presumed that a social phenomenon cannot be measured. Hence, positivism is underpinned with quantitative methods of analysis grounded on a statistical analysis of quantitative research data. In contrast, interpretivism is grounded on the interpretation of qualitative research data (Collis and Hussey 2014).



Figure 4.1. A Continuum of Paradigm  
(Collis and Hussey, 2014; 45).

Paradigms can be applied from a positivism, post-positivism, critical theory or interpretivism/phenomenological perspective. However, it is essential to view

positivism and interpretivism as the extremities of a non-stop line of paradigms that can exist simultaneously.

Figure 4.1 shows the extremities of paradigms on a continuous line. Moving lengthways, the characteristics and philosophy of each paradigm are progressively relaxed. The critical theory, constructivist and participatory paradigm is more interpretive and leans towards the interpretivism paradigm of inquiry (Collis and Hussey, 2014;45).

Table 4.1 summarises the characteristics of positivism to interpretivism based on ontology, epistemology and methods, indicating the application of paradigms from positivism to interpretivism.

	<b>Positivism</b>			<b>Interpretivism</b>		
<b>Ontological Assumption</b>	Reality as a concrete structure	Reality as a concrete process	Reality as a contextual field of information	Reality as a realm of symbolic discourse	Reality as a social construction	Reality as a projection of human imagination
<b>Epistemological Stances</b>	To construct a positivist science	To construct system, process, change	To map contests	To understand patterns of symbolic discourse	To understand how social reality is created	To obtain phenomenological insight, revelation
<b>Research Methods</b>	Experiments, surveys	Historical Analysis	Interpretative contextual analysis	Symbolic analysis	Hermeneutics	Exploration of pure subjectivity

Table 4.1. Typology of Assumptions on a Continuum of Paradigm (Collis and Hussey, 49; 2014)

The criteria for selecting the correct paradigm of inquiry for an investigation is based on the research proposal, characterised by philosophy, ontology, epistemology, methodology and methods that underpinned the research study. As stated above, most social science studies are underpinned by an interpretivism/phenomenological paradigm of inquiry. In contrast, natural science research would generally lean towards a positivism paradigm of inquiry. Although Williams (2003) highlights the idea of most researchers embracing the post-positivism paradigm of inquiry because it was assumed to be a middle ground between positivism and Interpretivism.

#### 4.2.1 **The Positivism Paradigm of Inquiry**

This research will adopt the deductive approach developing hypotheses on a theory already in existence. These hypotheses will be tested with the inferential statistical method (Silverman, 2013). The deductive method is principally matched to the positivist approach, and it allows for the design of hypotheses and statistical testing of outcomes to a satisfactory level of possibility (Snieder & Larner, 2009). Many investigators in gender studies have used this approach to derive substantive results (Idike et al., 2020). The positivism paradigm emphasises objectivity, and it is linked to research methods related to quantitative data collection (Collis and Hussey, 2009; Bayo and Syed, 2018). The positivistic view will be used to design this research from a deductive approach, using a survey questionnaire to collect empirical data to understand individuals in the Nigerian offshore industry regarding employment inequality.

A positivistic approach is typically based on the ontology that realism is a concrete structure, objective and external to the researcher and is mainly carried out by scientific experiments to achieve quantified results that ensure reliability see Table 4.1. While applying the positivism view, researchers can separate themselves from the research, unlike interpretivism, where the investigator is linked to the investigation by dialogue between them and the subject investigated.

Philosophers developed the positivism paradigm due to their different schools of thought concerning a social reality (Collis and Hussey, 2014;43). Collis and Hussey (2014) mention that there was only one paradigm of inquiry for hundreds

of years (positivism). This paradigm was developed based on scientific achievements, it was based on how a natural science study is investigated and is built on the hypothesis that social realism is particular, impartial and not influenced by the study.

Positivism was identified during the mid-19th century and was closely linked with specific perspectives of empiricism, and also fitted well with the idea of the progress that typified this period. However, this paradigm was challenged by post-positivism because theories surrounding it could not be falsified, resulting in a more unified and less rooted mythological approach (Azuh et al., 2015). Howell (2013) cite that the methodology for the post-positivist position is about falsifying standing specific laws and the ontology concerned with criticising the existing reality. The major variation between positivism and post-positivism is that the positivism approach verifies theories, evidence and regulations. In contrast, post-positivism looks at falsification, indicating that the result of social science studies cannot be prearranged or forecasted.

#### **4.2.2 The Constructivism/Participatory Paradigm of Inquiry**

The constructivists on the other hand understand that reality is not objective. However, it is locally constructed, often under various social and cultural factors, grounded on public experience as groups/individuals are variable, constructivism is identified as 'relativist realism' or 'relative ontology' Guba and Lincoln, (1989). At the same time, the participatory paradigm involves a co-related reality through the interaction between the mind and the world, indicating that both the subjective and objective elements exist, and a participative process develops reality (Howell, 2013; Guba and Lincoln, 1989).

#### **4.2.3 The Interpretivism Paradigm of Inquiry**

The interpretivist paradigm was built on the ontology that realism is locally constructed and based on experience, which is subjective. This approach involves the researcher being included in the investigation (Howell, 2013).

Interpretivism, is a contrast to positivism on a nonstop line of paradigms that can occur instantaneously, consisting of critical theory, constructivist, and participatory paradigm of inquiry (Bryman and Bell, 2015). The interpretivism paradigm of inquiry originated due to a paradigm shift of the principle of idealism. It was a viewpoint relating to 'Kant (1724-1804) and later advanced by Dilthey (1833-1911), Rickert (1869-1936) and Weber (1864-1920)' (Collis and Hussey, 2014;44). According to Collis and Hussey (2014), a paradigm shift in the social sciences from the positivistic to the interpretivism views brought about the development of new paradigms near the end of the 19<sup>th</sup> century. These theories include the critical theory, constructivism, and participatory paradigms of inquiry (Collis and Hussey, 2014). These paradigms represent the interpretive views that highlight the relationship between understanding and the phenomenon investigated (Howell, 2013;25).

The interpretivism ideology was based on understanding reality (Thietart et al., 2011). They believe that social realism is not impartial but extremely particular and multiple since it is formed by our insights (Collis and Hussey, 2014;45; Kim, 2003). Interpretivism believes that reality and the researcher cannot be separated. Thus, our world perceptions are inseparably bonded to a stream of practices we experienced during our lives (Walker and Evers, 1991; Webber, 2004).

#### **4.2.4 Critical Theory Paradigm of Inquiry**

As defined by Quinlan et al. (2015), critical theory is the examination and critique of a society, intending to expose systems of domination through a focus on values and norms.

The critical theory paradigm of inquiry was developed in the late 1920s at the ISF, University of Frankfurt (Kihlstrom, 2020). According to Teo (2015), It stemmed from a critique of the great German philosophers that included Karl Marx, and Max Weber. Howell (2013) cite that the initiation of critical theory was to identify the problems the post-positivism left for the social sciences, therefore identifying and challenging events in institutions from a historical and qualitative perspective.

The critical theorist perceived that influential groups defined theories that are developed around historical change, and incorporate moral trials to standing theories, while the constructivist view is based on individuals actively engaging with and creating their world; that people perceive reality differently and create their understanding of a phenomenon. The participatory view advocates a philosophy in which the researcher and those being investigated are treated interdependently and responsive to one another during the investigation (Howell, 2013;26).

#### **4.3 Ontology, Epistemology and Methodology Concerning Gender Employment in the Nigerian offshore Oil and Gas Industry**

Ontology comprehends how history has shaped gender engagement in the Nigerian offshore industry. Inequality in the workforce is considered to affect females worldwide, especially in STEM roles. Ontology provides the link for the researcher to choose the most appropriate methodology to explore reality in the Nigerian oil and gas industry. It also provides the researcher with an understanding of the best paradigm that underpins this investigation (Collis and Hussey, 2014, Howell, 2013).

Applying the critical theory paradigm approach, the epistemology for this research would be aimed at understanding the relationship between historical issues surrounding gender inequality in the Nigeria offshore industry, studying philosophies and theories subjectively and objectively without any form of prejudice from the investigator's gender to the research subject or any historical beliefs.

The methodology governs how this research is conducted to achieve validated results. As detailed in the introduction above, this research will be underpinned by the positivist paradigm, applying the survey technique to gather primary survey data from individuals in the Nigerian offshore industry.

#### 4.4 The Research Methodology

Research methodology is a guide that enables the researcher to carry out this research within the boundaries of the research questions (Saunders et al., 2007). The selected methodology for this research is supported by a comprehension of this research paradigm. There are several research methodologies available, and they are based on the ideas of different philosophical views.

Table 4.2 below outlines different research methodologies from positivism to interpretivism views (Collis and Hussey, 2014). The choice of methodology is closely linked with the research design based on the paradigm of inquiry chosen (Collis and Hussey, 2014). According to Creswell (2009), a researcher's knowledge, strategies, and methods determine the methodology and establish the link between the paradigm of inquiry and the methodology adopted for the research.

<b>Positivism</b>	<b>Interpretivism</b>
Experimental studies	Hermeneutics
Surveys (using primary and secondary data)	Ethnography
Cross - sectional studies	Participative inquiry
Longitudinal studies	Action research
	Case study
	Grounded theory

Table 4.2. Methodologies Associated with Paradigms of Inquiry  
(Collis and Hussey 2014;60)

According to Clough and Nutbrown (2002;22), a research methodology provides the reasons for using a specific strategy. Therefore, to conduct a valid research, the most appropriate methodological approach must be adopted. The research methodology typically influences the decisions made during the research, and also the results of the research.

#### 4.4.1 The Survey Approach

The survey approach was adopted for this investigation. The survey technique is generally connected with the deductive strategy. It is used to gather significant and consistent data that applies to inferential statistical analysis. Surveys are principally linked to quantitative research. It encompasses a selection of the demonstrative amount in a community (Bryman & Bell, 2011). This method is mainly adopted to investigate contributory variables amid diverse samples; it allows the acquisition of large samples from the response of the research question.

### 4.5 Research Method

The goal of this chapter is to ascertain a suitable research method that underpins the research problem. This research scope is based on an investigation to understand whether patriarchy in the Nigerian society is the reason for the shortage of females in the Nigerian offshore industry. By intending to accomplish the objectives of this investigation, the researcher considered three strategies.

The first approach was to identify females and males employed in the Nigerian offshore oil and gas industry. These individuals were the subjects under investigation for the study.

The second approach was to undertake this research from a feminist perspective, adopting the liberal feminist philosophical approach. This approach is grounded on fighting the inequalities and oppression encountered by females in the society.

The third approach was to identify the appropriate data collection and analysis methods that support the research aims and objectives (Olsen, 2004; Siegmann and Blin, 2006). This research adopts the quantitative method, applying the survey questionnaire strategy, with pre-coded numeric answers to collect comparable data from individuals. This method is advantageous to this research because data can be collected from individuals spread across different companies with ease (Mathers et al., 2009). The pre-coded numeric answers can easily be input into computer-aided software to ease data analysis (Olsen, 2004).

Data for this research will be collected by sending out an extensive scale survey questionnaire to targeted respondents. This data will be analysed using descriptive and inferential statistical methods (Chang et al., 2016).

Research methods are techniques used for collecting research data. Data collection methods fluctuate along a continuum, with qualitative and quantitative methods at opposite extremes, although they could be triangulated. Saunders et al. (2007) cite that the different types of data that can be generated for a research are 1). Primary data, these are first-hand information generated from a source and 2). Secondary data, data collected from an existing source (Sekaran and Bougie, 2011). Research methods can adopt quantitative, qualitative or both (mix-methods) strategies for data collection, depending on the paradigm of inquiry, methodology and data analysis methods that underpins the research (Saunders and Lewis, 2009). Bryman and Bell (2015) define quantitative research as a research that emphasises quantification (numbers) for gathering and interpreting data. In contrast, qualitative research usually emphasises words to gather and interpret data (Campbell, 1999).

Survey data will be collected through the primary source for this research, which means that data will be acquired by the researcher's communication with the participants that will partake in this research through survey questionnaires (Collis and Hussey, 2014). The significant advantage of selecting this data gathering method is that the researcher will collect current, tailored and vital information surrounding the phenomenon under investigation (Mpu and Adu, 2019).

#### **4.5.1 Research Method for Gender Inequality in the Nigerian Offshore Oil and Gas Sector: The Survey/Quantitative Method**

This research will utilise the quantitative research approach, employing the survey questionnaire method. It will involve a sampling system, whereby data collection would be designed to ensure that appropriate respondents are targeted from the survey population essential to this research study (Simms et al., 2019; Rosenthal, 2016).

The surveys approach permits the collection of enormous data from a community effectively, and at a low cost (Saunders et al., 2003). The advantage of this method is that it allows for the analysis of data for easy comparison between respondents. This research is underpinned by the deductive approach, adopting the positivist philosophical view (Collis and Hussey, 2003). According to Bryman and Bell (2003; 53), a survey constitutes of a cross-sectional design about which data are collected. With this strategy, data collection is predominantly by the survey questionnaire'. It permits the researcher to gather quantitative data and perform data analysis quantitatively, adopting descriptive and inferential statistics methods (Saunders et al., 2007).

The motive for selecting the quantitative over the qualitative approach was to enable the researcher to perform an investigation with a high level of reliability. Generally, the quantitative approach commonly results in a high degree of reliability, while qualitative studies result in a high degree of validity (Collis and Hussey, 2014; Ricci et al., 2018). According to Ricci et al. (2018), the most suitable way to gather data to guarantee reliability is by performing quantitative research directly with the required community. This quantitative approach enabled the researcher to generate survey questionnaires that involved the population of interest, fully reflecting their perspective and ensuring that it is relevant to their condition.

An essential variance amid the quantitative and qualitative approaches is that the qualitative approach emphasises developments and context that is not rigorously scrutinised regarding quality, amount, intensity, or frequency. In contrast, quantitative researchers pursue responses to questions that emphasise creating a social experience (Denzin and Lincoln, 2000; Azorin and Cameron, 2010).

#### **4.5.2 Data Collection Method for the Offshore Oil and Gas Sector; The Close Ended Survey Questionnaire**

The data collection strategy employed for this research study was the survey strategy, adopting the closed-ended Likert scale survey questionnaire. Many researchers have used this method for a similar topic to generate satisfactory results (Adu, 2019; Kelley et al., 2003).

According to Creswell (2003), a survey can be described as a methodical approach for collecting evidence. It encompasses requesting information from an extensive collection of individuals regarding a specific topic to describe the characteristics of the larger community that the individuals have a membership. It provides a numeric explanation of a population's inclinations, feelings, and thoughts. In contrast, a questionnaire collects sensibly organised inquiries after extensive reviews; a questionnaire aims to provoke consistent replies from a preferred group of individuals (Jill and Roger, 2003).

Survey questionnaires comprise of two major types. Saunders et al. (2007) mention the following.

- I. The self-administered questionnaires: these are managed electronically via the internet or intranet. The posted method is where questionnaires are posted to respondents or given to each respondent by hand to pick up later (Saunders et al., 2007).
- II. The interviewer-administered: these are documented grounded on respondent's answers (Saunders et al., 2007).

Questionnaires could be made up of either open-ended or closed-ended questions. The benefits of the open-ended questions include the delivery of an unswerving understanding of a respondent's thoughts during an interview. On the other hand, the closed-ended questions are coded comparatively fast, while the open-ended questions entail human coding.

Abawi (2017) cite that a survey questionnaire is a research method that consists of a sequence of enquiries and other stimuli to collect material consistently from respondents to attain a reliable conclusion for a research study.

The questionnaire method for this research was structured as closed-ended questions, requiring the respondents to select an answer from a set of pre-coded answers, in a range from 1 to 6, indicating an agreement level (Abawi, 2017). The questionnaire method is appropriate for comparing the responses from large respondents. For this study, all the questionnaire questions were designed in a

closed format because it encourages respondents to answer all the questions (Mathers et al., 2009; Abawi, 2017).

The close-ended survey questionnaire method is respondent friendly, as it is easier for the respondents to pick answers when the questions are formatted appropriately. It has also been understood to increase the response rate (Burgess, 2001; Krosnick and Presser, 2009).

The questionnaire method was chosen for this research based on its suitability for collecting quantitative data requiring a high degree of reliability. It was also faster than other survey methods and attracts minimum cost (Ricci et al., 2018; Mpu and Adu, 2019; Thelwall et al., 2019; Mette et al., 2017).

This research survey questionnaire was designed with a total of thirty-four survey questions. The first eleven questions were used to group the respondents, while the remaining twenty-three questions were designed as a close-ended six-point Likert type questionnaire. It was done to increase the chances for more responses. Past studies have concluded that shorter questionnaires result in a significant increase in response rate, recording approximately 50% higher response rate than longer questionnaires. Therefore, there should be a trade-off between additional questions and larger sample size (Mpu and Adu, 2019; Sahlqvist et al., 2011).

Other research data collection methods include telephone, face to face interviews, and focus groups' (Quinlan et al., 2015; Zikmund, 2003; and O'Connor and Gibson, 2003). Nevertheless, the survey questionnaire was chosen for this research due to its advantages for this research over the other listed methods.

Liu (2016) concluded that although face-to-face surveys result in more response rates. the survey questionnaires sent by email provides better quality, including more rounded answers and a high degree of privacy for respondents. The questionnaire methods are also considered more economical, and fast, and known to cover a vast sample size (Key, 1997; Mathers et al., 2009; Abawi, 2017; Thelwall et al., 2019; Mpu and Adu, 2019).

Although the questionnaire offers this research a good number of advantages, there are also some shortcomings from using this method. The significant challenges with the questionnaire approach are clarity to respondents, phrasing, and the sensitivity of questions. Therefore, a pilot test is essential. A pre-test was carried out by sending questionnaires to some targeted respondents, and confirming their understanding of the questionnaire; this was done to identify and resolve any ambiguity in the survey questionnaire (Abawi, 2017; Zikmund 2003).

The survey questionnaire for this research was developed based on existing studies on the effect of patriarchy regarding the limited inclusion of females in the Nigerian workplace and offshore industry (Claessens et al., 2004; Mette et al., 2019). All the questions for this research were structured in a close format as they deliver directions that encourage the respondents to complete the survey questionnaire. The survey questionnaire for this research also contains a consent statement, requesting the participants agree to take part in the research. Due to practicality and logistics constraints, the questionnaires were sent to participants as a link via emails (Mette et al., 2017; Liu, 2016).

#### **4.6 Sample Size, Sample Requirements and Eligibility to Participate**

The sample size for this research is underpinned by the type of data collected, which determines the data analysis method (Mathers et al., 2009). According to Burgess (2001), many researchers complete the data collection phase before considering their data analysis method, leading to inadequate data and also inadequate interferences from data. The data analysis method also influences the required sample size. According to Uttely (2019), a critical consideration for any research is the sample size and the ability for the research to avoid making a type I or type II error. Uttley (2019) further identified that the sample size of a research has a significant influence on the sensitivity of a research, and the ability of the research to reveal a significant result about the sampled population. For example, insignificant sample size will not reveal a significant result, resulting in a type II error. Meanwhile, using an enormous sample size could result in a waste of resources. Therefore, the selection of an appropriate sample size is a very critical aspect of the research design.

This research used the quota sampling strategy; this method was chosen to avoid any form of bias from the research data. The scope of this research was to collect and analyse data from both male and female respondents to avoid a partiality during data analysis and interpretation of results (Mathers et al., 2009). The quota sampling method allows the researcher to identify critical characteristics for the required respondents relating to this research from a particular population (Onwuegbuzie and Collins, 2007).

According to Mathers (2009), surveys are not capable of producing precisely correct outcomes. Hence, sampling aims to attain a level of tolerable accurateness. There is also a probability of a margin of error around any figure produced due to a survey. Mathers gives an example of a survey carried out on 300 randomly selected patients, 75% were satisfied with their previous visit, this determined that at 95% confidence the actual result was 5% on either side of 75%, giving the research between 70% and 80% statistical power. It is referred to as the 95% assurance break.

Burgess (2001) cite that to determine the appropriate sample size for a research study, it is normally beneficial to work backwards from the estimated sample size required for the completed questionnaires. Meanwhile, many researchers have turned to power analysis and effect size software, for example, G\*Power 3, MorePower 6.0, and other estimation and power analysis software, to aid with power and effect size estimation during their research study (Abaci et al., 2012; Kang, 2015; Uttley, 2019). These software packages have been designed to be compatible with many statistical data analysis packages, including the ANOVA analysis package (Campbell and Thompson, 2012; Park, 2010).

#### 4.6.1 **Power Analysis and Effect Size Estimation for this Research: G\*Power**

To determine an approximate sample size to produce over 80% statistical power for this research, the researcher decided to adopt the use of G\*Power version 3.1.9.2. This is a power analysis and effect size estimation software used during various statistical tests for many social research (Faul et al., 2007; Faul et al., 2009; Park, 2010). Many social science researchers have used this power and

size estimation software to produce studies with over 80% statistical power, which is the minimum accepted statistical power requirement for a social science (Erdfelder et al, 2007; Kang, 2015; Abaci, et al., 2012; Uttley, 2019).

G\*Power was chosen for this research because of its ease of use and the wide range of studies for which it caters. Using G\*Power software, sample size and the research statistical power can be achieved by researchers with relatively little technical knowledge of statistics (Cunningham and McCrum-Gardner, 2007; Uttley, 2019).

According to Lakens and Caldwell (2019), an *a-priori* power analysis is performed by many researchers during a statistical power and effect size estimation for an ANOVA analysis. It is done to ensure that the study is adequately powered to yield informative results.

The *a-priori* power analysis test using G\* Power software was used to test the statistical power and effect size estimation for this research. An *a-priori* power analysis test is usually carried out before the research questionnaire is made public (Lakens and Caldwell, 2019). The *a-priori* power analysis test is ideal because it provides the researcher with an efficient method to control type I and types II errors, while determining the statistical power, and providing an estimated sample size (Faul, et al., 2007; Kretzschmar et al., 2016). An *a-priori* analysis is generally used to comprehend the necessary sample size of a test, if the Alpha ( $\alpha$ ) level, Effect size (f), Power ( $1-\beta$  error probability), and the number of groups are provided (Faul et al, 2007; Anaya et al, 2015; Uttley, 2019). An *a-priori* analysis measures the difference between the null hypothesis and the alternate hypothesis (Nochetto et al., 2014). The *a-priori* power analysis test for this research was carried out using the *f-test* from the test statistic family while utilising the ANOVA fixed effect, omnibus one-way from the statistical test. It is a test for the mean of a data set (Faul et al., 2007). The sample size is usually justified based on the statistical power of the *a-priori* test (Lakens and Caldwell, 2019).

Figure 4.2 shows the results from a power and sample size analysis test using the G\*Power. The G\*Power analysis and effect size estimation software was used to achieve an estimated sample size for this research. The results in Figure

4.2 shows that the smallest model extent essential to achieve a numerical strength of 80% and above for this research was 128 respondents. However, the researcher has decided to send out over 1000 questionnaires, although 640 is the estimated number of questionnaires that was required to be sent out based on the 20% rule, that a typical response rate for a questionnaire survey is assumed to be 20% of the significant subcategory of the target sample (Kelley et al., 2003). Therefore, to target the response of the above 128 respondents, five times the questionnaires were required to be sent  $(128 \times 5) = 640$ . This process was done to increase the statistical power of the research, as the more significant the sample size, the greater the statistical power, which in turn increases the possibility to detect a significance of a smaller size, and thus reduces the likelihood that the null hypothesis will be incorrectly accepted (Burgess, 2001; Mathers et al., 2009; Uttley, 2019).

Many researchers have sent out an average of 1000 questionnaires for comparable studies on gender inequality adopting the ANOVA data analysis. It is based on the 20% response rule and an estimated response rate to achieve above 80% power ( $1-\beta$  error probability), the level that produced statistically acceptable results (Stoker et al., 2011; Mani, 2011; Kónya et al., 2016, Chang, 2016; Wen, 2013; Bindah and Othman, 2012). For similar studies on gender inequality using ANOVA, Chadwell (2016) received a response from 207 respondents, enabling his research to produce statistically accepted results. Kule et al. (2019) sent out 700 questionnaires and received 147, indicating a 21% response rate. Ogbo, et al. (2014) adopted Taro Yamane's formula to conclude that a sample size of 300 was required for their research, thereby sending out 1200 surveys to achieve a research with a statistical power of 90%.

Uttley (2019) cite that assuming the null hypothesis ( $H_0$ ) is accepted when false, meaning that it is mistakenly accepted when it should be rejected, will result in a type II error. To avoid a type II error, the statistical power ( $1-\beta$  error probability) and the probability of finding a difference between groups if one genuinely exists were set to 0.8 (80%). Generally, the greater the power of a study, the lower the risk of a type II error occurring (Kennedy-Shaffer, 2018; Campbell and Thompson, 2012; Uttley, 2019). The sample size also influences the power of the research. The larger the sample size, the greater the statistical power and fewer chances

of a type II error. According to Kang (2015), statistical power is typically set at 0.8 or 80% for social science research, meaning that the researcher should have an 80% possibility of identifying a statistically significant variance when there is one. Naturally, before an investigation, it is also essential to establish the effect size for the research. It is used as part of the power analysis test (Park, 2010; Soderberg, 2015; Kang, 2015; Uttley, 2019).

The sample size estimation and power analysis test for this research, see Figure 4.2 was performed grounded on the expectations below.

1. Two groups will be investigated (male and female), this research study is carried out to collect data from male and female individuals regarding the observation on their employment in the Nigerian offshore industry.
2. Effect size ( $f$ ) is 0.25. It is the minimum size difference to be detected by the researcher for this research. The value of 0.25 based on Cohen's  $F$  is for a medium-size effect. According to Cohen (1988; 1992), the effect size for an  $F$  test ANOVA ranges from 0.10 for a minor effect, 0.25 for an average effect, and 0.40 for a big effect depending on the type of analysis employed in the research, and the targeted respondent demographic. Cohen (1992) proposed the medium effect size because it can approximate the average size of observed effects in various fields (Kang, 2015; Cohen, 1988; Chuan and Penyelidikan, 2006; Cunningham and McCrum-Gardner, 2007).
3. The alpha ( $\alpha$ ) probability error for this research was set to 0.05. This value of 0.05 is typically used for social science research (Conlin et al., 2019); it is the likelihood that a type I error has a 5% chance of occurring (Harrison et al., 2020) or the probability to reject the null hypothesis even if it is correct (Kang, 2015; Cohen, 1988).
4. The statistical power ( $1-\beta$  error probability) is established at 0.8 (80%). This is the likelihood of a type II error to occur (likelihood of discarding the null hypothesis if it is incorrect). VanVoorhis (2007), cite that the minimum power suggested by Cohen for a one-way ANOVA research using the

medium to large effects is 80%. Although the researcher has set power for this research to 80% to understand the lowest power to base this research on, it has been decided to collect over the limit of the sample size estimated by G\*Power, as this will increase the statistical power for this research (Kang, 2015; Cohen, 1988).

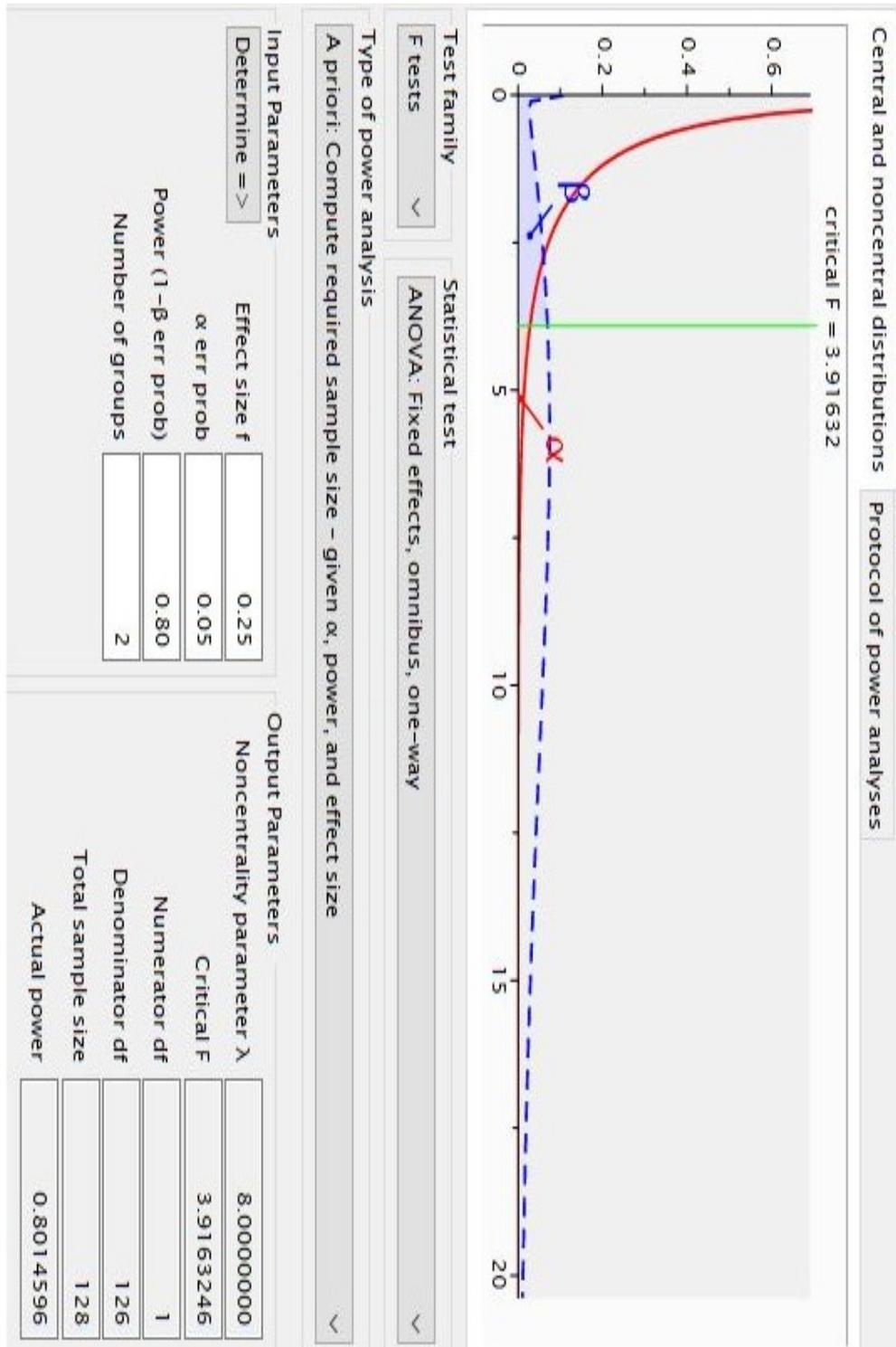


Figure 4.2. G\*Power Estimation Graph

Figure 4.3 shows a graphical representation of the total sample size against power (1- $\beta$  error probability). It can be noticed that as power increases, the total sample size also increases. Therefore, it will be wise to have a large sample size. As it will increase the chances of receiving more respondents and increase the research's statistical power (Lakens and Caldwell, 2019).

Although the statistical power for this research was set at 0.80%, the least accepted statistical power for a social science research (Kang, 2015; Cohen, 1988; Abaci et al., 2012; Uttley, 2019). The power and sample size estimate graph in Figure 4.3 and Table 4.3 shows that to achieve a statistical power of 0.90%, the researcher will require 172 responses, and to achieve a statistical power of 0.95%, the researcher will require responses from 210 respondents. As stated above, the researcher aimed to send out 1000 questionnaires with the intention of exceeding the calculated estimated response sample size. It was done to increase the statistical power of the research to be above the recommended statistical power of 0.08%.

	<b>Statistical Power (%)</b>	<b>Total Sample Size Required</b>
1	0.80	128
2	0.90	172
3	0.95	210

Table 4.3. Statistical Power and Total Sample Size

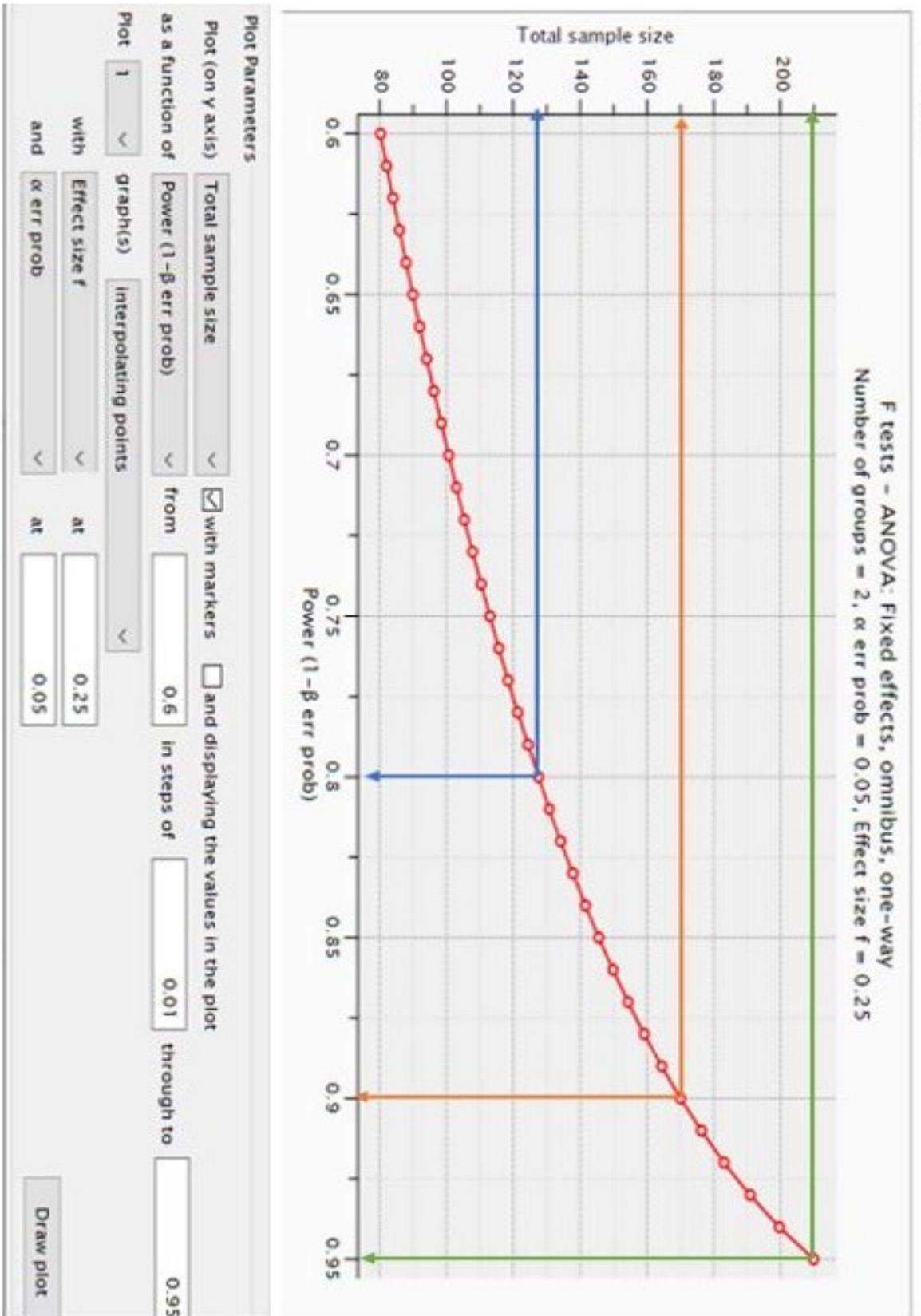


Figure 4.3. G\*Power Sample Size Graph

Participation in this research study was voluntary. Participants were sourced from offshore oil and gas unions and groups in Nigeria regarding the research subject under investigation. Additionally, colleagues and friends in the Nigerian offshore oil and gas companies were also encouraged to pass on the questionnaires to subjects of interest in the Nigerian offshore industry.

To be eligible to partake in this research, the researcher listed the following prerequisite to support the research study

1. All participants must be Nigerian males or females.
2. All participants must be over 18.
3. All participants must be educated in a course related to the offshore industry.
4. All participants must be working in the Nigerian offshore industry.
5. All participants must be seeking employment or working in the Nigerian offshore industry.

The survey questionnaire for this research was administered electronically between July and September 2020. A convenience sample of Nigerian male and female individuals in various Nigerian offshore companies were targeted. At the closure of the survey, 174 responses were received, of which 173 were valid, demonstrating a 27% response rate signifying a higher response rate compared to Kule et al. (2019) research of 21% response rate.

G\*Power was used again to determine the statistical power for this research based on valid responses.

Figure 4.4 and Figure 4.5 display that 173 responses received produce a statistical power of 90%; this was 10% over the stipulated standard statistical power of 80% required for a social science research (Kule et al., 2019; Konya 2019). Therefore, this research has a higher statistical power than similar investigations carried out by Chadwell (2016) and Konya 2019 that concluded their research with statistical powers of 0.7 and 0.8%, respectively.

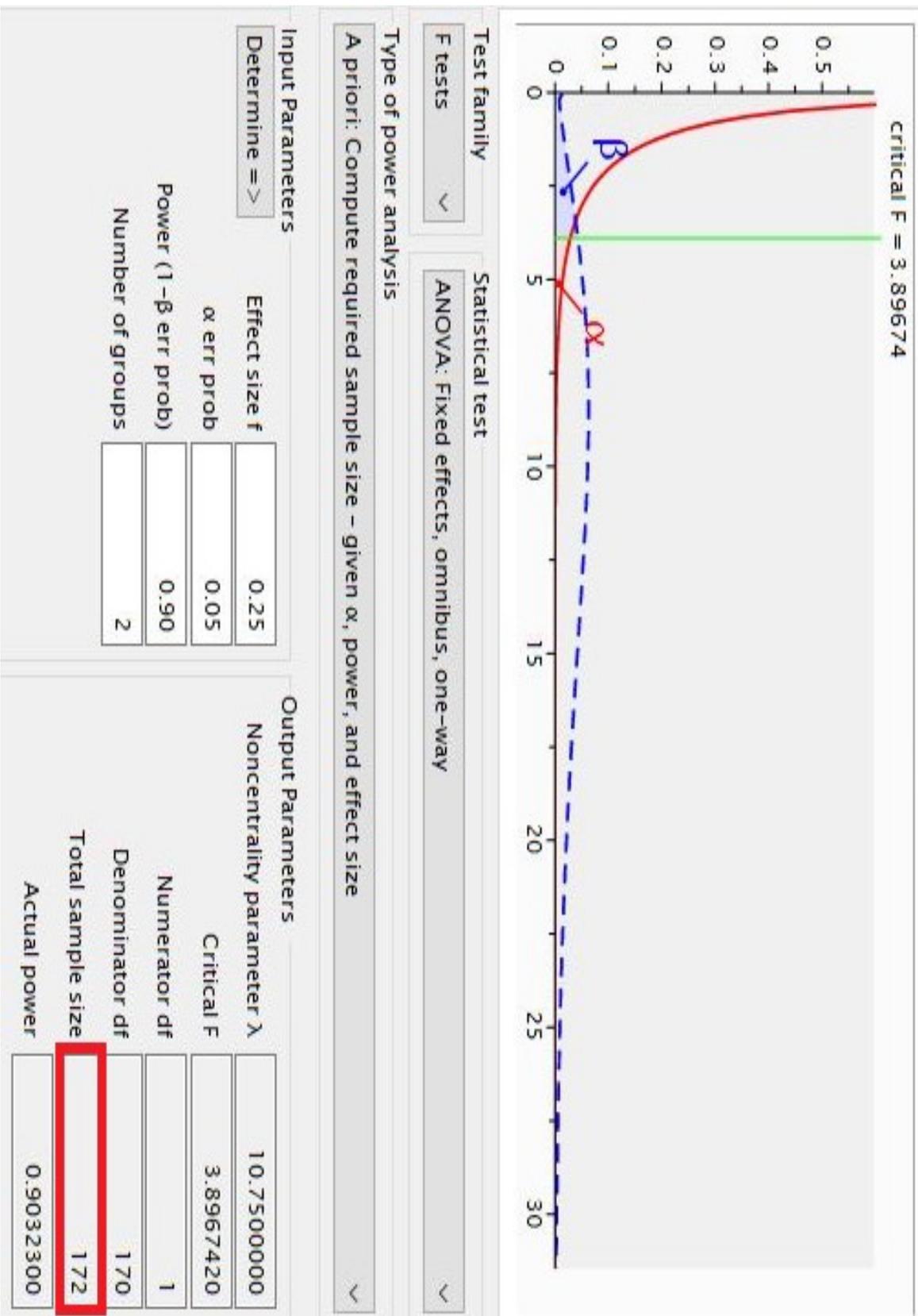


Figure 4.4. Final G\*Power Estimation Graph

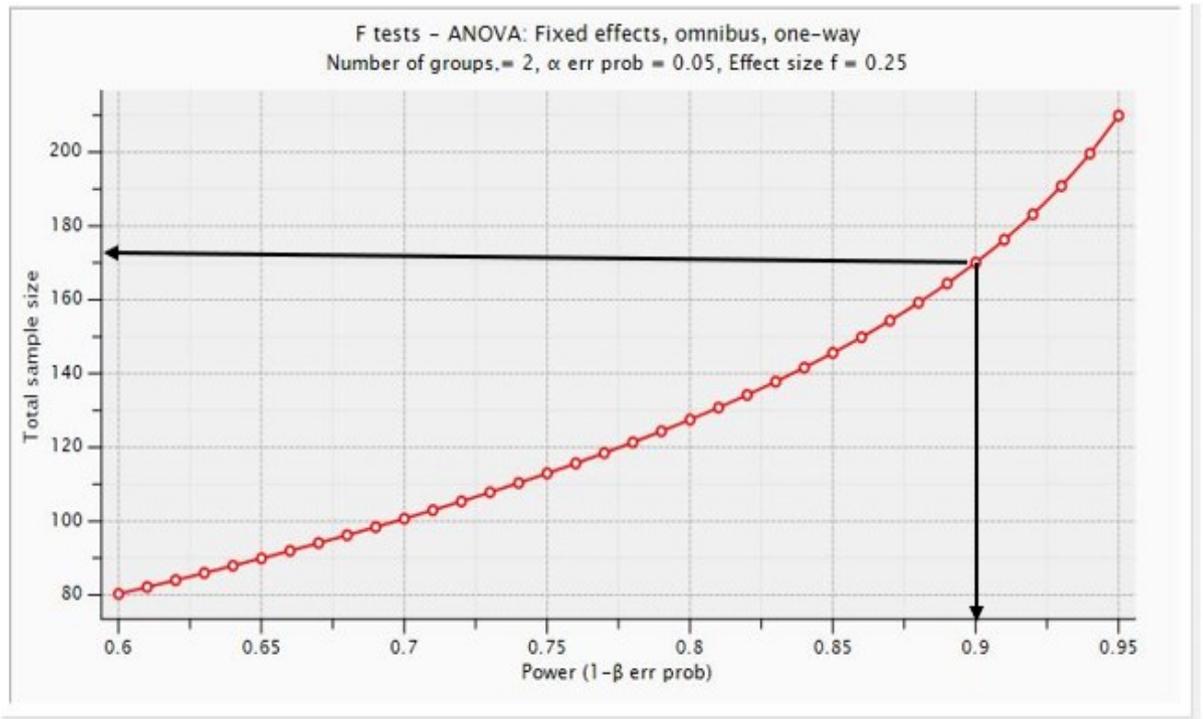


Figure 4.5. Final G\*Power Sample Size Graph

#### 4.7 Pilot Test

The pilot test for this research was administered using Jisc online survey tool. The aim was to achieve a response from 26 respondents. Baker (1994) recommends 10% to 20% of the primary sample size for a pilot study. This figure was derived based on the analysis in Chapter 4.6, indicating that the researcher requires over 640 questionnaires to be sent out for this research to receive above 80% statistical power. Therefore, considering the 20% response rate (Soderberg, 2015; Kang, 2015; Uttley, 2019), 128 pilot questionnaires will be sent out.

The results from the pilot survey indicated that all the respondents showed a complete comprehension of the survey questionnaire. Therefore, the final editing was carried out on the survey questionnaire, and the survey questionnaire was then made public.

A pilot test represents a cornerstone of a good research study (Hazzi and Maldaon, 2015). It is an essential initial step while conducting a research. Generally, researchers conduct a small-scale test to ascertain the best approach to carry out a bulkier investigation. The importance of the pilot for this research

was to improve the quality and efficiency of the investigation. The pilot was also used to disclose any grounding problems before the researcher commences with the actual research. The result from the pilot was used to gain information on the practicability and to recognise if any alterations were required for the main study. Generally, a pilot is conducted to improve an investigation and comprehend an appropriate approach to carry out the investigation. It also gives the research an inclination on the estimated time and resources required to complete a larger investigation (Crossman, 2019).

#### **4.8 Data Management Plan and Ethical Approval**

An essential factor that was taken into consideration during this research study was the ethical implications. Bryman (2016) writes about the ethical debate barely progressing since the 1960s because they are not readily capable of resolution. Therefore, it is imperative to be conscious of ethical values surrounding the nature of conducting a social research, especially with research involving human participants.

This research highlights ethical issues, as it involves investigating human attitudes towards the inequality encountered by females employed in the Nigerian offshore industry, meaning that an ethical process was required to seek the essential ethical approval from the University of Plymouth research ethics and integrity committee.

An application for ethical approval together with a data management plan for this research was submitted to the University of Plymouth in May 2020. The data management plan, see Appendix 3 covers sections from

1. Data collection, the type of data that will be collected and how the data will be collected.
2. Ethics and legal compliance, indicating that the research data for this research will be created, managed, and shared in a manner that is compliant with the University's code of good research practice, and

research ethics policy. The researcher also applied for ethical approval from the University's research ethics and integrity committee.

3. Data storage and back up, this section highlights that the researcher will ensure that data is stored in a secure location and managed in accordance with the University's information security classification policy and any additional ethical and legal requirements will be taken into consideration, it also indicates that data will also be backed up regularly, because of likely viruses and storage space.
4. Data preservation, this section indicates that selected data from this research will be stored in PEARL, with the researcher's consent to archive, share, or publish.
5. Data sharing, this section indicates that research papers written and published during the research period will be made available with a subset of data necessary to verify the research findings, in accordance with the University of Plymouth information security classification policy.
6. Responsibilities, this section highlights the researcher's responsibilities, indicating that the researcher is responsible for the overall data management for this research and the researcher will ensure that proper quality control is maintained throughout the research process.

On the 9<sup>th</sup> of July 2021, ethical approval was granted, meaning that the data management plan submitted for this research was satisfactory, see Appendix 2. Only after the ethical approval was granted, did the researcher have the liberty to make the survey questionnaire public and distribute it to the intended participants.

To guarantee that the individuals that will participate in this research understood, that participation was voluntary. They were required to consent to participation and affirm they comprehend the significance of the investigation, how their data will be collected and used for the research, and that they agree to partake voluntarily in the research study, also they were made to understand that there was a data management plan in place. all information are available to participants

on the first page of the survey questionnaire. This section of the questionnaire also contains an address affirming that participants have the right to decline the questionnaire and are free to withdraw at any time until the 30<sup>th</sup> of September 2020 without providing the researcher with any explanations, and there will be no penalty or no adverse consequences if they decide that they do not wish to continue participating in the research study. Had any participant wished to withdraw at any time, their data would be destroyed following the best practice set out by General Data Protection Regulation (GDPR).

It is also noted that the researcher undertook the University of Plymouth General Data Protection Regulation (GDPR) training, see Appendix 1 for the certificate. This training course enabled the researcher to understand how to comply with data management procedures and the EU's privacy law regarding data protection.

For ethical reasons, the names of the Nigerian offshore establishment, organisations, female groups, and all the individuals involved in this research would be anonymous.

#### **4.9 Questionnaire Design: The Six Point Likert Scale Questionnaire**

The survey questionnaire consisting of three sections was designed to gather data for the research, see Appendix 4 for the research questionnaire. The individuals were required to specify on a six-point Likert questionnaire the level at which they agreed or disagreed with statements produced around this research topic.

Section 'one' contains the confidentiality statement, section 'two' of the survey questionnaire comprises personal biographical questions, and section 'three' comprises of the six-point close-ended Likert survey questions.

The survey questionnaire for this research was administered using Jisc online survey tool. This method was cost-effective, fast and enabled the distribution to diverse sample locations.

Questions one to eleven of the survey questionnaire were used to collect grouping information, while questions twelve to thirty-four were designed as a six-point Likert questionnaire in a range from strongly agree to strongly disagree, requiring respondents to select the most appropriate response applicable to them, to seek out their opinion regarding the subject matter see Table 4.4. The six-point Likert scale comprises of a sequence of questions designed to understand the differences in opinion between male and female respondents regarding the effects of patriarchy on females in the Nigerian offshore, gender roles, male domination, and gender discrimination in the Nigerian offshore industry. This was designed from a liberal feminist perspective (Joshi et al., 2015). The Likert scale design for this research enabled the researcher to collect and comprehend the variances in respondents' opinions regarding this investigation, seeking to analyse their responses from the questionnaire (Sullivan and Artino, 2013). According to Jacques and Osman (2019), the six-point Likert survey questionnaire gives the respondents six dimensions of decision-making choices that avoids a middle ground response, unlike the five-point Likert questionnaire that gives room for respondents to supply a biased response based on the middle ground.

The Likert scale, developed in 1932 by Rensis Likert (Sullivan and Artino, 2013), was designed to measure attitude in a scientifically accepted and validated manner. Its purpose was to allow respondents to rate their agreement or disagreement level (Joshi et al., 2015). This method was developed to enable a researcher to collect quantitative data for easy analysis without transcribing data (Boone and Boone, 2012). According to Kelley et al. (2003), Likert scales are pretty popular because they are a reliable method to measure opinions, perceptions, and behaviours in the social sciences.

The survey questionnaire was designed based on the aims and objectives, research questions and the theoretical framework of this research.

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

Table 4.4. Scaling for Likert Questionnaire

A questionnaire is a survey method used for collecting comparable data from many individuals. This method is advantageous if the respondents are widely dispersed, as with this research (Mathers et al., 2009; Liu, 2016). Questionnaires usually consist of similar formats and are questions, statements, or stimulus words, with structured replies groupings that necessitate explanation from a respondent (Oosterveld et al., 2019; Mathers et al., 2009). For questionnaires to provide meaningful results, the questions need to be clear, precise and consistent across all respondents (Mathers et al., 2009). Some of the critical characteristics considered during the questionnaire design for this research include the following 1). The questionnaire title, 2). The instruction for completing the questionnaire, 3). Wording, clarity and understanding of the questionnaire, 4). Type of data that will be collected, 5). Data analysis method, 6). Length of questionnaire and 7). Sample size. Finally, as discussed in Chapter 4.7, a pilot test will be carried out to gain insight into how the respondents understand and respond to the questionnaire (Abawi, 2017; Zikmund 2003 Mathers et al., 2009). It was also imperative to comprehend that survey questionnaire questions were grounded on this investigations aims, objectives, research questions, the type of data to be collected and the data analysis method (Burgess, 2001).

As stated above, the Likert scale questionnaire is designed with a total of thirty-four questions. The first eleven is used for grouping the respondents, while questions twelve to thirty-four is designed as close-ended questions to ease understanding for the respondents and increase the response rate (Mathers et al., 2009). Sahlqvist et al. (2011) advised against lengthy questionnaires questions, a conclusion from their research indicated that shorter questions significantly increased the response rate (Kelley et al., 2003), thereby urging researchers to understand the balance between the worth of extra questions or a larger sample. The survey questions were set up after an extensive examination

of many relevant literatures surrounding gender inequality in the Nigerian offshore industry and the theoretical framework for this research (Oslen, 2004; Burgess, 2001).

The questionnaire questions were grouped into sections of the theoretical framework that underpins the research. See Appendix 4 for a sample of the survey questionnaire.

Table 4.5 below shows the connection between the theoretical framework and the survey questionnaire questions. The survey questionnaire questions were developed after extensive literature reviews on similar investigations.

The theoretical framework was divided into four sections, and survey questions were developed accordingly. A total of 23 questions were developed for this research. Each question was developed with a primary focus on the theoretical framework that underpins it.

Theoretical Framework Area	Survey Questions
<b>(A to B) Gender Roles in the Nigerian Offshore Oil and Gas Industry</b>	13. How much do you agree or disagree that it is better for the family that the man works outside the home? (Inmpey et al, 2019; Okeke, 2019; Eneji and Nwagbara, 2019; Matthew et al, 2019).
	16. How much do you agree or disagree that men are given more preferences than women during selection for job roles in the Nigerian offshore oil and gas industry? (Eneji and Nwagbara, 2019; Matthew et al, 2019).
	24. Do you feel that the Nigerian women are seeking favouritism when demanding for equality in the Nigerian offshore oil and gas industry? (Ablo, 2012; Mpu and Adu 2019; Eneji and Nwagbara, 2019; Aigbokhan, 2017; Organisation of Economic Cooperation and Development, 2015; Nigerian National Bureau of Statistics, 2018).
	31. How much do you agree or disagree that men and women should be treated as equals in the Nigerian offshore oil and gas industry? (Organisation of Economic Cooperation and Development, 2015; International Maritime Organisation, 2019; African Development Bank, 2019; United Nations, 1948).
	32. How much do you agree or disagree that a woman should be able to fill a top position in the Nigerian offshore oil and gas industry? (Adu 2019; International Labour Organisation, 2018; Lawanson and Umar, 2019; Inmpey, Opara, and Iloh, 2019).
	33. How much do you agree or disagree that the working in the Nigerian offshore oil and gas industry is a male role? (Trading Economics, 2018; Mathew et al, 2019, African Development Bank, 2019; National Bureau of Statistics, 2018).

Theoretical Framework Area	Survey Questions
<b>(B to C) Females in the Nigerian Offshore Oil and Gas Industry</b>	12. Can mothers who stay at home establish a better relationship with their family than mothers who work in the Nigerian offshore oil and gas sector? (Liu, 2016; Ablo, 2012; Mpu and Adu 2019; Allanana, 2013; Inmpey et al, 2019; Okeke, 2019; Eneji and Nwagbara, 2019; Matthew et al, 2019).
	15. How much do you agree or disagree that gaining employed the Nigerian offshore oil and gas industry is gender driven? (Trading Economics, 2018; Landau and Lewis, 2019).
	19. How much do you agree or disagree that women should work in STEM roles in the Nigerian offshore oil and gas industry? (International Labour Organisation, 2018; Lawanson and Umar, 2019; Inmpey, Opara, and Iloh, 2019).
	20. How much do you agree or disagree that women are stereotyped regarding their work ethic while working in the Nigerian offshore? (Matthew et al, 2019; Nigerian National Bureau of Statistic, 2018; Trading Economics, 2018; African Development Bank, 2019).
	21. How much do you agree or disagree that the offshore industry is suited for women? (International Labour Organisation, 2018; Nigerian National Bureau of Statistic, 2018; Trading Economics, 2018; African Development Bank, 2019).

Theoretical Framework Area	Survey Questions
<b>(A to D) Male Domination in the Nigerian Offshore Oil and Gas Industry</b>	14. How much do you agree or disagree that there is discrimination against women in the Nigerian offshore oil and gas industry? (National Bureau of Statistics, 2018; Okeke, 2019).
	17. How much do you agree or disagree that working in the Nigerian offshore oil and gas industry should be based on one's gender? (International Labour Organisation, 2018; Lawanson and Umar, 2019; Impey, Opara, and Iloh, 2019).
	18. How much do you agree or disagree that your gender influenced your chances of gaining employment in the Nigerian offshore oil and gas industry? (Liu, 2016; Ablo, 2012; Mpu and Adu 2019; Trading Economics, 2018; Mathew et al, 2019, African Development Bank, 2019; National Bureau of Statistics, 2018).
	22. How much do you agree or disagree that there should be gender diversity in the Nigerian offshore oil and gas industry? (Nigerian National Bureau of Statistic, 2018; Trading Economics, 2018; African Development Bank, 2019).
	23. How much do you agree or disagree that the news media should pay more attention to discrimination against women in the Nigerian offshore oil and gas industry? (International Labour Organisation, 2018; Nigerian National Bureau of Statistic, 2018; Trading Economics, 2018; African Development Bank, 2019).
	25. Do you feel that employers often discriminate against women during hiring and promotion? (Amon, 2017; Landivar, 2013; Thelwall et al, (2019).

Theoretical Framework Area	Survey Questions
<b>(A to E) Gender Discrimination in the Nigerian Offshore Oil and Gas Industry</b>	26. How much will you agree or disagree that you have ever lost a job opportunity because of your gender? (Nigerian National Bureau of Statistic, 2018; Trading Economics, 2018; United Nations, 1948).
	27. Do you feel it encourages more public awareness towards gender inequality in the workforce if women complain about discrimination? (Organisation of Economic Cooperation and Development, 2015; Nigerian National Bureau of Statistics, 2018; Trading Economics, 2018; Mathew et al, 2019, African Development Bank, 2019).
	28. How much do you agree or disagree that you receive the respect you deserve from your colleagues at work? (International Labour Organisation, 2018; Lawanson and Umar, 2019; Inmpey, Opara, and Iloh, 2019; Samkange, 2015; Lorber, 2005).
	29. How much do you agree or disagree that your manager encourages you at work with respect to your daily task? (International Labour Organisation, 2018; Lawanson and Umar, 2019; Inmpey, Opara, and Iloh, 2019).
	30. How much do you agree or disagree that you must work harder at your job because of your gender to be respected? (International Labour Organisation, 2018; Lawanson and Umar, 2019; Inmpey, Opara, and Iloh, 2019; Samkange, 2015; Lorber, 2005).
	34. In the Nigerian offshore oil and gas industry today, how much do you agree or disagree that men have more opportunities for advancement than women? (Trading Economics, 2018; African Development Bank, 2019; National Bureau of Statistics, 2018).

Table 4.5. Connection of the Theoretical Framework to the Research Questions for this Research

#### **4.10 Data Type for this Research**

As discussed in Chapter 4.9, the researcher engaged the use of a 6-point Likert scale questionnaire with pre-coded numeric answers for this research. This method was chosen to avoid errors during transcribing from other data collection methods and to ease data handling (Lucky and Fehintoluwa, 2020).

The Likert scale questionnaires have been used by many researchers for social science investigations, including the study of gender inequality, in combination with an ANOVA analysis to produce studies with over 80% statistical power (Stoker et al., 2011; Mani, 2011; Kónya et al., 2016; Bindah and Othman, 2012; Oosterveld et al., 2019). Wen et al. (2013) showed that they used the Likert scale data, combined with the one-way ANOVA data analysis method in their research to produce validity and reliability.

The response from the Likert questionnaire was ranked on an equal six-point Likert scale system, and the researcher considered that the difference in range between (1) strongly agree to (6) strongly disagree for the Likert results are equal (Allen and Seaman, 2007; Joshi et al., 2015). The researcher also confirmed that the pre-coded answers collected from the Likert scale survey questionnaire for this research improve validity and reliability. Providing the accuracy that the data collected for this investigation measured the requirement that it was intended to measure, to produce the required data representing the reality and the consistency of the results from this investigation (O'Connor and Gibson, 2003; Williams et al., 2014). Generally, the purpose of collecting this data was to understand the differences in opinion between male and female respondents regarding gender inequality in the Nigerian offshore industry.

As stated above, for ease of data handling and analysis, this research employed pre-coded numeric answers; it was chosen to avoid errors during transcribing from other data collection methods and to ease data handling (Burgess, 2001; Williams et al., 2014). According to Ursa et al. (2003), because the close-ended questions have distinct answers, are frequently vague with open coding, they are considered to be better for questionnaire survey research than the open-ended questions. On the other hand, they mention that open coding is normally isolated,

due to insufficient unwritten alterations with appearance. Driscoll et al. (2007) explain that the analytic process of combining qualitative and quantitative data by transcribing qualitative data can be time-consuming with increased room for error. Hence, applying the quantitative data collection method for this research enables the questionnaire data to be validated and generalised (Bazeley, 2008).

#### **4.11 Data Coding**

The Likert scale questionnaire for this research was designed using pre-coded numerical answers on a scale ranging from one to six (1 to 6), one representing strongly agree to six representing strongly disagree, see Table 4.4 (Landivar, 2013). The advantage of using pre-coded numeric response for this research was for ease of computer-aided data analysis, making it easier for data for this research to be entered into a computer software faster, and also to limit typographical errors (Mathers et al., 2009; Kelley et al., 2003; Joshi et al., 2015).

The data for this research was numerically coded see Table 4.4. Therefore, making it easy for it to be imported into the software for data analysis. After this was done, necessary checks were carried out to verify that there were no errors in the data, no blanks, outliers and typographical errors. Once this was established, the researcher proceeded with data analysis (Urša Reja et al., 2003; Ostertagová, and Ostertag, 2013).

#### **4.12 Normality Test**

To determine the most appropriate statistical analysis for this research, the researcher had to conduct a normality test (Chadwell, 2016). The normality test was carried out to determine whether to select the parametric or the nonparametric statistical data analysis (Oosterveld et al., 2019; Cain et al., 2016). This section discusses the method used to determine the most appropriate statistical approach that underpins this research.

A normality test was carried out for the research data using the descriptive analysis tool. The test compared the skewness and kurtosis values to determine if the research data followed a normal distribution (Cain et al., 2016). The

normality test results were used to determine the most appropriate data analysis method (parametric or nonparametric) applicable to this research (Mishra et al., 2019). According to Mishra et al. (2019), a parametric test should be used if the data follows a normal distribution. Otherwise, a nonparametric test should be used (Birawani, 2018). According to Ghasemi and Zahediasl, (2012), statistical errors are prevalent in published articles. The normality distribution of the research needs to be studied to avoid these errors, as it improves the validity of the research.

Mishra et al. (2019) write about the central limit theorem, stating that when a sample size has over 100 observations, as in the case of this research having 173 valid observations, the violation of the normality is not a significant issue, but for the meaningful conclusion, and to confirm the validity of this research, the assumption of normality was followed by undertaking a skewness and kurtosis test (Chadwell, 2016).

The survey data received from the respondents were grouped according to their theoretical framework areas A). Patriarchy in the Nigerian society, B). Gender roles in the Nigerian offshore industry, C). Female in the Nigerian offshore industry, D). Male domination and E). Gender discrimination in the Nigerian offshore industry, then skewness and kurtosis tests were carried out on each of these respective theoretical framework areas.

The skewness and kurtosis values from the tests carried out for this research indicated that the results followed a normal distribution; see Table 4.6. Therefore, the parametric one-way ANOVA statistical analysis was employed (Ostertagová, and Ostertag, 2013). To verify if the results of this research follows a normal distribution, the skewness value needs to be between **-1 to 1**, indicating a substantially skewed distribution, while the kurtosis value should fall between **-3 to 3** (Kim, 2013; Mishra et al., 2019).

Ostertagová and Ostertag (2013) argue that even if the distribution is slightly different from a normal distribution, one-way ANOVA can still produce valid results, provided the sample size is over 100.

<b>Patriarchy in the Nigerian Society</b>	<b>Kurtosis</b>	<b>-0.736763188</b>
	<b>Skewness</b>	<b>0.748725947</b>
<b>Female in the Nigerian Offshore Oil and Gas</b>	<b>Kurtosis</b>	<b>-0.520221476</b>
	<b>Skewness</b>	<b>0.73582243</b>
<b>Gender Roles</b>	<b>Kurtosis</b>	<b>-0.661300771</b>
	<b>Skewness</b>	<b>0.552080558</b>
<b>Male Dominance</b>	<b>Kurtosis</b>	<b>-0.544963531</b>
	<b>Skewness</b>	<b>0.344538056</b>
<b>Gender Discrimination</b>	<b>Kurtosis</b>	<b>-0.964774128</b>
	<b>Skewness</b>	<b>0.556868905</b>

Table 4.6. Skewness and Kurtosis Test Result

Cain et al. (2016) cite that the skewness and the kurtosis values are the most important indicators in comprehending the effects of nonnormality in the inferences made during an analysis of variance test. They are as well an instinctive method of comprehending a normality test.

According to Hair et al. (2017), skewness is used to determine the level of proportionality of the distribution. A distribution is considered skewed if the responses are tailed to the left or the right. At the same time, kurtosis is used to quantify the peakedness of a spread (Kim, 2013). Hair et al. (2017) specify that it is considered a normal distribution if the skewness and kurtosis have a zero value.

Sometimes most researchers analyse ordinal data as interval data. Allen and Seaman (2007) suggest that it may be due to the disagreement that parametric statistical tests, which is based on the central limit theorem, are more potent than

nonparametric alternatives. Also, assumptions that the comprehension of parametric tests are easier to construe and offer more evidence compared to nonparametric methods.

#### **4.13 Summary**

This investigation was carried out from the positivist perspective adopting the deductive approach as hypotheses were developed on existing theories, which allowed the use of statistical testing. This method allowed the adoption of the quantitative survey method, using survey questionnaires to collect primary research data. Due to time constraints, the investigator elected to adopt the close-ended survey questionnaire.

A total of 173 valid responses were received from the survey, signifying a 27% response rate, higher than the average response rate of 21% from other publications, this thereby signifies a 90% statistical power for this research. 10% higher than the statistical standard of 80% for a social science research. The pilot test carried out to gain an insight into how the respondents comprehended the survey questionnaire indicated that the respondents were happy to proceed with the main survey. Before the pilot test, the sample size estimation that was carried out to estimate the pilot size indicated that only 26 responses were required.

After submitting a data management plan and an ethical approval request, ethical approval was granted for this investigation. This was done as the investigation required human interaction, and an ethical process was required.

The survey questionnaire was developed around extant literature reviews and the theoretical framework using a Six-point Likert scale.

The skewness and kurtosis values from the normality test carried out for this research indicated that the results followed a normal distribution, thereby allowing the adoption of parametric statistical analysis.

## **5. CHAPTER FIVE. DATA ANALYSIS AND RESULTS (DESCRIPTIVE AND INFERENTIAL STATISTICS)**

### **5.1 Introduction**

This chapter deliberates on the statistical data analysis for this research. The statistical approach selected for the data analysis for this research was chosen based on its applicability to the investigative nature of this research.

Data from this research was first sorted and interpreted using descriptive statistics analysis. After that, the research hypothesis was tested using inferential statistics. The data management process for this research involved arranging the data into a meaningful order to make it easier to visualize and understand. Subsequently, an inferential parametric analysis was carried out using one-way ANOVA.

The researcher has designated to adopt the use of descriptive and inferential statistics for data analysis as a result of the investigative nature of the research, and the benefits of comparing the results from both research analysis. Konya et al., (2019); Boone and Boone, (2012); and Chang et al., (2016) all applied inferential statistics for similar studies to produce results with reliability and validity. The idea of combining both statistical data analysis methods was to enable the investigator to be able to comprehend results with the use of descriptive statistics and also test the research hypothesis with inferential statistics (Birawani, 2018; Hair et al., 2017).

Data for this research was collected by sending out a survey questionnaire between the 11<sup>th</sup> of July and the 30<sup>th</sup> of September 2020. The descriptive statistics analysis was used to sort the survey questionnaire responses, to confirm the total number of respondents, and make sure that there were no outliers or blanks, then bar charts were used to analyse and compare the survey responses. The descriptive statistics analysis from the survey questionnaire for this research confirms that out of the 174 responses received, 173 were valid, based on the survey questionnaire requirements. The results also show that out of the 173 valid responses, 131 responses were from male respondents

accounting for 76% of males in the Nigerian offshore industry, while 43 were from female respondents, accounting for 24% of females in this industry.

## **5.2 Descriptive Statistics Analysis for Gender Inequality in the Nigerian Offshore Oil and Gas Industry**

This section uses descriptive statistics to examine the results of the survey questionnaire. After the data was sorted, bar charts were created with responses based on agreement and disagreement from the male and female respondents that completed the survey questionnaire for this research. This method was used to analyse each theoretical framework (gender roles, females in the Nigerian offshore, male dominance and gender discrimination based on the influence of patriarchy). See Table 4.5 for the research questions and their theoretical framework areas.

The descriptive statistics analysis was used as the first stage of data quality assurance. It was used to sort out blanks, remove outliers, and to give insight into how the researcher understood the respondents in view of the survey questionnaire (Baglin, 2014; Mishra et al., 2019). With this method, the researcher was also able to comprehend the percentage level of the respondents for the various theoretical framework section for this investigation (Holt, 2014; Anggraeni, 2018).

### **5.2.1 Profile of Respondents**

The respondents' profile for this research is shown in Table 5.1 below, with variables collapsed into categorical variables. After analysing the respondent profile from the survey questionnaire for this research, it was identified that male respondents were the majority in all categories. Thus, supporting studies of Matthew et al. (2019), and Eneji and Nwagbara (2019) that the Nigerian workforce is male-dominated. The respondents' profile in Table 5.1 already indicates that the Nigerian offshore industry is male-dominated, this is connected to the traditional practice of patriarchy in the Nigerian society .

Question	Male Respondents	Number	%	Female Respondents	Number	%
3	<b>Marital Status</b>			<b>Marital Status</b>		
	Married	92	70.2	Married	17	41.9
	Single	24	18.3	Single	6	39.5
	In a relationship	12	9.2	In a relationship	18	12
	Divorced	3	2.3	Divorced	2	4.7
	Widowed	0	0	Widowed	0	0
4	<b>Children Status</b>			<b>Children Status</b>		
	Have	93	71	Have	17	39.5
	Don't Have	38	29	Don't Have	26	60.5
5	<b>Spouse working offshore</b>			<b>Spouse working offshore</b>		
	Yes	12	9.2	Yes	4	9.3
	No	119	90.8	No	39	90.7
6	<b>Offshore qualification</b>			<b>Offshore qualification</b>		
	Yes	119	90.8	Yes	34	79.1
	No	12	9.2	No	9	20.9
7	<b>Seeking Employment Offshore</b>			<b>Seeking Employment Offshore</b>		
	Yes	47	35.9	Yes	15	34.9
	No	84	64.1	No	28	65.1
8	<b>Currently Working Offshore</b>			<b>Currently Working Offshore</b>		
	Yes	84	64.1	Yes	25	58.1
	No	47	35.9	No	18	41.9
9	<b>Level of Education</b>			<b>Level of Education</b>		
	None	0	0	None	0	0
	Secondary School Certificate	0	0	Secondary School Certificate	1	2.3
	Vocational Training	1	0.8	Vocational Training	0	0
	National Diploma	5	3.8	National Diploma	2	4.7
	Higher National Diploma	13	9.9	Higher National Diploma	3	7
	Bachelor's degree and above	112	85.5	Bachelor's degree and above	37	86
10	<b>Previous Offshore Experience</b>			<b>Previous Offshore Experience</b>		
	Yes	100	76.3	Yes	25	58.1
	No	31	23.7	No	18	41.9
11	<b>Years working in the Nigerian offshore Sector</b>			<b>Years working in the Nigerian offshore Sector</b>		
	One to Two	16	12.2	One to Two	10	23.3
	Three to Five	18	13.7	Three to Five	6	14
	Over Five	81	61.8	Over Five	17	39.5
	Never	16	12.2	Never	10	23.3

Table 5.1. Respondent Profile

Table 5.2 represents a quick visual view of the percentage levels of respondents' regarding their level of agreement on whether patriarchy has any influence on this theoretical framework for this research that underpins the shortage of females in the Nigerian offshore industry.

Theoretical Framework Areas	Gender	Strongly Agree (%)	Agree (%)	Slightly Agree (%)	Slightly Disagree (%)	Disagree (%)	Strongly Disagree (%)	Total
Females in the Nigerian Offshore	Female	38%	15%	10%	5%	13%	19%	100%
	Male	24%	27%	15%	10%	14%	8%	100%
Gender Roles	Female	33%	31%	17%	5%	8%	6%	100%
	Male	18%	28%	22%	15%	13%	5%	100%
Male Domination	Female	39%	14%	11%	4%	14%	18%	100%
	Male	26%	26%	17%	9%	15%	7%	100%
Gender Discrimination	Female	36%	28%	13%	8%	7%	9%	100%
	Male	18%	31%	16%	10%	16%	10%	100%

Table 5.2. Respondents Percentage Table

Table 5.2 indicates that 38% of females compared to 24% of male respondents strongly agreed to patriarchy influencing females employed in the Nigerian offshore industry, thus resulting in the shortage of females in this industry. The results also indicate that 33% of females compared to 18% of males strongly agree to patriarchy influencing gender roles in this industry. In comparison, 39% of females, and 26% of males strongly agree that patriarchy influences male domination in this industry. Lastly, 36% of females, compared to 18% of males, responded strongly agree that patriarchy has an influence on gender discrimination as the factor for the shortage of females in this industry. This table shows that the lowest percentage of responses regarding the theoretical framework areas was between slightly disagree and strongly disagree. These results signify the support of Ogunleye and Osekita (2016) research confirming that there is gender inequality in the Nigerian workforce, and also supporting the theory that gender inequality in the Nigerian offshore industry is underpinned by patriarchy.

### 5.2.2 Analysis of the Descriptive Statistics Data for this Research

This section describes the descriptive statistics data analysis method for the survey questionnaire results collected for this investigation. The survey questionnaire questions were underpinned by the research questions and the theoretical framework for this research.

The descriptive statistics analysis for this research was based on examining the results from the survey questionnaire in Table 4.4. After the questionnaire data was sorted, corresponding bar charts were produced to interpret the perception of male and female respondents concerning each theoretical framework area. The bar charts were produced to compare male and female respondents, and their agreement level from strongly agree to strongly disagree, against responses received in percentages for each theoretical framework area.

### 5.2.3 Patriarchy in the Nigerian Society on Gender Roles in the Nigerian offshore Oil and Gas

Figure 5.1 below shows a bar chart of the results from male and female respondents regarding their perspective on whether patriarchy in the Nigerian society influences gender roles in the Nigerian offshore industry. This result shows the level of agreement of 65% between strongly agree to slightly agree for male and female respondents combined. It indicates that the majority of the responders answered in the agreement range that patriarchy influences the distribution of roles in the Nigerian offshore industry, thereby agreeing with studies by Allanana (2013), Inmpey et al. (2019), Okeke (2019), Eneji and Nwagbara (2019), and Matthew et al., (2019).

The results also indicate that 66% males and 63% females responded in the strongly agree to slightly agree range, while 34% males and 37% females responded slightly disagree to strongly disagree. The highest responses were males (27%) agreeing, and females (38%) strongly agreeing.

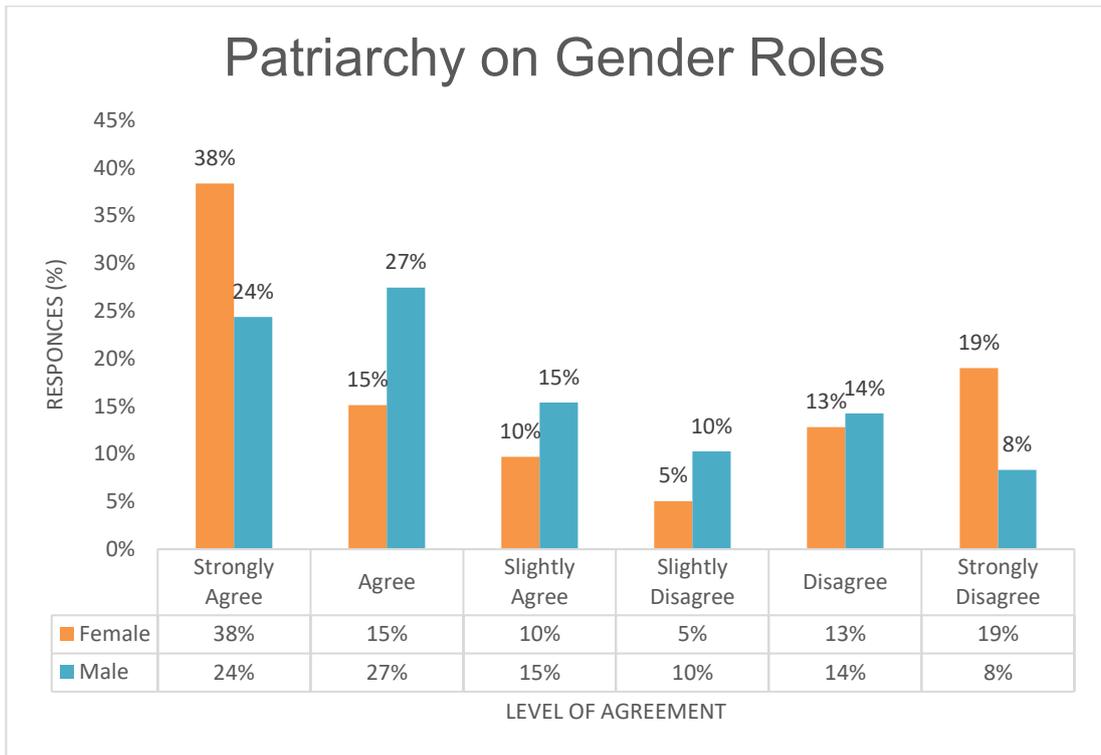


Figure 5.1. Bar Chart Result for the Effect of Patriarchy on Gender Roles in the Nigerian Offshore Oil and Gas Industry

#### 5.2.4 Gender Roles on Females in the Nigerian offshore oil and gas Industry

Figure 5.2 below represents the results of male and female respondents on their perspective regarding whether gender roles influence the rate of females in the Nigerian offshore industry. This result shows a level of agreement of 75% in total between strongly agree to slightly agree for both male and female respondents. This shows that the majority of the respondents agreed to patriarchy influencing gender roles, resulting in the low rate of females employed in the Nigerian offshore industry.

The results also indicate that 68% of males and 81% of females answered between strongly agree to slightly agree, while 32% males and 19% females answered between the slightly disagree to strongly disagree range. Again, the highest percentage of males (28%) answered agree, while the highest percentage of females (33%) strongly agreed.

Matthew et al. (2019) write about females being as important as males but are not treated fairly in Nigerian society and concluded that females should be awarded equal opportunities and privileges as their male counterparts. The results from this section agree that the majority of the individuals, both males and females, felt that gender roles govern this industry. Li (2017) suggest that there are assigned gender roles in all cultures, which may be the case with the Nigerian society.

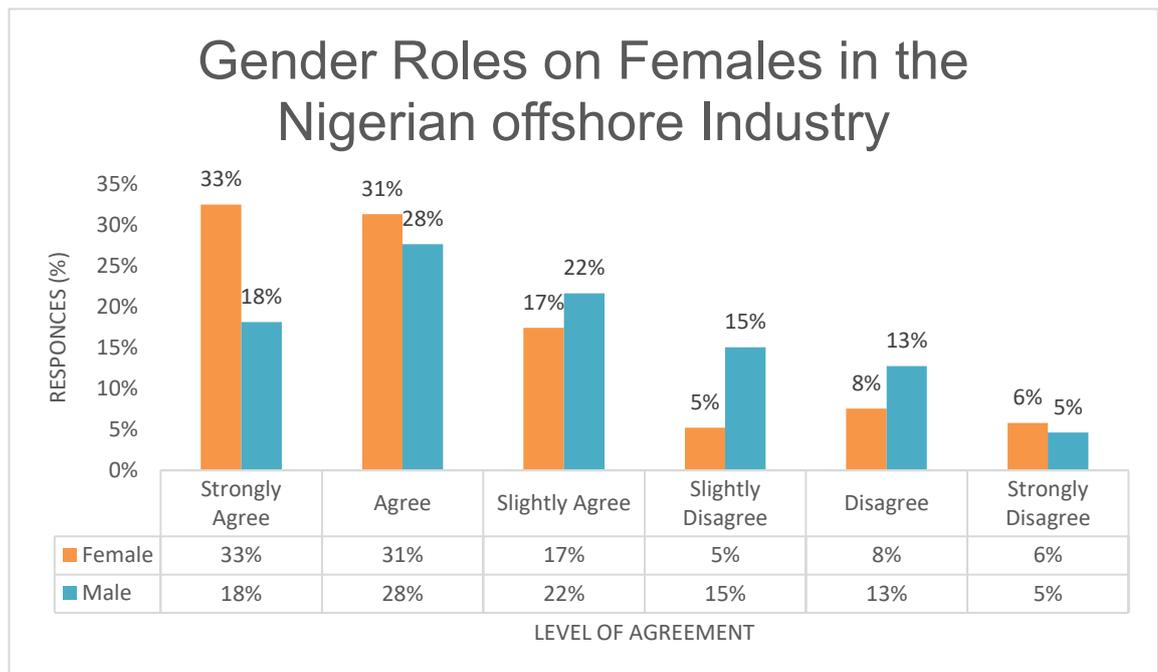


Figure 5.2. Bar Chart Result for the Effect of Gender Roles on Females in the Nigerian Offshore Oil and Gas Industry

### 5.2.5 Gender Roles on Male Domination in the Nigerian offshore oil and gas Industry

Figure 5.3 below shows a bar chart of the results from male and female respondents regarding their perspective on whether gender roles influence male domination in the Nigerian offshore industry. It shows the level of agreement of 68% between strongly agree to slightly agree for both male and female respondents. It indicates that more responders answered in the agreement range that gender roles influence male domination in the Nigerian offshore oil and gas industry, thereby agreeing with studies of Okeke (2019), Eneji and Nwagbara (2019) and Matthew et al. (2019).

The results also indicate that 69% of males and 64% of females responded strongly agree to slightly agree range, while 31% males and 36% females responded slightly disagree to strongly disagree. The highest responses were males (26%) who strongly agreed and agreed that females (39%) strongly agreed.

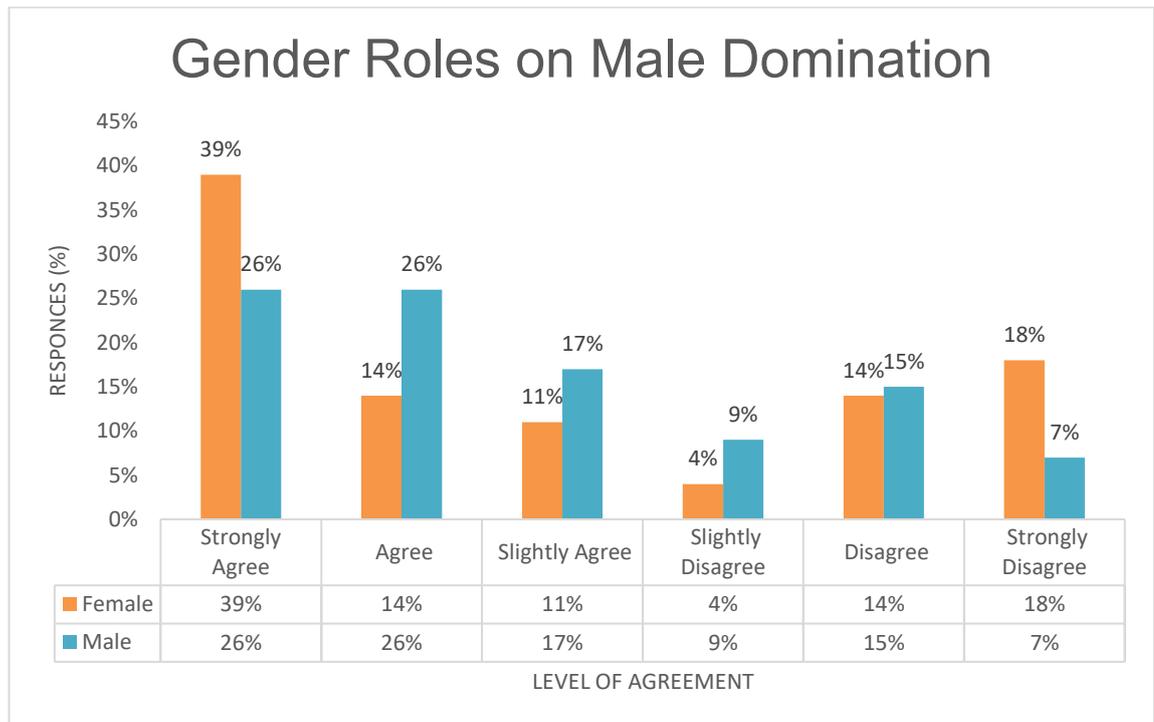


Figure 5.3. Bar Chart Result for the Effect of Gender Roles on Male Domination in the Nigerian Offshore Oil and Gas Industry

#### 5.2.6 Patriarchy in the Nigerian Society on Gender Discrimination in the Nigerian offshore oil and gas Industry

Figure 5.4 below represents the results of male and female respondents on their opinion regarding the influence of patriarchy on gender discrimination in the Nigerian offshore industry. The results present an agreement level of 71% between strongly agree to slightly agree for both male and female respondents. It indicates that more respondents agree that patriarchy influences gender discrimination and is a factor for the low rate of females employed in the Nigerian offshore industry.

The results also indicate that 65% of males and 77% of females answered between strongly agree to slightly agree range. In comparison, 35% males and 23% females answered between the slightly disagree to strongly disagree range. The highest percentage of males (31%) responded with agree, while the highest percentage of females (36%) strongly agreed.

The Nigerian workforce is male-dominated as a result of gender discrimination stemming from patriarchy. It affects females in the Nigerian offshore industry and the entire Nigerian workforce as well (Trading Economics, 2018; Mathew et al., 2019, Anyoha et al., 2015; National Bureau of Statistics, 2018).

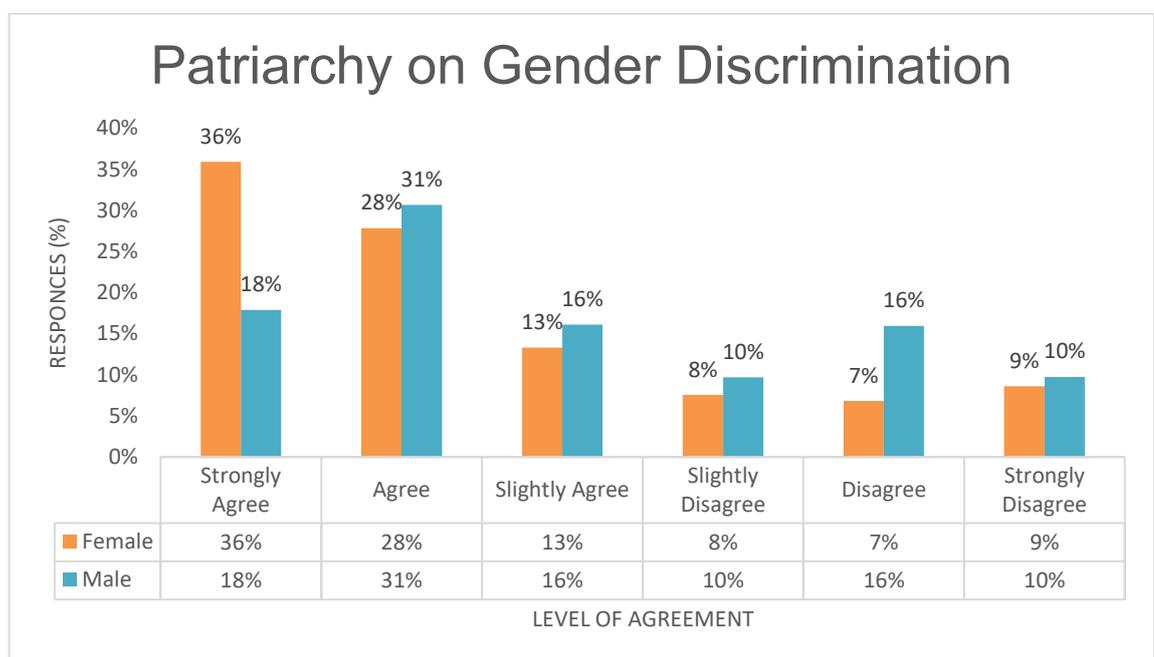


Figure 5.4. Bar Chart Result for the Effect of Patriarchy on Gender Discrimination in the Nigerian Offshore Oil and Gas Industry

### 5.2.7 Summary of the Descriptive Statistics Analysis

The analysis from the descriptive statistics in Chapter 5.2.2 attests that there is still a gross imbalance in the number of females employed in the Nigerian offshore industry compared to males. The results indicate that a total of 76% of responses were from male respondents as compared to a total of 24% of responses from female respondents. These results support previous studies carried out by Matthew et al. (2019), Eneji and Nwagbara (2019), National Bureau

of Statistics (2018), Inmpey et al. (2019), Okeke (2019), African Development Bank (2019), Trading Economics (2018), and Ajala (2016) that conclude that females are underrepresented in the Nigerian workforce, which according to African Development Bank (2019) can be detrimental to a nation's economy. Trading Economics (2018) conclude that the wealth of countries is determined by the successful exploitation of their production resources, including workforce utilisation. Recent investigations regarding the Nigerian workforce indicate higher participation of Nigerian females, but their influence is still relatively low compared to males in the Nigerian workforce, especially the Nigerian offshore industry (Adebowale, 2009; Ogunleye and Osekita, 2016).

Gender inequality saturates all aspects of Nigerian society. According to Eneji and Nwagbara (2019), it manifests in the homes and the workforce. This act negatively impacts development and the employment market (Organisation of Economic Cooperation and Development, 2015; Nigerian National Bureau of Statistics, 2018). The descriptive statistics results from this research support the studies of Sibani (2017), Nkama (2019), and Allanana (2013) that patriarchy, gender discrimination and gender roles were factors that influence the admission of females in the Nigerian offshore industry.

In this study, gender inequality is viewed as hindrances against the inclusion of females into the Nigerian offshore. The results from the descriptive statistics survey for this research clearly shows an imbalance in the ratio of males and females employed in the Nigerian offshore industry due to gender inequalities underpinned by patriarchy. These imbalances in the Nigerian workforce may result in many economic disadvantages, as cited by (Ogunleye and Osekita, 2016). An article by African Development Bank (2019), suggested that gender inequality was the dismissal of privileges to individuals that could have a positive impact upon the growth of an establishment or a country. These privileges include equal employment opportunities and equal pay (Olomola, 2008; Trading Economics, 2018).

### 5.3 Inferential Statistics Analysis: The One-way ANOVA

The one-way ANOVA was used to test the null hypothesis for this research to determine the likelihood that any measured association arose due to random sampling (Conlin et al., 2019). ANOVA is a parametric analysis method adopted to find a comparison between the means of two or more groups, to determine if a survey or an experiment's results are significant (Anggraeni, 2018; Surendiran and Vadivel, 2011). In other words, ANOVA was adopted to test the null hypothesis to determine if it should be rejected or failed to be rejected (Joshi et al., 2015; Boone and Boone, 2012). According to Plonsky and Oswald (2017), analysis of variance is the most frequently used statistical test in quantitative investigations to produce valid and reliable results. This research aimed to generalise the results from this research (Ostertagova and Ostertag, 2013).

The one-way ANOVA was adopted to investigate any important variances among the responses from male and female respondents regarding the theoretical framework areas (Konya et al., 2019). This analysis also allowed the researcher to understand if the variances between models are only because of accidental blunders or systematic treatment effects (Chadwell, 2016; Boone and Boone, 2012; Chang et al., 2016). Uttley (2019) cite that many researchers have used the one-way ANOVA analysis method to generate credible results in different social science investigations, especially with gender inequalities (Stoker et al., 2011; Chang et al., 2016). Other parametric statistical approaches that can be used for data analysis include correlation, regression and *t*-test methods (Uttley, 2019).

The survey questionnaire questions for this research were underpinned by their respective theoretical framework (female in the Nigerian offshore, gender roles, male domination and gender discrimination) see Table 4.5. As soon as the online survey questionnaire for this research was closed, the responses from the male and female respondents were analysed according to their respective theoretical framework areas.

According to Kenton (2019), an ANOVA permits for a contrast of two or more groups simultaneously to resolve if a connection occurs amongst them. An

ANOVA compares the differences among data models to differences within the individual data model. The average of the different models will not be equivalent if the differences among are larger than the difference within, and they would not present significant variations between the model averages if the variation among and within are relatively the same (Gyan et al., 2020).

In order to carry out a one-way ANOVA analysis, the researcher needs to ensure that the data is measurable, the populations' sample involved should follow a normal distribution, and all the populations are to be assumed to have equal variances (Zhu, 2019).

The three important principles to consider when determining whether accept or reject the null hypothesis are listed below.

- i. The *F – statistic* (Harrison et al., 2020).
- ii. The *p-value*, (0.05), is the likelihood that a type I blunder is 5% likely to occur (Harrison et al., 2020).
- iii. the *F – critical* (Harrison et al., 2020).

When conducting a one-way ANOVA analysis, the null hypothesis should be rejected if the following occurs.

- If the *P-value* is less than 0.05, normally written as  $p < 0.05$ , or *F – statistic* greater than the *F – critical* ( $F \text{ statistics} > F \text{ critical}$ ) (Conlin et al., 2019).

Alternatively, accept the null hypothesis if the following occurs.

- If the *P-value* is more significant than 0.05, normally written as  $p > 0.05$ , and the *F – statistic* is less than the *F – critical* ( $F \text{ statistics} < F \text{ critical}$ ) (Conlin et al., 2019).

Suppose the null hypothesis is rejected for any of the theoretical framework areas for this research. In that case, it means that there was a 95% confidence level ( $1 - \alpha$ ) that the effect of patriarchy on females in the Nigerian offshore, gender roles,

and gender discrimination in the Nigerian offshore industry influence the shortage of females in this industry (Kónya et al. 2016).

However, suppose the null hypothesis is failed to be rejected for any theoretical framework (female in the Nigerian offshore, gender roles, male domination, and gender discrimination) in the Nigerian offshore industry. In that case, it means that the result from that particular framework area has a statistically equal mean, and an alternative hypothesis should be investigated (Anggraeni, 2018).

For this research, the one-way ANOVA was performed on each of the theoretical framework areas (female in the Nigerian offshore, gender roles, male dominance and gender discrimination) for male and female respondents to collect individual results (Konya et al. 2019).

### 5.3.1 Hypothesis Testing

The null hypothesis ( $H_0$ ) was tested with the one-way ANOVA for this research. It was done to confirm if the null hypothesis should be discarded or not. In that case, research an alternative hypothesis ( $H_A$ ) (Chadwell, 2016; Anggraeni, 2018). It was adopted to determine the likelihood that any measurement was not due to random sampling (Conlin et al., 2019). After extensive study and investigation of data analysis methods, the one-way ANOVA analysis was deemed the most appropriate statistical analysis method for this research (Kule et al., 2019).

The advantage of hypothesis testing for a data set is that it enables the results to be generalised to a broader population (Birawani, 2018; Kozub, 2010; Ostertagová and Ostertag, 2013).

Hypothesis testing for this study was done to avoid a type I error occurring (Gyan et al., 2020). First, the cut off for the *p-value* was set for the research. The *p-value* for this research was set at 0.05 (Park, 2010; Conlin et al., 2019). It was set based on the threshold of  $P < 0.05$ , which was proposed by Fisher in 1925 and used today by many social science scholars to indicate a significant effect in their research study (Uttely, 2019). The *p-value* is the likelihood that, with the conditions defined by the null hypothesis, a difference between the data sets as

large as the one observed could have 5% occurred by chance (Harrison et al., 2020), or it simply represents the error rate to discard the null hypothesis (Conlin et al., 2019).

The *p-value* forms a specific boundary between discarding or accepting the null hypothesis (Kang, 2015). According to Anggraeni (2018), If the null hypothesis ( $H_0$ ) of a piece of research is rejected when valid and should not have been rejected, a type I error is said to occur (an untrue positive finding), On the other hand, a type II error occurs when the null hypothesis ( $H_0$ ) is accepted when untrue, resulting to untrue negative finding (Kennedy-Shaffer, 2018; Kang, 2015, Uttley, 2019). According to Kennedy-Shaffer (2018), the rate which  $P = 0.05$ , or 1 out of 20, equals 1.96, approximately 2. This point is taken as the boundary to decide if the deviation should be treated as important. Generally, the *p-value* of  $= 0.05\%$  is a 5% possibility to make type I error (Kónya et al., 2016; Lakens, 2015; Park, 2010). With a lesser *p-value*, there would be a lower likelihood of a research finding representing a random event, and a stronger argument for rejecting the null hypothesis (Zhu, 2016).

*P-value* for this research was set at 0.05. Therefore, if the one-way ANOVA analysis for this research returns a statistically significant result, meaning that the ANOVA result returns a *p-value* smaller than 5%. The null hypothesis that there is no numerical variance among the average of any of the groups under study is rejected. For further checks, the *f statistic* value from the ANOVA result is also used when deciding whether the null hypothesis should be accepted or not. Suppose the *f-value* is larger than the *f-critical*, then the null hypothesis should be rejected, and an alternate hypothesis should be considered (Joshi et al., 2015).

Again, if the *f-value* is less than the *f-critical*, then the null hypothesis should not be rejected (Joshi et al., 2015; Boone and Boone, 2012). Generally, the *f statistic* is adopted together with the *p-value* while determining the complete outcomes for a one-way ANOVA (Stoker et al., 2011; Mani, 2011; Kónya et al. 2016; Zhu W, 2016; Conlin et al., 2019).

### 5.3.2 The Null and Alternative Hypothesis for Gender Inequality in the Nigerian Offshore Oil and Gas Industry

The null hypothesis developed on extant literature review for this research indicates that patriarchy influences gender roles, females in the Nigerian offshore, male domination and gender discrimination regarding employment in the Nigerian offshore oil and gas industry, and consequently this is the root cause of the shortage of female in this industry (Allanana, 2013; Inmpey et al., 2019; Okeke, 2019; Eneji and Nwagbara, 2019; Matthew et al., 2019).

The null hypothesis ( $H_0$ ) for this research is therefore written as shown below in Table 5.3.

	<b>The Null Hypothesis</b>
1	Ho <sub>1</sub> : Patriarchy in the Nigerian society has an influence on gender roles in the Nigerian offshore oil and gas sector.
2	Ho <sub>2</sub> : Gender roles has an influence on females employed into the Nigerian offshore oil and gas sector.
3	Ho <sub>3</sub> : Gender roles has influence on male domination in the Nigerian offshore oil and gas sector.
4	Ho <sub>4</sub> : Patriarchy in the Nigerian society has an influence on gender discrimination in the Nigerian offshore oil and gas sector.

Table 5.3. The Null Hypothesis

The null hypothesis in Table 5.3 above indicates that there is no statistical significance between the average of any of the theoretical framework areas, thereby signifying that none of the groups' means affects each other, and there is no relationship between any of the groups. A null hypothesis normally indicates no statistical difference between certain characteristics of a population or data-generating process, and that all the groups under investigation have equal means (Hayes and Westall, 2019).

On the other hand, the alternate hypothesis for this research is underpinned by the studies supporting the notion that patriarchy, gender roles, gender discrimination play no role in gender inequality in the Nigerian workforce, thereby not resulting in the shortage of females in the Nigerian offshore industry (Williams, 2019; Park et al., 2019).

The assumption of the alternative hypothesis  $H_A$  (the research hypothesis) is that there should be at least one important variance among the averages of any model under investigation. It is written as  $H_A: \mu_1 \neq \mu_2$  (Anggraeni, 2018; Conlin et al., 2019).

The alternative hypothesis ( $H_A$ ) for this research is written below, see Table 5.4.

	<b>The Alternative Hypothesis</b>
1	$H_{A1}$ : Patriarchy in the Nigerian society has no influence on gender roles in the Nigerian offshore oil and gas sector.
2	$H_{A2}$ : Gender roles has no influence on females employed into the Nigerian offshore oil and gas sector.
3	$H_{A3}$ : Gender roles has no influence on male domination in the Nigerian offshore oil and gas sector.
4	$H_{A4}$ : Patriarchy in the Nigerian society has no influence on gender discrimination in the Nigerian offshore oil and gas sector.

Table 5.4. Alternative Hypothesis

The concept of this investigation was to comprehend male and female’s opinions surrounding gender inequality in the Nigerian offshore industry by adopting inferential statistics to test the null hypothesis.

### 5.3.3 **Analysis of $H_{01}$ : The Effect Patriarchy in the Nigerian Society on Gender Roles in the Nigerian Offshore Oil and Gas Sector**

As discussed in Chapter 5.3.2, some studies reveal that patriarchy does not affect the shortage of females in the workforce. Williams (2019) cite job insecurity due

to layoffs, while Park et al, (2019) suggest that harmful customs and superstitions are the causes of the shortage of females in the workforce.

The null hypothesis one ( $H_{01}$ ) for this research states that patriarchy affects gender roles in the Nigerian offshore oil industry, research from Allanana (2013), Inmpey et al. (2019), Okeke (2019), Eneji and Nwagbara (2019), and Matthew et al., (2019) all disagrees with this assumption from Williams (2019), as they all concluded that patriarchy was the factor for the shortage of female in the Nigerian offshore industry. Thereby indicating that ( $H_{01}$ ) should not have a statistically significant effect (Konya et al. 2019).

According to null hypothesis one, there should be no statistical difference regarding how male and female respondents perceive the effects of patriarchy on the roles in the Nigerian offshore industry been gender-driven. If this is the case, the null hypothesis would then be accepted for this research, and it will be agreed that patriarchy is the reason why this industry is role driven.

To test this hypothesis, a one-way ANOVA was conducted to compare how male and female individuals in the Nigerian offshore oil and gas industry viewed patriarchy concerning their employment in this industry regarding gender roles.

After the analysis, the results from the one-way ANOVA between groups for male and female respondents did not return any statistically important variance among the means of these models for this hypothesis. Therefore, indicating that the null hypothesis was rejected for  $H_{01}$  for this research (Hayes and Westall, 2019; Fatile et al., 2020).

The result of the null hypothesis produced a  $p$ -value greater than 0.05, and  $F$ -*calculated* smaller than  $F$ -*critical*, see Table 5.5, as stated in Chapter 5.3.1 because the  $p$ -*value* for this investigation was set at 0.05, the null hypothesis stating that patriarchy in the Nigerian society influences the roles in the Nigerian offshore industry was accepted, this notion supports studies by Okeke (2019), Eneji and Nwagbara (2019), and disagrees with studies from Williams (2019) and Park et al., (2019).

<b>ANOVA: Null Hypothesis Result for the Effect of Patriarchy on Gender Roles in the Nigerian Offshore Oil and Gas Industry</b>							
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>	<b>Result</b>
Between Groups	1.29	1.00	1.29	<b>0.43</b>	<b>0.51</b>	<b>3.85</b>	<b>Fail to Reject</b>
Within Groups	3091.47	1036.00	2.98				
Total	3092.76	1037.00					

Table 5.5. ANOVA: Null Hypothesis Result for the Effect Patriarchy on Gender Roles in the Nigerian Offshore Oil and Gas Industry

#### 5.3.4 **Analysis of Ho<sub>2</sub>: The Effect of Gender Roles on Females in the Nigerian Offshore Oil and Gas Sector**

Null hypothesis two for this research states that gender roles influence the rate of females employed in the Nigerian offshore industry (Oluwunmi et al., 2020). According to null hypothesis two, there should be no statistically significant variance regarding how the male and female respondents perceive gender roles concerning gender inequality in the Nigerian offshore oil and gas industry, indicating that gender roles should not be a factor in the shortage of females in the Nigerian offshore industry (Hayes and Westall, 2019).

Again, a one-way ANOVA test was conducted to compare how male and female respondents reacted to the idea of gender roles as the factor for the shortage of females in the Nigerian offshore industry (Konya et al., 2019).

The one-way ANOVA analysis for Ho<sub>2</sub> for this research produced statistically significant results see Table 5.6, indicating that the null hypothesis was rejected for hypothesis two. These results contradict with previous studies of Oluwunmi et al., (2020), Ajala (2016), and Azuh et al., (2016) that gender roles are a factor influencing the shortage of females employed in this sector, but support studies from Hayes and Westall (2019), Fatile, Adejuwon and Kehinde (2020).

The outcome of null hypothesis two produced a *p*-value less than 0.05, and *F-calculated* larger than *F-critical* Table 5.6. Therefore, the null hypothesis stating that patriarchy affects gender roles in the Nigerian offshore industry is rejected, allowing the researcher to investigate an alternative hypothesis.

<b>ANOVA: Null Hypothesis Result for the Effect of Gender Roles Females in the Nigerian Offshore Oil and Gas Industry</b>							
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>	<b>Result</b>
Between Groups	13.22	1.00	13.22	<b>6.16</b>	<b>0.01</b>	<b>3.85</b>	<b>Reject</b>
Within Groups	1850.81	863.00	2.14				
Total	1864.03	864.00					

Table 5.6. ANOVA: Null Hypothesis Result for the Effect of Gender Roles on Females in the Nigerian Offshore Oil and Gas Industry

### 5.3.5 Analysis of Ho<sub>3</sub>: The Effect of Gender Roles on Male Domination in the Nigerian Offshore Oil and Gas Sector

Null hypothesis three for this research states that gender roles influence male domination in the Nigerian offshore oil industry (Oluwunmi et al., 2020). According to null hypothesis three, there should not be any statistically significant variance regarding how male and female respondents perceive male domination concerning gender inequality in the Nigerian offshore industry, indicating that male domination should not be a factor in the shortage of females in this industry (Hayes and Westall, 2019).

Again, a one-way ANOVA test was conducted to compare how male and female respondents reacted to the idea of male domination as a reason for the shortage of females in this industry (Konya et al., 2019). The one-way ANOVA analysis for Ho<sub>3</sub> for this research produced results that were not statistically significant. See Table 5.7, indicating that the null hypothesis was accepted for hypothesis three. These results agree with previous studies of Oluwunmi et al. (2020), Ajala (2016), and Azuh et al., (2016) that male domination is a factor for the shortage of females

employed in this sector, and contradicts studies from Hayes and Westall (2019), Fatile, Adejuwon and Kehinde (2020). The outcome of this hypothesis produced *p*-value greater than 0.05 and *F-calculated* smaller than *F-critical* Table 5.7. Therefore, the null hypothesis stating that patriarchy affects male domination in the Nigerian offshore industry was accepted.

<b>ANOVA: Null Hypothesis Result for the Effect Gender Roles on Male Dominance in the Nigerian Offshore Oil and Gas Industry</b>							
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>	<b>Result</b>
Between Groups	1.20	1.00	1.20	<b>0.41</b>	<b>0.52</b>	<b>3.85</b>	<b>Fail to Reject</b>
Within Groups	3116.13	1051.00	2.96				
Total	3117.33	1052.00					

Table 5.7. ANOVA: Null Hypothesis Result for the Effect of Gender Roles on Male Domination in the Nigerian Offshore Oil and Gas Industry.

### 5.3.6 Analysis of Ho<sub>4</sub>: The Effect of Patriarchy in the Nigerian Society on Gender Discrimination in the Nigerian offshore oil and Gas Sector

The fourth hypothesis investigated for this research states that patriarchy influences gender discrimination in the Nigerian offshore industry. Again, extant studies have revealed that gender discrimination influences the shortage of females in the Nigerian workforce (Azuh et al., 2016; Ajala, 2016).

The one-way ANOVA analysis for this hypothesis for this research produced statistically significant results, Table 5.8, indicating that the null hypothesis was rejected for Ho<sub>3</sub>. Thus, not supporting previous studies of Oluwunmi et al. (2020), Ajala (2016), and Azuh et al. (2016) studies that gender discrimination is a factor for the shortage of females employed in this industry, but does support studies from Hayes and Westall (2019), Fatile, Adejuwon and Kehinde (2020).

The outcome of  $H_{04}$  produced a  $p$ -value less than 0.05, and  $F$ -calculated was larger than  $F$ -critical, see Table 5.8. Therefore, the null hypothesis stating that the shortage of females in the Nigerian offshore industry is not caused by gender discrimination was rejected.

<b>ANOVA: Null Hypothesis Result for the Effect of Patriarchy on Gender Discrimination in the Nigerian Offshore Oil and Gas Industry</b>							
<b>Source of Variation</b>	<b>SS</b>	<b>df</b>	<b>MS</b>	<b>F</b>	<b>P-value</b>	<b>F crit</b>	<b>Result</b>
Between Groups	130.91	1.00	130.91	<b>49.63</b>	<b>0.00</b>	<b>3.85</b>	<b>Reject</b>
Within Groups	5470.25	2074.00	2.64				
Total	5601.16	2075.00					

Table 5.8. ANOVA: Null Hypothesis Result for the Effect of Patriarchy on Gender Discrimination in the Nigerian Offshore Oil and Gas Industry

### 5.3.7 Summary of the Inferential Statistics Analysis

The summary of the analysis of the one-way ANOVA results for the inferential statistics analysis in Table 5.9 indicates that the results did not return any statistically significant difference between any of the means from the groups under investigation for  $H_{01}$  and  $H_{03}$ , this means that the  $p$ -value obtained from the one-way analysis for these hypotheses were greater than the  $p$ -value of 0.05 set for this research. Thereby, resulting in  $H_{01}$  and  $H_{03}$  failing to be rejected, in line with studies from Allanana (2013), Inmpey et al. (2019), Okeke (2019), Eneji and Nwagbara (2019), and Matthew et al. (2019) that all concluded that patriarchy influences females in the Nigerian industry, thereby resulting to the shortage of females in the Nigerian workforce.

Subsequently, the analysis from the one-way ANOVA that underpinned the theoretical frameworks for the effect of patriarchy on gender roles and gender discrimination returned statistically significant results, meaning that the  $p$ -values returned values less than 0.05 see Table 5.9. Therefore, indicating that  $H_{02}$  and  $H_{04}$  were rejected. These rejected null hypotheses support the works from Hayes and Westall (2019) and Fatile et al. (2020) that these factors do not affect the

shortage of females in the Nigerian workforce. These results further indicate that individuals that took part in this research suggest that gender roles and gender discrimination were not the factors for the shortage of females in the Nigerian offshore industry, but lean on the hypothesis that the effect of patriarchy on the rate of male and female domination in this industry was the major factor for this occurrence.

<b>One-way ANOVA Result for Gender Inequality in the Nigerian Offshore Oil and Gas Sector</b>				
	<i>F</i>	<i>P-value</i>	<i>F-critical</i>	<b>Result</b>
<b>The Effect of Patriarchy on Gender Roles</b>	<b>0.43</b>	<b>0.51</b>	<b>3.85</b>	<b>Fail to Reject</b>
<b>The Effect of Gender Roles on Women in the Nigerian Offshore</b>	<b>6.16</b>	<b>0.01</b>	<b>3.85</b>	<b>Reject</b>
<b>The Effect of Gender Roles on Male Domination</b>	<b>0.41</b>	<b>0.52</b>	<b>3.85</b>	<b>Fail to Reject</b>
<b>The Effect of Patriarchy on Gender Discrimination</b>	<b>49.63</b>	<b>0.00</b>	<b>3.85</b>	<b>Reject</b>

Table 5.9. Summary of the one-way ANOVA Analysis

#### **5.4 Summary**

This section is used to summarise the results of the data analysis from the deceptive and inferential statistical methods adopted for this investigation. Upon analysis, the percentage profile indicates that 76% of respondents were males, while 24% were females. This already shows a gross imbalance in the ratio of males compared to females employed in the Nigerian offshore industry.

Further analysis adopting the descriptive statistical analysis on the theoretical framework indicates that patriarchy in the Nigerian society was the root cause of gender inequality in the Nigerian offshore industry. From the descriptive statistical analysis, it is observed that this traditional practice influences gender roles in the Nigerian offshore industry, as females are marginalised to unpaid domestic

duties, while males have the privilege of securing paid employment. The results also show that patriarchy in the Nigerian society resulted in gender discrimination in the Nigerian offshore industry, meanwhile as a result of the roles in the Nigerian offshore industry being gender-oriented, it results in the shortage of females in this industry, as fewer females are employed due to the industry being male-dominated.

The inferential statistical analysis also signified that patriarchy was the root cause of gender inequality in the Nigerian offshore industry. This chapter shows that descriptive and inferential statistical analysis are suitable for this research.

## **6. CHAPTER SIX. RESEARCH FINDINGS AND DISCUSSION OF RESULTS**

### **6.1 Introduction**

This Chapter is used to deliberate on the discoveries from the descriptive and inferential statistics for this research. It starts by discussing the findings for the descriptive statistics, then it discusses the findings from the inferential statistics, and then provides a summary of the descriptive and inferential statistics. This chapter also discusses the alternative hypothesis for this research and the results of the descriptive and inferential statistics, it then summarises, and compare both results. This chapter concludes by aligning the theoretical framework with the liberal feminist theory and addressing the research questions.

### **6.2 Findings of the Descriptive Statistics Results**

The findings for the descriptive statistics were examined based on their theoretical framework that underpins this research see Chapter 3.10. This is carried out in correlation with the research questions. The data from this research was analysed based on male and female responses from the survey questionnaire centred on patriarchy in the Nigerian offshore industry.

The outcomes of the descriptive statistics analysis in Chapter 5.2.2 confirms a gross imbalance in the ratio of males to females employed in the Nigerian offshore industry, thereby indicating that the industry is male-dominated. Below is a critical analysis of how patriarchy influences gender roles, male domination and gender discrimination in this industry.

#### **6.2.1 Findings of the Effect of Patriarchy on Female in the Nigerian Offshore using Descriptive Statistics**

The results in Chapter 5.2.2 indicate that 65% of the total responses from the male and female respondents for this research fell between the strongly agree to slightly agree for the research questions relating to whether patriarchy influences the rate of females employed in the Nigerian offshore industry. The findings of this result indicate that from the respondents' point of view, patriarchy was considered to be a factor for the shortage of females in this industry, which

supports studies by Allanana (2013), Inmpey et al. (2019), Okeke (2019), Eneji and Nwagbara (2019) and Matthew et al. (2019) whom all concluded that patriarchy is the factor for gender inequality in the Nigerian workforce. Patriarchy is prevalent in African countries. It stems from traditional beliefs underpinned by cultural division of roles between males and females, thereby making females vulnerable and limited to roles they can undertake (Onwutuebe, 2019). A report by Adisa et al. (2019) concludes that the patriarchal attitudes practised in the Nigerian homes were frequently transferred to the workplace, affecting female's workplace behaviour, thereby maintaining the males' supremacy, and allowing the domination and discrimination against females.

The findings of this research also support the studies of Ogunleye and Osekita (2016), Nkama (2019), and Eneji and Nwagbara (2019) that patriarchy does exist in the Nigerian workforce, this finding is underpinned by a majority of the male respondents (66%) agreeing that roles in the Nigerian offshore industry is governed by patriarchy. It is understood that in contrast to western employment, gender inequality in the workforce stemming from Nigeria's patriarchal heritage is suggestively dissimilar due to the unique established backgrounds. Therefore, the fight for employment equality in developed countries is intensified, given the exclusive socio-cultural and institutional realities (Nwagbara, 2020).

#### **6.2.2 Findings of the Effect of Patriarchy on Gender Roles using Descriptive Statistics**

The analysis of gender roles for this research indicated that 75% of the total respondents responded between the strongly agree to slightly agree to patriarchy influencing the roles in the Nigerian offshore industry. Thereby, indicating that respondents understudied for this research considered patriarchy to influence gender roles. Thereby, supporting Matthew et al. (2019) report that females are not treated fairly in the Nigerian workforce and are not been given the same opportunities and privileges as their male counterparts, but instead are been subjected to less physical and demanding roles, limiting the roles they can undertake.

The finding of this research indicates that gender roles underpin the selection for employment in the Nigerian offshore industry, and females in this industry are not given the same opportunities as their male counterparts even though they have an equivalent or a higher qualification required for the role (Adegoke et al., 2016). Matthew et al. (2019) write about females being as important as males but not treated fairly in the Nigerian workforce and concluded that females ought to be awarded identical prospects and privileges as their male colleagues (Bako and Syed, 2018). Li (2017) suggest that there are assigned gender roles in all cultures, which may be the case with the Nigerian society and is transferred to the Nigerian offshore industry. Therefore, concurring with the notion that the roles in this industry may not be suitable for Nigerian females due to the roles being gender-driven.

### **6.2.3 Findings of the Effect of Patriarchy on Male Domination using Descriptive Statistics**

The findings from the analysis of the effect of patriarchy on male domination for this research indicated that 68% of the respondents for this research responded between the strongly agree to slightly agree. It also indicates that respondents from this research considered patriarchy to influence male domination in the Nigerian offshore industry. According to the African Development Bank (2019), despite the call for female empowerment in the maritime and offshore industry, the number of females turning towards this sector for employment is relatively low. The National Bureau of Statistics (2018) confirms that the Nigerian workforce is male-dominated, and Eneji and Nwagbara (2019) concluded that patriarchy does exist in the Nigerian workforce. Patriarchy results in male dominance in the Nigerian workforce as employment based on gender brings about the domination of the majority gender. Evidence from the oil and gas and mining extractive industries in Nigeria shows that the Nigerian workforce has historically been male-dominated at all levels (Trading Economics, 2018). Hence, suggesting it leads to a bias of roles within this sector.

This research indicates that selection for employment in the Nigerian offshore industry is underpinned by patriarchy, resulting in male domination, indicating that

females in this industry are not given the same opportunities as their male counterparts as suggested by Adegoke et al., (2016).

#### **6.2.4 Findings of the Effect of Patriarchy on Gender Discrimination using Descriptive Statistics**

Findings for the effect of patriarchy on gender discrimination indicate that 71% of the total respondents fell between the strongly agree to slightly agree. Thereby indicating that 71% of the total respondents showed some form of agreement that patriarchy influences gender discrimination, which results in the shortage of females in this industry. Thereby, supporting the report from The National Bureau of Statistics (2018), that established that the Nigerian workforce is male-dominated, as a result of gender discrimination.

The findings from this section suggest that gender discrimination is still a significant factor influencing females' employment in the Nigerian offshore industry. According to Obiora et al. (2019), workforce diversity has become a primary concern for both profit and non-profit organisations and employing an unsuitable candidate for a role is detrimental. Most organisations are fixated on recognising and deciding on a candidate grounded attributes and knowledge. Therefore, it is advantageous for an organisation to identify a candidate with suitable skills and similar previous job experience, as it will be beneficial for performance with the new role, these are some apprehension that affects females throughout employment (Gberevbie et al., 2014).

### **6.3 Findings of the Effect of Patriarchy on the Theoretical Framework areas using Inferential Statistics**

The finding from the one-way ANOVA applying inferential statistics for ' $H_{01}$  and ' $H_{03}$  shows that the null hypothesis was accepted, On the contrary, the findings for ' $H_{02}$  and ' $H_{04}$ ' still applying inferential statistics indicated significant differences, resulting in hypotheses two and four being rejected and an alternative hypothesis investigated.

Although findings from Oluwunmi et al. (2020), Ajala (2016), and Azuh et al. (2016) all assumed that the effects of patriarchy had less influence on gender roles and gender discrimination as the reasons for the negative admission of females into the Nigerian workforce, the findings from this research indicate that the respondents were more aligned with the view that patriarchy greatly influences the admission of female into the Nigerian offshore industry and also contributes to why this industry is highly male-dominated.

#### 6.4 Summary of the Findings for the Descriptive and Inferential Statistics

This research finding indicates that there is indeed a shortage of females in the Nigerian offshore industry. The findings also exposed that patriarchy greatly influenced the number of females in this industry. The table below shows the summary of the findings from the descriptive and inferential statistics for this research.

	Descriptive Statistics Findings		Inferential Statistics Findings	
	Result supporting the research hypotheses	Result refuting the research hypotheses	Result supporting the research hypotheses	Result refuting the research hypotheses
1. Gender Roles	Yes		Yes	
2. Females in the Nigerian Offshore Oil and Gas Industry	Yes			No
3. Male Domination	Yes		Yes	
4. Gender Discrimination	Yes			No

Table 6.1. Summary of the Findings from the Descriptive and the Inferential Statistics and the Theoretical Framework

Table 6.1 illustrates that the outcomes from the results of the descriptive statistics all support the theoretical framework developed by the investigator regarding the effect of patriarchy in the Nigerian society on gender roles, females in the Nigerian offshore, male domination and gender discrimination in the Nigerian offshore industry. It also agrees with journals for similar studies for inequality in gender employment see Table 6.2.

The research findings from the inferential statistics for the theoretical framework that underpins the effect of patriarchy on females in the Nigerian offshore, and male domination in the Nigerian offshore industry supports the null hypothesis for this research. Table 6.2 shows references of similar investigations conducted on this subject and how they compare to this current investigation.

	Descriptive Statistics Findings		Inferential Statistics Findings	
	Publications supporting the research hypotheses	Publications refuting the research hypotheses	Publications supporting the research hypotheses	Publications refuting the research hypotheses
<b>1. Gender Roles</b>	Allanana (2013), Inmpey et al (2019), Okeke (2019), and Ezenwa-Ohaeto (2015).	Williams (2019), and Park et al (2019).	Allanana (2013), Inmpey et al (2019), Okeke (2019), and Eneji and Nwagbara (2019).	Williams (2019), and Park et al (2019), Amon (2017).
<b>2. Females in the Nigerian Offshore Oil and Gas Industry</b>	Emeke, (2015), Umukoro, (2014), and Nkama (2019).	Bako and Syed, (2018), and Williams et al (2014).	Oluwunmi, et al (2020), Ajala (2016), and Azuh, et al (2016).	Hayes and Westall (2019), and Fatile et al, (2020).
<b>3. Male Domination</b>	Adegoke et al (2016), Anyoha et al (2015), Owoyemi and Olusanya (2014).	Ekhaton, (2015), Osunde and Olokooba (2014). Amon (2017).	Umukoro (2014), Emek (2015), Makama (2013).	Perryman et al (2016), Williams (2019), and Park et al (2019).
<b>4. Gender Discrimination</b>	Matthew et al (2019) Umukoro, (2014), and Nkama (2019).	Hayes and Westall (2019), and Fatile et, at (2020).	Azuh, et al, (2016), and Ajala, 2016).	Fatile et al, (2020), and Sibani (2017).

Table 6.2. Publications Supporting/Refuting the Theoretical Framework for this Research

In reference to this study, the researcher investigated past studies with similar notions. Table 6.2 presents references from publications that support and refute the theoretical framework for this research using the descriptive and inferential statistics data analysis method.

From this table, it is evident that works from Allanana (2013), Inmpey et al. (2019), Okeke (2019), and Ezenwa-Ohaeto (2015) were all aligned with this research findings, that the effects of patriarchy was the reason for the shortage of females in the Nigerian offshore industry, while studies from Williams (2019), and Park et al. (2019) highlighted job insecurity due to layoffs as the reason for the shortage of females in the offshore industry, thereby not supporting the research hypothesis ( $H_{01}$  and  $H_{03}$ ). As highlighted in Chapter Two, the Nigerian society is underpinned and deeply rooted in patriarchy. This traditional act embedded in the Nigerian homes has transferred to the general society and is now paramount in the Nigerian workforce. Results from this research indicate that the Nigerian offshore industry is male-dominated due to patriarchy.

Table 6.2 also shows that studies from Emeke (2015), Umukoro (2014), and Nkama (2019) support the results from this research that the shortage of females in this industry was due to the gender assigned roles, while studies from Matthew et al. (2019) Umukoro, (2014), and Nkama (2019) all supported gender discrimination.

## **6.5 The Alternative Hypothesis**

The analysis of null hypotheses two and four using inferential statistics produced results that return a statistically significant difference between their means, resulting in the rejection of these hypotheses and allowing the researcher to investigate an alternative hypothesis (Williams, 2019).

The following alternative hypotheses are explored in response to null hypotheses two and three (Matthew et al., 2019).

$H_{A2}$ : the shortage of females in the Nigerian offshore sector is not caused by gender roles.

$H_{A4}$ : the shortage of females in the Nigerian offshore sector is not caused by gender discrimination.

#### 6.5.1 Alternate Hypothesis Two – Gender Roles

The alternative hypothesis two, see Table 5.4, resulting from the rejection of the  $H_{O2}$ , thereby gives room for an investigation of an alternative hypothesis. The alternative hypothesis supports the study by Olaogun et al. (2015), who argued that employment disparity in the Nigerian workforce was due to discrimination based on roles.

According to Allanana (2012), patriarchy is the main factor for gender inequality in the Nigerian society. This cultural tradition has remained at the home front and has trickled into the Nigerian workforce, resulting in discrimination in roles. Although the results from  $H_{O2}$  for this research indicates that respondents do not consider gender roles to be a factor for the shortage of female in the Nigerian offshore industry, it could be argued that these respondents were focused on the primary factor (patriarchy) which resulted in them neglecting the idea that this industry could as well be hampered by the roles being gender-oriented (Matthew et al., 2019).

#### 6.5.2 Alternate Hypothesis Four – Gender Discrimination

$H_{O4}$  for this research produced a result with statistical significance, resulting in developing an alternative hypothesis for this research see Table 5.4. Although the alternative hypothesis supports studies from Fatile et al. (2020), Sibani (2017) and Hayes and Westall (2019), gender discrimination is a worldwide and affects females from different walks of life, especially in STEM roles. The one-way ANOVA analysis for  $H_{O4}$  produced a statistically significant result, indicating that  $H_{O4}$  was rejected. After further analysis in combination with the research questions, the theoretical framework and the survey questionnaire, it can be argued again for  $H_{O2}$ , that respondents were focused on the main factor (patriarchy), which lead to them neglecting the notion that this industry could as

well be hampered by gender discrimination as an additional factor contributing to the shortage of female in this industry.

## **6.6 Discussion of Results**

This section is used to discuss the findings of the descriptive and inferential statistical analysis for this research.

## **6.7 Discussions of the Descriptive Statistics Results**

The results from the descriptive statistics for this research indicates that the effect of patriarchy on gender roles, females in the Nigerian offshore, male domination and gender discrimination influences the inclusion of females employed into the Nigerian offshore industry.

The descriptive statistics analysis for the survey questions linked to gender roles, females in the Nigerian offshore, male domination and gender discrimination all showed that individuals in this industry consider these factors to be the reason for the shortage of females. These results are supported by Allanana (2013), Inmpey et al. (2019), Okeke (2019), Eneji and Nwagbara (2019) and Matthew et al. (2019), they all concluded that patriarchy due to cultural beliefs was the cause for the shortage of females in the Nigerian workforce. Many individuals in the Nigerian offshore industry responded that gender roles, male domination, and gender discrimination due to stereotyping and STEM roles being less family-friendly were responsible for the shortage of females in this industry.

According to Animashaun (2019), in African countries, employment inequality based on gender is controversial. Most researchers have probed the position favouring a specific gender. Animashaun argues the need for Nigeria to strengthen legislation on gender impartiality by evolving stronger laws to promote fairness in the Nigerian workforce. Gberevbie et al. (2014) mention the perception of gender prejudice during the recruitment process associated with the job, including extended hours at the office, job requirement travel, and relocating requirements, as barriers for females seeking employment in offshore roles, especially if they are married. However, in roles outside the STEM industry,

gender discrimination is not as predominant. Although there may be a need for long hours with these roles outside the STEM industry, it is usually not as daunting as in the STEM roles, making it easier for females to fit in as they could organise these jobs around their family lives.

## **6.8 Discussions of the Inferential Statistics Result**

The analysis of the one-way ANOVA test indicates that patriarchy does indeed affect female employment, resulting in male domination in the Nigerian offshore gas industry.

The result from the one-way ANOVA analysis for null hypotheses one and three returned no statistically significant difference. Therefore, null hypotheses one and three were accepted as the analysis produced a *p-value* greater than 0.05, see Table 5.9.

These findings support earlier findings and arguments by Allanana (2013), Inmpey et al. (2019). Okeke (2019), Eneji and Nwagbara (2019) and Matthew et al. (2019), they all agreed that patriarchy was a cause for the shortage of females in the Nigerian workforce. However, their research was pitched towards the Nigerian workforce and not the Nigerian offshore industry. Williams (2019), on the contrary, argue that job insecurity due to layoffs results in the shortage of females in the STEM and the Nigerian offshore oil and gas industries. Williams (2013) argue that females working in a male-dominated profession encounter a glass ceiling that prevents their ascension into the top jobs, sighting this as a factor that discourages qualified females from participating in the offshore roles. Some females are known to identify social interactions as limiting their professional opportunities more often than institutional policy in STEM careers in western countries (Amon, 2017).

Whereas the one-way ANOVA result for null hypotheses two and four, see Table 5.9 returned results with statistically significant differences, producing results with *p-values* less than 0.05, see Table 5.6 and Table 5.8, implying that gender roles and gender discrimination have no influence on the shortage of females in the

Nigerian offshore industry (Ariffin and Che Ha, 2014). Hence, these null hypotheses were rejected, and an alternative hypothesis was investigated.

According to Olaogun et al. (2015), gender inequality occurs when an individual is denied privileges based on gender. It generates unfair actions due to their gender and denies them privileges, prospects, and incomes. Ajala (2016) states that in African countries such as Nigeria, discrimination against females in countless methods continued to exist in the workforce, despite worldwide and local efforts at guaranteeing gender equality. She concluded that gender discrimination was not the root cause of the lack of females in the Nigerian workforce but argued that traditional, cultural and customary practices were accountable.

Ajala (2016) argues that females are usually perceived as unequal to males in Nigerian society, giving rise to a subjective communal structure of gender roles between males and females, whereby males come first in all things. In contrast, females are considered subordinate. It means that males have more privileges in the household and society. Consequently, Olaogun et al. (2015) cite that males govern the commercial structure and bureaucratic decision-making positions while females roles were in the household, entailing principally unskilled activities that do not yield bureaucratic and commercial enablement. Gender roles positioned males ahead of females in commercial and bureaucratic supremacy positions, allowing males to make vital decisions regarding activities in the society (Ogunleye and Osekita, 2016).

Olaogun et al. (2015) argue that gender inequality is associated with gender labelling and prejudice. They suggest that it was a blockade to building a pleasant workforce. It is normally revealed through sexual harassment, chauvinist dialectal, and partiality while at work (Maruzani, 2013). Azuh et al. (2016) cite that gender roles are governed by gender discrimination. They write that it is a social activity connected with sexes in a communal association in a nation. Gender customs are strengthened in essential masculine and feminine identities (Azuh et al., 2016; Pharr et al., 2012).

## 6.9 Summary of Results

The results from the descriptive statistics analysis for the effects of patriarchy on females in the Nigerian offshore, gender roles, male domination and gender discrimination indicated that these were the factors for the shortage of females in the Nigerian offshore industry. However, the result for the inferential statistical analysis displayed that the one-way ANOVA test for null hypotheses one and three indicated that many of the survey respondents were of the view that patriarchy affects the employment of males and females in the Nigerian offshore industry, supporting the result from the descriptive statistics and studies from Allanana (2013), Inmpey et al. (2019), Okeke (2019), Eneji and Nwagbara (2019) and Matthew et al. (2019).

The null hypothesis one and three tested whether male and female Nigerian offshore workers felt that patriarchy influenced their employment in this sector; respondents for these hypotheses believed that a shortage of females in this industry was due to male domination through patriarchy. As the ANOVA analysis accepted the hypothesis, there was no need to research alternative hypotheses.

On the contrary, the one-way ANOVA test of null hypotheses two and four for this research indicated that gender roles and gender discrimination have no effects on the shortage of females in the Nigerian offshore industry. It does not correspond with the descriptive statistics result for this research. Null hypotheses two and three tested whether male and female workers in the Nigerian offshore industry felt that gender roles and gender domination influenced their employment in this sector. The ANOVA analysis resulted in a rejection of these hypotheses. Thus, requiring the need to research alternative hypotheses. The alternative hypothesis for this research led to a discussion on whether individuals in the Nigerian offshore industry perceived gender roles and gender discrimination through patriarchy, thereby laying little or no emphasis on workplace inequality resulting from gender roles and gender discrimination.

The theoretical framework for this research, see Figure 3.1, was developed around gender inequality in the Nigerian offshore industry, underpinned by the liberal feminist view. This view focuses on how patriarchy in the Nigerian society

influences females in the Nigerian offshore industry, gender roles, male domination and gender discrimination. Allanana (2013), Inmpey et al. (2019), Okeke (2019), Eneji and Nwagbara (2019) and Matthew et al. (2019) all argued that the Nigerian workforce is patriarchal. Citing that females were side-lined at home and outside the homes, especially when it came to the workforce. Studies by Eagly and Heilman, (2016) suggest that females are more emotional than their male counterparts, affecting their suitability for certain job roles that require decision-making, leadership, much travelling, being a long time away from their family, and heavy lifting.

Most studies argue about the effect of gender on emotions in the workplace, indicating that females are more emotional because of the way they were created (Eagly and Heilman, 2016). According to Tripathi (2015), the decision-making process in the workplace could be influenced by individual conscious and unconscious emotions. It means for professions that require emotional stability, an emotionally stable individual is required, but how are emotions judged? Tripathi writes that emotion is the inner sensation that comprises moods from an inducement. Emotions sometimes stimulate appraising decisions of good or bad for most circumstances (Tripathi, 2015). However, Pulsford (2014) argued that an individual's emotional state does not essentially suggest that they will make unreasonable choices. Pulsford (2014) further argues that better decision making is sometimes achieved by individuals with intense emotions, and it is beneficial for establishments to include individuals that are emotionally intelligent in their workforce (George, 2000). On the contrary, Petri and Govern (2013) argue that the comprehension of one's emotions could be impending, and result in negative outcomes while deciding. It is understood that group decision making can be influenced by individual emotions (Petri and Govern, 2013).

Some studies have suggested that gender variances in specialised conduct are an instinctively developing circumstance. The inclusion of females in the global workforce has reduced stereotyping and closed the gender bridge in developed countries. Schultz et al. (2003) cite that employment equality encourages creativity, innovative problem-solving, and productivity. This happens by the distribution of varied concepts and perceptions (Ogbo et al., 2014).

Ogbo et al. (2014) argue about the significance of employment variety on structural presentation, implying its importance for the triumph of an organisation. Ogbo further cites that employment diversity had a constructive impact on organisational achievements in Nigerian firms and that education in dealing with employment diversity had a positive effect on organisational success in Nigeria. According to Ogbo et al. (2014), workforce diversity has been identified as leading to improved organisational performance because of the wider nature and the specialisation it conveys to an establishment.

### **6.10 Aligning the Theoretical Framework with the Liberal Feminist Theory**

This research was undertaken using the liberal feminist view to build a theoretical framework to understand the inequalities females face in the Nigerian offshore industry. The goal was to comprehend why there is a lack of females in this industry (Sibani, 2017). This research aimed to use the liberal feminist perspective to study the theoretical framework developed in Chapter three to gain a comprehension of how the liberal feminist theory can bridge the knowledge gap in gender employment inequality in the Nigerian offshore industry.

This research demonstrates that this industry is still very much male-dominated because of the effects of patriarchy. Patriarchy generated from traditional origin has been embedded in the Nigerian society and governs this society at all levels. This act leads to the roles in the Nigerian society being gender-driven and results in gender discrimination in this society (Oluwatosin, 2018). The major goal of Liberal feminism is the possibility of a social change by using rational decision making, dialogue and policies on issues of gender discrimination (Heaney, 2019). Based on the liberal feminist view regarding the theoretical framework for this research, the Nigerian female in the offshore sector should advocate laws and policies to aid the fight against patriarchy in this sector. The fight against patriarchy in this industry should then assist in the fight against gender roles and gender discrimination.

Sibani (2017) write about the liberal, social and Marxist and radical feminist theories, all agreeing that there is oppression and inequality towards females

worldwide. However, they all differ on how feminist theories focus on implementing social changes to improve females' status and everyday lives (Delamont, 2003), meaning that they all use different approaches on how to combat these imbalances within society (Samkange, 2015).

Gender inequality in employment is not only related to the Nigerian offshore industry. It has been a global subject, which has become more recognised and extensively discussed at many different levels worldwide. Many Western countries are leading the reform for gender equality in the workforce. The fight for gender equality worldwide has given many countries' administrations room to apply laws and legislation to tackle this issue. It has also given room for the rise of different organisations to fight these practices. Organisations worldwide like the ILO, ADB, CEDAW, EEOC, and WISE have strived to enlighten the public regarding the inequality females face in the workplace. However, developing countries like Nigeria are still disadvantaged as females from this country are still underrepresented in the workplace, especially in STEM roles (ILO, 2017). There have been great efforts to give males and females the same prospects in the workplace worldwide, regulations have also been put in place to reinforce the inclusion of females in all functions of society (Bako and Syed, 2018). According to Nkama (2019), the Nigerian society, especially the Nigerian workforce still has a considerable amount of work to do as females are still considered to be underrepresented in this sector.

Liberal feminism is focused on attaining gender equality through bureaucratic and lawful improvement within liberal fairness. It can have its limitations in effecting a radical change in the Nigerian offshore industry because it fails to change its philosophy (Sibani, 2017). Some of the feminist approaches in the Nigerian workforce bear a resemblance to the doctrine of liberal feminist theory. Nevertheless, there are restrictions to achieving fairness in the Nigerian workforce, especially in STEM and other political areas, this is due to many factors that include patriarchy due to cultural beliefs.

Although the analysis from the one-way ANOVA for gender roles and gender discrimination produced results with statistical significance means for null hypotheses two and three. They indicated that individuals in the Nigerian offshore

oil and gas industry do not feel that gender roles or gender discrimination affect females' employment in this industry. The researcher's theoretical framework for this study was investigated regarding how the liberal feminist theory underpins patriarchy, females in the Nigerian offshore, gender roles, male domination and gender discrimination.

## **6.11 Addressing the Research Questions**

This section is used to discuss how the research questions developed in Chapter 1.4 were answered. Each question for this research was developed based on extant literature reviews encompassing the factors governing the theoretical frameworks generated for this research. The research questions for this research were developed to address the research topic regarding the shortage of females in the Nigerian offshore industry.

The research questions for this research has a direct link with the theoretical framework. Developing these research questions enabled the researcher to understand the research topic, and provide more enlightenment about this situation to improve this subject in the Nigerian offshore industry.

### **6.11.1 RQ1 - Is Gender a Prerequisite for Employment in the Nigerian Offshore Oil and Gas industry**

Yes, gender is a prerequisite for employment in the Nigerian offshore industry. The analysis of the descriptive statistics from the survey questionnaire result for this research deduced that gender inequality as a result of patriarchy, gender roles, and gender discrimination all have an influence on employment in the Nigerian offshore industry, as supported by Matthew et al. (2019) Okeke, (2019) and Inmpey, (2019).

On the contrary, the results of the inferential statistics for this research indicate that most of the individuals in the Nigerian offshore industry agreed that patriarchy influenced gender roles and male domination in this industry, indicating that Nigeria is a patriarchal society. Although the analysis of the inferential statistics for null hypotheses two and four suggest that the shortage of females in the

Nigerian offshore industry is not a result of gender discrimination, Allanana (2013), Inmpey et al. (2019), Okeke (2019), Eneji and Nwagbara (2019) and Matthew et al., (2019) all concluded that patriarchy was the factor for the shortage of female in the Nigerian workforce.

Eneji and Nwagbara (2019) write about the difference between sex roles and gender roles, citing that in Nigeria, patriarchy leads to gender discrimination starting from the homes and then affecting the workplace.

#### **6.11.2 RQ2 - Is Patriarchy the Factor for Gender Inequality in The Nigerian Offshore Oil and Gas Industry**

The findings of this research study show that it could be analytically determined through descriptive and inferential statistics, and it reinforces the null hypothesis that patriarchy is a cause of gender inequality in the Nigerian offshore industry, as supported by Inmpey et al. (2019), Okeke (2019), Eneji and Nwagbara (2019), while it disregards the notions of Williams (2019), and Park et al. (2019), and Amon (2017) that outlines the lack of mentorship amongst other reasons.

Guidelines to address the shortage of females in this industry is the main motive of this research, and tactics to combat these traditional beliefs, cultural norms, and customary practices responsible for gender discrimination in this industry are the main goal.

Patriarchy is in every function of the Nigerian female's world. It arises from outdated beliefs and social customs in most communities, especially in African countries, where females are regarded as inferior to males (Amon, 2017). Obiora et al. (2019) write about the traditional custom in some Nigerian communities where it is believed that a female child is of less value to the family. This traditional concept manifests from patriarchy into all forms of gender discrimination, leading to gender roles and male domination in the Nigerian workforce (Obiora et al., 2019). The system of patriarchy leads to uneven entrees to educational establishments, lack of female training and difficulties for females in gaining employment or setting up a business (Osunde and Olokooba, 2014). These outdated principles and social functions in Nigeria have shaped the communal

opinion of gender roles that discriminates against females in the workplace and limit females' capacity to attain economic and political power (Emeke, 2015).

Bako and Syed (2018) suggest that females are viewed as inferior to males due to the patriarchal viewpoint in most African countries that emphasise male children, resulting in a gender bias with prospects and jobs roles, limiting females to domestic roles. Osunde and Olookoba (2014) argued that the Nigerian culture regards females as subordinate to males. They are confined to domestic work and are underrated and poorly paid if they gain professional employment. Patriarchy has been a traditional culture that is well embedded into the African community for generations. Perryman et al. (2016) cite that this ancient practice is so deep-rooted that it infuriates the hard work of female activists in Nigeria.

#### **6.11.3 RQ3 - Are the Roles in the Nigerian Offshore Oil and Gas Industry Gender Neutral**

The conclusion from the results of this research identifies a significant gender inequality in the rate of females employed in the Nigerian offshore industry, indicating that fewer females are currently employed in this industry than their male counterparts.

Funk and Parker (2018) argue that the atmosphere is different for females working in STEM jobs. It is often more an unfriendly environment for them than for their male counterparts, with discrimination and sexual harassment being more frequent, and gender is perceived as more of a barrier than a benefit to their career advancement. Funk and Parker further highlight that most females in STEM roles have experienced gender discrimination at work. It supports the result of this research, indicating that roles in the Nigerian offshore industry are not gender-neutral and confirming that this industry is still very much male-dominated (Ariffin and Che Ha, 2014).

Ogbo et al. (2014) suggest a breakdown of certain barricades to successfully manage employment diversity. Amongst these was to stop prejudice and stereotyping. It is displayed by variances that are viewed as feebleness, thereby encouraging the notion that variety employment is assumed to disregard aptitude

and excellence. Ogbo et al. also mention excluding female employees from the administrative systems due to the lack of bureaucratic savvy on varied employees. As a result, diverse employees may not get promoted because they lack the knowledge of getting along with the politics in the establishment (Ogunleye and Osekita, 2016).

Again, the trouble in complementing an individual's profession and household career is an issue. Females still shoulder most of the responsibilities of raising children, making it more difficult for females to work odd shifts or carry out work-related journeys as soon as they have children. Even without children, domestic responsibilities account for more of a female's time compared to males.

The resistance to change is also a great factor to be considered. Successfully handling diversity demands a significant amount of organisational and individual alteration. Managing diversity is an important module of organisational success. Makama (2013) cite a common Nigerian belief that females should be restricted to domestic chores. On the contrary, investigations have suggested that companies will fail, except their recruitment process includes diversity regulation and the inclusion of females in their workforce (Londen, 2006, Ogbo et al., 2014).

Ogbo, et al. (2014) concludes that workforce diversity is very significant for organisational performance and critical for any organisation's success. Many researchers have concluded that employment variety has been recognised as the key to an enhanced organisational achievement. It is due to the broad-based nature of specialisation it conveys to a company.

Anyalebechi (2016) cite that the Nigerian Constitution of 1999 rules for gender impartiality as the requirement for communal growth in the country. The Nigerian government have ruled, regulations and policies regarding females in the workforce, which includes funded training by establishments (Onwutuebe, 2019). According to Gbadamosi (2014), the Nigerian government has also built institutes for gender training on the female role to generate consciousness of females in the community. This was achieved by educating the community through crusades about the requirement for a female to gain employment. The purpose was to stop gender stereotypes towards females at work. It was a reassurance of females'

active involvement in labour relations; and the examination of employment regulations to comprise an improved shielding platform for female workers (Adebowale, 2009; Gbadamosi, 2014).

A study by Ezenwa-Ohaeto (2015) indicate that despite the Nigerian's government effort to stop inequality against females in employment, inequality still occurs (Azuh et al., 2014; Idike et al., 2020). According to Ezenwa-Ohaeto (2015), notwithstanding the educational qualifications females attain, gender domination limits females from gaining employment and promotions in establishments. On the contrary, females generally gain employment in lesser grade jobs than their male counterparts in Nigerian organisations, notwithstanding their heightened educational credentials (Gbadamosi, 2014). Ogbo et al. (2014) maintained that even though Nigeria's 1999 Constitution rules that there should be equality between genders in the country, the reality is that the bridge amid policies and reality is inclusive, and most times, superficial. Generally, females are subjected to a heftier workload with lesser wages than males and are also limited in profession progression due to the traditional barricades of the Nigerian culture. It is a common practice in the Nigerian workforce. Hence, there are only a few females in high-status occupations and top management positions in Nigeria and fewer females in these positions in the Nigerian offshore industry (Nwagwu, 2009).

The lesser representation of females in the Nigerian offshore industry displays the continuous disparities amongst males and females in this industry and unexploited prospects for females to address humankind's most pressing problems (ILO, 2017). Even though studies have shown an improvement in gender discrimination in the Nigerian workforce, the current professional status for females in the country does not agree with this, as female representation is categorised as involved in the lower-level executive profession. Aina (2012) cites that females account for over half of the population in Nigeria and are still under-represented in employment (Aina, 2012).

Although Jacques and Osman (2019) write that including female employees in the workforce could result in specific gender roles in the community, because female-owned establishments are likely to adopt a domestic tailored

establishment. However, Oluwatosin (2020) cite that in the Nigerian workforce, most female employees have reported that they have been required to undertake duties that promote male satisfaction, thereby strengthening gender-focused roles which stem from the homes.

Generally, all employees abide by the duties they have been presented as they have to depend on the organisation for wages; this has been reported to affect many females, as a majority of the occasions, the duties they undertake are not even related to the career they are qualified in (Azuh, 2017). Oluwatosin and Oluwatobiloba (2018) link the Nigerian workforce's role domination to the patriarchal nature of Nigerian homes. Jacques and Osman (2019) cite that preconceptions against females in group decision activities in establishments, and the connection between gender positions from groups and position setup is significantly motivated by a group decision.

Inequality in roles in the Nigerian community is very prominent. Females are still subjected to a system where employers judge their abilities and commitment based on a stereotype perception (Ezenwa-Ohaeto (2015). Onwutuebe (2019) write about employers having a pre-defined notion about a lack of commitment and less productivity from married females due to family responsibilities than their male colleagues.

Azuh et al. (2014) cite that many organisations are hesitant to hire and train female employees, especially in the Nigerian offshore industry, because females are assumed to take time off work, mainly because of household chores, marital stress, and having children (Idike et al., 2020). However, on the contrary, many married females these days are employed, occupying positions with great responsibilities in developed countries (Ezenwa-Ohaeto, 2015).

Oluwatosin and Oluwatobiloba (2018) mention the possibility of most females using sexual harassment and gender inequality to excuse their lack of personal development in the workforce. Meanwhile, the root cause is their lack of enthusiasm and low ambitions. Females with this mentality begin to underestimate and underutilize their abilities, become self-satisfied, displaying a relaxed character. It results in their male counterparts exploiting hardworking

female employees, as females in these organisations would have lost the necessary aptitude and integrity required for their progression.

#### **6.11.4 RQ4 - Does Gender Discrimination and Patriarchy Co-Exist in the Nigerian Offshore Oil and Gas Industry**

The results from null hypotheses two and four for the inferential statistics revealed significant influence between females in the Nigerian offshore industry, and gender discrimination. The findings from this study reveal that patriarchy and gender discrimination do co-exist in this industry. The results indicate that these factors are accountable for the shortage of females in the Nigerian offshore industry, as gender roles and gender discrimination are underpinned by patriarchy (Eneji and Nwagbara, 2019).

The inferential statistics also revealed that gender discrimination and gender roles interactively do not affect females employed in the Nigerian offshore industry. However, the significant contributory effect of these two variables jointly due to the influence of patriarchy is accountable for the shortage of females in the Nigerian offshore sector (Park et al., 2019). A major finding recognised from the results of this study was a significant interaction between patriarchy, gender roles, females in the Nigerian offshore and gender discrimination, which unquestionably impacted the shortage of females in this industry. Many researchers have concluded that Nigeria is a patriarchal society due to cultural beliefs and practices. These beliefs and practices, according to Okeke (2019), contributes to gender inequality in the Nigerian workforce.

An interpretation from the findings of this research shows the existence of a level of reverse discrimination. Hence, the interpretation of the inferential statistics for null hypotheses two and four indicates that individuals in the Nigerian offshore industry responded that gender roles and gender discrimination were not the reason for the shortage of females in this industry, but patriarchy was. Therefore, individuals in this industry considered patriarchy a major issue (Ogunleye and Osekita, 2016). According to Ogunleye and Osekita (2016), the level of prestige of various personal characteristics, including gender difference and gender roles associated with occupation, was frequently cross-culturally stereotyped. Thus,

workers in the Nigerian offshore sector may have been influenced by cultural/societal beliefs. Hence, regardless of gender, females are inspired to work harder to improve prestige and confidence or reduce efforts on their job due to having attained status (Olaogun et al., 2015).

Mathew et al. (2019) suggest that in the Nigerian workforce, prejudice against females is due to differences, segregation or restraint that is grounded on gender difference. Its effect is the weakening or invalidating the appreciation of females and the impeding of their privileges in the community. According to Inmpey et al. (2019), workplace inequality usually arises when an employer or colleague deliberately acts/reacts differently with a colleague due to their gender or ethnicity, throughout any stage, from recruitment, disciplinary actions, job evaluation, or termination of employment (Oluwatosin and Oluwatobiloba, 2018).

Okeke (2019) cite that the major hurdle encountered by female employees in the Nigerian workforce is acceptance in their selected careers due to stereotypes. In Nigeria, stereotyping has defined some roles as male-only jobs (Okeke, 2019). Females in these professions are viewed as demanding to be equal to males. The consequence of this is that the duties they should carry out are taken from them because females are viewed as the weaker gender (Eneji and Nwagbara, 2019).

#### **6.11.5 RQ5 - Is the Liberal Feminist Theory Appropriate to Address gender Inequality in the Nigerian offshore Oil and Gas Industry**

Liberal feminism is a gender reorganised female movement derived from liberal philosophy (Mama, 2011). According to Enyew and Alemeneh (2018), the liberal feminist philosophy recognises females existence and struggles and concentrates on reforming the structure that weakens the complete participation of females in society. This philosophy was used for this investigation to encourage impartiality amongst males and females against male domination and supremacy (Enyew and Alemeneh, 2018). For this research, the liberal feminist theory was viewed as giving qualified females in the Nigerian offshore industry the opportunity to decide if they want to work in this industry without prejudice.

Liberal feminism argues that variances among males and females are not grounded on sex, representing the reproduction changes. Therefore, it is proposed that females have the same privileges as males, including employment and educational opportunities. Regrettably, liberal feminists are not able to supersede the predominant notion that females and males are fundamentally different. However, they triumph in establishing that females are not subordinate to males (Nienaber and Moraka, 2016). The liberal feminist philosophy does not fix the opening in gender employment in the Nigerian offshore industry regarding the inclusion of females because they are still very underrepresented in this sector (Sibani, 2017).

The idea of a liberal feminist does not support the social and cultural system in Nigeria. The patriarchal nature of Nigeria, whereby males are looked upon as the head of the family, has been transferred to other aspects of the Nigerian system (Matthew et al., 2019). As a result, it shows the role that cultural beliefs play in shaping and controlling the Nigerian workforce (Fesseha and Abtewold, 2017).

In contrast to developing countries, as well as Nigeria, liberal feminist concepts are most suited to developed countries. Enyew and Alemeneh (2018) cite that the uniqueness of liberalism is that it pays no reflection to the consideration of likes or variances of females in any form. Bako and Syed (2018) suggest that the relegation of females in commercial growth and the communal and dogmatic structure is a global issue; nevertheless, it is predominant in developing nations. Notwithstanding the implementation of the CEDAW treaty for Females equality in 1985 and other analogous guidelines, including the 2006 National Gender Policy in Nigeria, gender disparity continues to occur mainly due to numerous traditional and organisational barriers; and this has put a constrain on the participation of females in society (Bako and Syed, 2018).

In the Nigerian workforce, it is difficult to exercise the individual rights of females because of culture, especially because the Nigerian society is partly Christian and partly Islam, and both societies view the issues of gender inequality in different lights. Chegwe (2013) mentions that Nigerian law is acquired from numerous philosophies that do not equally emphasise female privileges. The Nigerian policies on gender inequalities originate from public regulation

established by males, entwined with perceptions of the traditional or outdated decree that integrate religious ideologies and customs. These policies are difficult to break. It is difficult to enforce regulations on gender equality due to the limitation of universal awareness amongst individuals regarding the scope of Nigeria's regulations. According to Mama (2011), the regulation only defends individuals in the executive sections of the bureaucratic system, abandoning the general workforce that is the foremost economic proprietor in the nation. Osunde and Olokooba (2014) report that several executives report unfamiliarity with anti-discrimination rules; a limited amount of them knew these policies but refused to practise. Emeke (2015) cite that the ambiguity of the legislation and the absence of implementation have unfavourably affected female participation in all spheres of the community. Although the 2006 National Gender Policy assured that the relegation of females would be eradicated, Makama (2013) argues this policy has failed, and the absence of females in employment globally remains a key issue.

Emeke (2015) write that the federal government of Nigeria have granted the power to individual states in the country to draft their laws to impede female privilege. He writes about the East of Nigeria, in states like Ebonyi and Enugu, where widows and female orphans are not allowed to inherit husbands and fathers assets due to traditional beliefs. Therefore, when a man passes away without a male heir, his belongings are shared amongst his extended family members and nothing to his widow and daughters. Again, apart from a few Nigerian states, for example, Lagos and Ekiti, that have regulations against violence at home, others do not have any laws in this respect. Ekhaton (2015) mention the Nigerian penal code that does not stop husbands from beating their wives, providing no major injuries should occur. Enyew and Alemeneh (2018) suggest that there will be difficulty developing gender-subtle regulations in a world that males dominate, and where the majority of the policymakers and originators were males. They then questioned the effectiveness of pursuing legal actions by bullies to profit the oppressed. Therefore, it is a choice for females in Nigeria to use the radical feminists' approach to fight their prejudice. The liberal feminists' emphasis on rationality and the Nigerian system is very patriarchal to address female injustice, affecting females rationally as traditional and religious philosophies underpinning patriarchy appears to be of prominence (Bako and Syed, 2018).

## 6.12 Summary of the Research Questions/Results

Table 6.3 below portrays how the findings from the descriptive and inferential statistics result support or oppose the research questions for this research.

RQ1 - The findings from the descriptive and inferential statistics for this research indicates that gender discrimination and patriarchy do co-exist in the Nigerian offshore oil and gas industry, as supported by Allanana (2013), Inmpey et al. (2019), Okeke (2019), and Ezenwa-Ohaeto (2015).

RQ2 - The findings from both analyses indicate that patriarchy is a factor for gender inequality in this industry, as supported by Matthew et al. (2019), Umukoro (2014), and Nkama (2019).

RQ3 - The findings from both analyses indicate that roles in the Nigerian offshore industry are not gender-neutral, as supported by Matthew et al. (2019), Amon (2017).

RQ4 - The findings from both analyses indicate that gender discrimination and patriarchy do co-exist in the Nigerian offshore industry, as supported by Allanana (2013), Inmpey et al. (2019), Okeke (2019), and Eneji and Nwagbara (2019).

RQ5 - The findings from both analyses indicate that the liberal feminist theory is sufficient to investigate gender inequality in the Nigerian offshore industry. This result is supported by the work of Ezenwa-Ohaeto (2015), Anyalebechi (2016), and Heaney (2019).

	<b>Descriptive Statistics</b>		<b>Inferential Statistics</b>	
	<b>Support</b>	<b>Against</b>	<b>Support</b>	<b>Against</b>
<b>RQ1</b>	Yes		Yes	
<b>RQ2</b>	Yes		Yes	
<b>RQ3</b>		No		No
<b>RQ4</b>	Yes		Yes	
<b>RQ5</b>	Yes		Yes	

Table 6.3. Summary of Research Results

### **6.13 Summary**

This chapter was based on a critical analysis of the descriptive and inferential statistics results. Using the descriptive statistics analysis in Chapter Five, the researcher was able to process and visualise raw data collected for this research. In contrast, inferential statistics were used to test the research hypotheses. This chapter demonstrated how the findings from the descriptive and inferential statistics aligned with the theoretical framework and the research questions. The liberal feminist theory was used to study the theoretical framework underpinned

by how patriarchy influences gender roles, females in the Nigerian offshore, male domination and gender discrimination in the Nigerian offshore industry.

The findings from the descriptive statistics analysis indicate that patriarchy, gender roles and gender discrimination were all responsible for the shortage of females in this industry. In contrast, the inferential statistics showed that just the effect of patriarchy on gender roles and the effect of gender roles on male domination were responsible for the shortage of females in this industry.

This chapter finally demonstrated how the research questions were answered by the descriptive and the inferential statistics findings. Although both statistical analysis methods adopted different strategies for data analysis, the findings from both statistical analyses methods aligned regarding the research questions.

## **7. CHAPTER SEVEN. CONCLUSION, LIMITATIONS, IMPLICATIONS FUTURE RESEARCH, AND REFLECTIONS**

### **7.1 Introduction**

This chapter summarises the importance of this study, emphasising on why this study was undertaken and highlighting the outcomes of this study. This chapter starts by reviewing the liberal feminist approach for addressing gender inequality in the Nigerian offshore industry. Subsequently, this chapter discusses the limitation of the liberal feminist theory for this study, highlighting its shortcomings concerning the approach for this research. Next, the conclusion of this research, followed by the contribution to knowledge, the research limitations, recommendations for future research studies, and the researcher's reflection is discussed.

### **7.2 A Critique of the Liberal Feminist Approach for Addressing Gender Inequality in the Nigerian offshore Oil and Gas Industry**

Gender inequality has been an evolving issue right from the creation of Nigeria in 1914 (Umukoro, 2014). It has been a global issue even before Nigeria got its independence in 1960, and the fight for gender equality intensified after Nigeria got its independence (Okeke, 2019). The lobbying for gender equality in Nigeria has added significantly to reform regulations in many sectors in the Nigerian community, including employment. According to Oluwatosin and Oluwatobiloba (2018), the post-independent regime of Nigeria is still fighting to eradicate many forms of inequalities, ranging from gender, race, class to religion. Although both liberal and radical feminists concur that there is gender inequality in the workforce, they both have different approaches to fighting these ills. While liberal feminists work towards legal reformation to combat this inequality, radical feminist considers the personal sphere, including the right to sexual freedoms (Heaney, 2019).

Every employee, male or female, is eligible for the same privileges and chances available from an employer and the policies governing their engagement, without prejudice or harassment of any kind whatsoever. Equal privileges and chances must be arranged for every employee without discrimination on sex, disability,

status, and origin (Idehen, 2011). These privileges are confirmed in the 1999 Constitution of the Federal Republic of Nigeria, guaranteeing to emancipate everyone from discrimination. It also establishes the communal purposes and affirms that Nigerian legislation is grounded on the morals of liberty, fairness, and impartiality (Oluwatosin and Oluwatobiloba, 2018). It is bestowed on all walks of life and not limited to labour participation. The 1999 Constitution also prohibits prejudice in employment, stating that the government will provide a rule guaranteeing all its residents are provided with an acceptable revenue and suitable prospect to work, and no one should be deprived based on gender or ethnicity. With this in mind, discrimination is considered to occur in most establishments where female employees are treated differently from males, contrary to the employment laws.

The ILO insist that all member states must respect the policies on eliminating inequality during engagement and on the job as an essential attitude. Nigeria is a member state of the ILO, has ratified the 1951 ILO Equal Remuneration Convention and the 1958 Discrimination Convention. The country's protection against gender inequality is still flimsy due to traditional regulation stemming from the religious decree. The regulations can be termed non-existent because there are few hearings on them, rendering this subject underdeveloped (Oluwatosin and Oluwatobiloba, 2018).

### **7.3 Limitation of the Liberal Feminist Theory for this Research**

Although the 1998-2015 Nigerian workers' inequality Acts summarised gender inequality in an extensive variety of engagement associated subjects, there is still a lot of gender inequality relating to employment in Nigeria, especially in the offshore and the STEM sectors. This research indicates that the liberal feminist theory is good enough to tackle these gender inequalities in this industry. The researcher has advocated for females in the Nigerian society to apply the laws and policies set by the Nigerian government to fight for gender equality in the Nigerian offshore industry. The liberal feminist theory is premised around several assumptions. Generally, the liberal feminist approach involves legislation and an incremental strategy to change society.

Many factors inhibit the full participation of females in the Nigerian workforce. Following an extensive literature review, the results from this research identify patriarchy, which results from traditional practices as the primary factor for gender employment inequality in the Nigerian offshore industry. Even when females have jobs, many obstacles make their lives more complicated than their male counterparts because of the conception of labour law and its inflexibility to accommodate females' dual roles. Labour laws can redefine its concept to accommodate contingent, flexible, nonconforming, marginal, or casual workers. Females often are responsible for the management of the household and childcare while carrying out workplace responsibilities daily. It effectively requires them to do double entry of work responsibility as well as home management. Allanana (2013) cite the Nigerian National Gender Policy that was put in place and pledged to guarantee a favourable action for females. Nevertheless, female representation in the Nigerian workforce is still under the targeted 35%. According to Oluwatosin and Oluwatobiloba (2018), the Nigerian government hardly deliberates on a favourable solution, and when a policy is approved, it is normally inferior to the benchmark initially set up.

This research also indicates that the patriarchal nature of the Nigerian offshore industry encourages a bias on gender roles and gender discrimination in this industry. Although Nigeria has considerably advanced regarding legislature as advocated by liberal feminists. There is a bridge in enforcing these policies as the ratio of gender balance is still very low in the Nigerian workforce, especially in the STEM and offshore oil and gas industry. Nigerian females generally suffer from undue discrimination, marginalisation, and exploitation by males implementing their traditional and cultural beliefs, which have placed males as superior to females.

Apart from the above features discussed in this research, there are still other influences in the Nigerian society that underpin gender inequality. The involvement of females in this workforce is also guided by features such as culture and gender stereotypes with both males and females.

Eneji and Nwagbara (2019) cite traditional beliefs and structural barriers as the cause of gender inequality. In their view, employment inequality affecting females

in the workplace, and other segments of the social and economic community can be addressed by adopting a radical approach to implementing the already advocated laws by liberal feminists.

It is hoped that raising awareness of modernisation by following the lead of the western world will help address the traditional beliefs embedded in the Nigerian society. It requires concerted efforts for the improvement of the involvement of females in the Nigerian workforce. It may be achieved by applying a radical approach to the existing laws. The liberal feminist advocates for the same privileges amongst individuals. Their method of reform is to progressively familiarise this action in the society without disturbing what was accepted to be normal. Their aims are reasonable, and their opinions do not radically contest the prevailing standards. Generally, they advocate for gradual reforms through laws and policies that promote equality.

#### **7.4 Conclusion of this Research**

From the findings of this research, it can be concluded that the Nigerian offshore industry is patriarchal. It is a vital example of a traditional society that provides a super-structure where social relations with a physical base enable males to dominate females (Idike et al., 2020). The traditional culture of Nigeria justifies the marginalisation of females in employment, thereby resulting in fewer females in the Nigerian workforce, especially the Nigerian offshore oil and gas industry (Onwutuebe, 2019).

Although females make up to around 40% of the Nigerian population, they do not enjoy the same rights and opportunities as their male counterparts (Bayo and Syed, 2019). Williams et al. (2014) mention that right from the industrial revolution, females have been subjected to workplace inequality worldwide, particularly in developing countries. The Nigerian government has gone through significant efforts to pass laws and policies in line with the liberal feminist doctrine to fight against inequality and provide equality in all sectors of the Nigerian community. However, this theory has limitations when it comes to gender employment. Anyalebechi (2016) suggests that it may be due to incapability to change the current situation, citing that the transformation it brings could be

inadequate regarding policies and laws generated to enhance the fight against gender inequality in the Nigerian workforce. However, it was determined that liberal feminism applies to employment inequality and the conditions of policies produced to aid impartiality and provide justice and fairness in employment. Nevertheless, there have been difficulties in attaining equality in the Nigerian workforce, especially in the offshore sector. Therefore, the legislation advocated by liberal feminists could be supported by radical reform.

In Chapter Two, gaps in the knowledge were identified regarding the background research, and subsequent extant literature review studied for this investigation. It was apparent during the literature review that the area of gender inequality, with particular emphasis on the shortage of females in the Nigerian offshore industry, was limited. Furthermore, considering the growing awareness for gender employment equality in Nigeria and the gap in knowledge in this area, it was vital for the researcher to examine and analyse this area in depth.

The findings from this research in Chapter Six identified a significant gender imbalance of individuals employed in the Nigerian offshore industry. The survey analysis results in Chapter Five indicate a gross disproportion in the ratio of males to females employed in this industry. Thus, aligning the findings from this research with previous studies of Idike et al. (2020), Onwutuebe (2019), Allanana (2013) and Aigbokhan (2017), all indicating a persistent disparity between males and females in the Nigerian workforce. However, this research could not determine how females were treated while working in this industry.

The survey questionnaire results in Chapter Five shows 173 valid responses, of which 131 responses were from male respondents, accounting for 76%, while 43 responses were from female respondents, accounting for 24%. Thereby supporting the literature review that there is a shortage of females in the Nigerian offshore industry, and indicating that this industry is still male-dominated.

These research findings indicate that the Nigerian offshore industry is male-dominated due to the conventional diversity management practised, and it remains prejudiced by the dominant male tactic of reducing female's participation in the Nigerian workforce. Additionally, the slight prominence of being the same

as an alternative to being different strengthens masculinity. This thereby acts as a contributory factor to the shortage of females in the Nigerian offshores sector. Therefore, it is recommended that organisations promote gender diversity and encourage all their staff to undertake training courses centred on unconscious biases, recognising that gender inequality is still a problem in the Nigerian industry, especially in the STEM offshore sectors. It is generally normal that female-friendly procedures are practised by establishments that support females in management roles, promoting a culture of unconscious bias, making it easier for everyone in an organisation to view the working environment from a females view (Tate and Yang, 2015). Generally, impartiality in an organisation has been acknowledged to boost its accomplishment (Ogbo et al., 2014).

The growth of an establishment can also be limited by gender inequality in the workforce, and it does not only affect individuals career aspirations. Gender discrimination can unfavourably affect an establishment's output, particularly because the individuals who are instrumental in the development of the establishment are disfavoured against gaining employment. The standard of an establishment is also vulnerable as it creates a demoralising working atmosphere that is not favourable to an employee's output.

Employment inequality also gives room for the retention of unproductive employees in an establishment. It is an additional consequence that portrays a damaging communal picture of the Nigerian workforce and the offshore industry. According to Olaogun et al. (2015), females can be remarkable when productive. However, they will not surrender to victimisation or sexual harassment, neither will their capabilities be harnessed. Establishments with less female presence have been reported to operate at a disadvantage due to gender inequality compared to a more diverse establishment.

In most cases, females have reported that they do not have an appropriate means to communicate victimisation due to an unethical procedure within an establishment, forcing them to accept discrimination rather than fight to defend their reputation.

Gender inequality in the Nigerian offshore industry has become among the most sensitive subjects for effective workplace management. Nigeria and other developing nations are still lagging behind developed nations because inadequate attention has been applied to resolve these matters. In many Nigerian establishments, gender discussion is frowned upon, and it is not the most vocal topic, making many managers reluctant to speak about it.

This research concludes that Nigerian females face high levels of inequality and discrimination that has impacted their participation in the Nigerian offshore industry, leading to their low contributions towards the sustainable development of Nigeria. The Nigerian female needs to engage in policies that will reform the structural barriers that discriminate against females in the Nigerian workforce. It holds back the progress on gender equality in the country. This research shows how the roles encouraged by the Nigerian community's patriarchal tradition influences the Nigerian offshore industry (Fesseha and Abtebold, 2017). Therefore, liberal feminist theory is ideal to reform the ideology of patriarchy in this industry.

Patriarchy is only one dimension of gender inequality. Several other forms of gender inequality still exist in the Nigerian workforce, especially the offshore oil and gas industry. Therefore, tackling male domination in this industry should involve a multilevel approach that tackles gender inequalities from different perspectives underpinned by the liberal and radical feminist theories (Syed and Murry, 2008).

### **7.5 Contribution to Knowledge**

In the literature review and theoretical framework chapters of this thesis (Chapters Two and Three), a body of knowledge and theories were investigated relating to the concerns regarding the imbalance in gender employment in the Nigerian offshore industry. It was undertaken to understand the persisting problem surrounding the shortage of females in this industry. After an extensive literature review, it was apparent that there was limited research addressing inequality in gender employment in the Nigerian offshore industry. However, existing literature identified inequality in gender employment in other sectors of

the Nigerian workforce (Olaogun et al., 2015). Eneji and Nwagbara (2019), and Allanana (2013) identified gender roles and gender discrimination as the major factor for employment inequality in the Nigerian workforce, while Aigbokhan (2017), Inmpey et al. (2019), Okeke (2019) and Matthew et al. (2019) identified patriarchy as the major reason for employment inequality in this sector. Thus, further emphasising the need for this research to understand its applicability to the Nigerian offshore industry.

This thesis made contributions at theoretical and practical levels. These contributions are summarised below.

### **7.5.1 Theoretical Implications**

Firstly, the researcher concluded that the liberal feminist theory alone was not adequate to combat gender inequality in the Nigerian offshore industry and resulted in the combination of the radical and liberal feminist theories. With both theories, the researcher proposes that the fight for gender inequality in this industry should be approached by radically challenging the existing laws and policies that promote equality (Onwutuebe, 2019).

A combination of the liberal and radical feminist theory underpinned by the research questions in studying why there is a shortage of females in the Nigerian offshore industry might add to the theoretical relevance of employers, and employees and how an organisation is managed. It was also added to the theoretical arguments of Oluwunmi et al. (2020) and Ogbo et al. (2014) that the patriarchal nature of the Nigerian culture has resulted in gender roles and gender discrimination in the Nigerian workforce, thereby accounting for the shortage of female in the Nigerian offshore oil and gas sector (Inmpey et al., 2019).

Furthermore, it justifies the need for intensifying the campaign and increasing the awareness of gender inequality in the Nigerian workforce as proposed by many scholars, including Inmpey et al. (2019), Okeke (2019), Eneji and Nwagbara (2019) and Matthew et al., (2019).

This study also contributes by exploring and affirming the general validity of many research assumptions regarding gender employment inequality in the Nigerian workforce.

Although it is understood that many employers in the Nigerian offshore industry are supporting the fight for equal gender opportunities, they are certainly failing to meet a fair, equal opportunity ground, as implied by the findings from this investigation.

Finally, the findings from this research could be viewed as preliminary for future investigations regarding gender studies in organisations, particularly in the Nigerian offshore industry. It provides researchers with an opportunity to present a complete picture of gender employment within the framework of inequality in gender employment in the Nigerian offshore industry and other countries that face similar issues.

#### **7.5.2 Practical Implications**

This research has several practical implications for employers and employees in the Nigerian offshore industry

Firstly, the theoretical framework identified the challenges that are currently impeding female's employment in the Nigerian offshore oil and gas sector, namely patriarchy, gender roles and gender discrimination, and to some extent, the individuals themselves, and their cultural beliefs and practices. These are essential elements that should be addressed to improve the ratio of competent females in the Nigerian offshore industry.

For instance, patriarchy is still extensively practised in the Nigerian culture. Notwithstanding the level of education most females have attained, they are still discriminated against when it comes to gaining employment in most of the sectors in the Nigerian workforce. Patriarchy is well embedded into the Nigerian culture that the Nigerian females feel subdued, and most females have surrendered to the patriarchal culture of the country.

Although the Nigerian government has advocated a gender reform and brought rules into place to assist the fight of gender inequality in the country, some rules appear not to be used in practice due to deficiencies in their adequacy and the overlap with other provisions. This problem requires a radical approach. Moreover, this study has shown that there may be specific factors that impede the governance practice in the Nigerian offshore oil industry, despite regulations in put in place.

The research also indicates a connection between patriarchy, gender roles and gender discrimination in the Nigerian offshore oil industry. Therefore, there is a need to understand these factors for gender inequality to be improved in this sector. The need for corporate diversity management programs in the Nigerian offshore oil and gas industry is a great starting point, these programs could be adopted during recruitment, and promotions, and they can also include mentoring programs, affinity groups, and diversity training, including an unconscious bias training, these have proven to be beneficial at attaining gender diversity in the developed countries (Williams et al., 2014). According to Williams et al. (2014), HR professionals argued that hiring people from diverse backgrounds could increase profits by expanding market share; reducing turnover; increasing employee productivity, profitability, creativity, innovation, and problem-solving abilities, while lowering legal costs. Companies in the Nigerian oil and gas sector should apply unconscious bias training for all their employees, as this could eliminate wrong gender stereotyping, promote a gender-neutral workforce, and present equal employment opportunities, and contributions from males and females in an establishment. This has been reported to positively influence an organisations growth. According to Adams (2016), female workers are under-represented and receive biased appraisals in the workplace due to negative stereotyping, this can also be corrected by companies taking advantage of applying unconscious bias training for all employees, possibly during the first week of employment.

Ogbo et al. (2014) argue that companies are bound to fail, except their recruitment process includes diversity regulation and the inclusion of females in their workforce, while Aigbokhan (2017) argued that reducing gender inequality in the Nigerian workforce will assist in poverty eradication and boost the country's

prosperity. Obiukwu (2019) cite that poverty is a gender issue, hence if gender equality is achieved in the Nigerian workforce, it is believed that the poverty level will improve, Obiukwu further mentions that gender bias in the Nigerian system is not only relegating females out of employment, but it is also limiting the country from approaching its massive economic potential, and that country could achieve a growth of GDP of 23% by 2025 if females participated in the economy to the same extent as males (Obiukwu, 2019).

This issue of organisational inequality could be a result of the organisation's negligence to query and change predominant concepts about what establishes the most suitable and efficient ways to express and complete work by females, distinguish and recompensing their ability, and comprehending and elucidating the behaviour of all employees (Ezenwa-Ohaeto,2015). Ogbo et al, (2014) argue that many organisations throughout Nigeria are unsure how to effectively manage diversity in the Nigerian workforce, with the excuse of lack of awareness of the combined need and relevance of addressing this subject.

Finally, due to the complexities of the Nigerian culture regarding employment, this thesis proposes the adoption of the liberal and radical feminist approach, combined with cooperation, and trust from the employers and the employees to create awareness by arranging symposiums showcasing females who have progress in this industry to stand as mentors to aspiring females, and to encourage them to seek a career in the Nigerian offshore industry.

## **7.6 Limitation of this Research**

The limitations of this study cover four areas: 1). Sample size, 2). Methodology, 3). Research focus area, and 4). Research methods. These are discussed in the following paragraphs below.

- I. The sample population for this research: The sample population for this study was limited to individuals of the Nigerian offshore industry, and the willingness of participants in this field to respond to the research questionnaire. The requirement of participants for this research narrowed down the scope of respondents, and the selection criteria were based on

individuals involved in the Nigerian offshore oil and gas sector. The researcher expected a higher response rate than received from females. However, only a restricted number of females could participate due to the low number of female employees in this industry. Nevertheless, the sample size and responses received for this research was appropriate for data analysis. Consequently, expanding the research to other shore-based STEM roles in Nigeria could have added a deeper level of analysis for this research.

- II. The methodology employed: The choice of a mono quantitative survey method for this research only allowed the researcher to study this research from one approach. This research might have benefitted more from a multimethod approach, as it would have allowed the researcher to collect primary and secondary data, and also allowed for the use and comparison of the parametric and the nonparametric data analysis methods.
- III. Research focus area: This research study focused only on the Nigerian offshore sector, and participation was restricted to Nigerian male and female individuals in the Nigerian offshore industry. Although addressing the subject matter on gender inequality in this industry, the results may be limited only to this industry, and not generally to females in STEM employment in other sectors of the Nigerian workforce.
- IV. Research Methods: Finally, this research was limited to the descriptive statistics and inferential statistics methods (the one-way ANOVA) for data analysis, although the researcher was able to deduce substantive results to support this research study, it might have been beneficial to have compared a different data analysis software package.

## **7.7 Recommendations for Future Research**

The first recommendation is for this research is that this research could have benefited from the approach by a combination of research methods (mixed-methods) using a qualitative and quantitatively study. The qualitative study will allow the researcher to delve deeper into why the respondents had certain

perceptions, as a quantitative survey does not allow the researcher to expand or explain a questionnaire question further.

Even though the results from the mono quantitative survey results indicated that most respondents had an overall negative perception of gender disparity in the Nigerian offshore oil and gas industry, a qualitative study could have expanded the comprehension of the investigation for the investigator and the respondents. The survey questionnaires could have benefitted from being open-ended to allow respondents to give in-depth responses to the survey questions. Also, it might have been beneficial to have interviewed the respondents as it might have given more insight into their understanding of the research subject.

It is proposed that future studies on gender inequalities should not only be focused on inequality in the Nigerian offshore industry but should be expanded to females in STEM roles in the Nigerian workforce.

In addition, further studies should investigate closer into the promotion factors between male and female offshore workers, and it is assumed that such investigations will improve knowledge of gender inequalities within the offshore and STEM sector, with the ultimate goal of identifying mechanisms of support for advancement, which organisations can use during employment.

Regarding the findings of this investigation, it is recommended for female offshore oil and gas workers to be proactive and strive to be at par or even better than their male colleagues since most female offshore workers are relatively aware of gender discrimination and male dominance in this industry.

Finally, a combination of the liberal and radical feminist theory could be beneficial. The Radical movement originated from Western countries. According to Ezenwa-Ohaeto (2015), the radical movement is a view encompassing feminism that emphasises patriarchy as an authority that arranges the community into complicated associations regarding the declaration that females are subordinate to males. The goal of the radical feminist is the radical reorganisation of society by contending outdated gender decrees and the domination of females to confront and eradicate patriarchy.

The radical feminist, in contrast to the liberal feminist, has a greater capability in addressing a masculinist patriarchal society through a radical reform, their strategy is to overthrow the known state of liberal democracy into a condition of anarchy whereby individual freedoms and equality can be expressed immediately and without preconceived limitations. Radical feminism recognises that liberal feminism does not have the capabilities in this modern era to account for the innate gender exclusionary practices of the country, and the real action in addressing these engrained motives is an overhaul of the patriarchal or masculine foundations of modern society (Heaney, 2019).

Regardless of communal class, the feminist movement indicates the opportunity for every female's privilege to revolt. Ezenwanebe (2015) suggests the concept of non-violent activism as a viable strategy for female's liberation. According to Heaney (2019), females worldwide, regardless of their individualities on the communal subject, should fight for female contention regarding gender domination with policies relating to their community, hypothesising about the fight for gender equality between feminists in developed and developing nations the major distinction is their approach for the fight for emancipation.

This research indicates that females understand that they are marginalised in the Nigerian offshore industry. Nowadays, females are becoming conscious that policies in place are not enough to fight this ill act in this industry. Nigerian females are obliged to seek a radical approach to fight this injustice. Anyalebechi (2016) suggests the need for females in Nigeria to unite collectively to fight gender inequality in the Nigerian workforce. Therefore, to address gender inequality and transform gender relations in the Nigerian offshore industry, patriarchy needs to be tackled and eradicated in all its manifestations in this industry. Again, Nigerian females should adopt a radical approach to eliminate all forms of patriarchal discrimination in this industry (Allanana, 2013).

According to Heaney (2019), It is arguable that radical feminism has the tools and context to make equality and freedom from structural oppression, not just a fanciful thought. However, a reality for future females in society, and thus the state is redeemable masculinist from this stance. Heaney concludes that radical feminism is an approach that will address these concerns and create a safe

feminist space, where individuals are regarded as equal and feminist subjects can exercise their full citizenship in an inclusionary environment, thus making the state redeemable masculinist.

## **7.8 Reflections**

This section discusses the researcher's reflection upon the journey towards achieving the goals of this DBA thesis.

The process commenced with the researcher studying past literature to gain an understanding of the research topic. During this process, the researcher also undertook some taught modules including 1). An introduction to doctoral study, 2). History and philosophy of business and the social sciences, 3). Identifying and explaining theory, 4). Reflective practice, reflexivity and paradigm of inquiries, 5). Understanding paradigm of inquiries, and 6). Developing methodological approaches and dealing with methods.

These taught modules provided the researcher with the essential skills and knowledge to comprehend the rudiments of undertaking a social science research. With these skills, the researcher was able to identify an appropriate research route, selecting a suitable research method, methodology and data analysis technique for this research. This process has broadened the researcher's knowledge on the comprehension of the different approaches available to carry out a research

The greatest learning curve during this research was understanding the different research approaches, and how to research at a doctoral level. The outcomes of this research were also very important, as it provided a few practical implications see Chapter 7.5.2 that could be beneficial to the Nigerian offshore oil and gas industry when trying to involve females in this industry.

During this research, the researcher also had a full-time job. Therefore, having to juggle and switch between a full-time job, and this DBA thesis required a lot of focus and time management. By accomplishing this research, the researcher learnt and understood the importance of time management, while also developing

fundamental skills in priority planning, which was required during planning on when to choose between a priority task concerning this research, or other matters. This DBA journey has also improved the researcher's written, communication and research skills, these are essential skills to possess, as they are not only required in the academic world, but are also vital during our day-to-day activities. Other skills acquired during this research journey includes multi-tasking, the ability to remain focused in-between many tasks, while maintaining accountability, and the patient to remain persistent, and focused, with the curiosity to always learn something new to expand knowledge. These skills were highly required to complete this research,

The researcher's critical thinking, praxis, and project management skills were also improved. This research involved the researcher developing a theoretical framework underpinned by the research questions, and the research aims and objectives, it required the researcher to harness critical project management skills to accomplish this task. The critical thinking skill gained enabled the researcher to conceptualise the notion of gender inequality in the Nigerian offshore industry actively, while the praxis skill gained enabled the researcher to carry out the practical aspect of the research successfully, and then the project management skill acquired enable the researcher to align the theoretical, and practical aspects of this research together to produce fundamental results for the Nigerian oil and gas industry, to assist combat gender inequality in this industry.

Finally, undertaking this research enabled the researcher to yoke leadership and public speaking skills. All these skills acquired during this research journey are essential in the researcher's current job because they will assist with the researcher's personal development, while at the same time contributing to organisational advancement.

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## **9. APPENDICES**

## **9.1 Appendix 1: GDPR Certificate**



# Certificate

## E-LEARNING ACHIEVEMENT

awarded to

Victor Apiafi

On Successful Completion and Passing  
of a University of Plymouth e-Learning Course

GDPR and Information Security

*Name of Course*

13/04/2020

*Date*

## **9.2 Appendix 2: Ethical Approval Letter**



**UNIVERSITY OF  
PLYMOUTH**  
Faculty of Arts, Humanities  
and Business

Date: 9 July 2020

Dear Victor

**Ethical Approval Application No: FREIC1920.36**

**Title: Investigating Employment in the Nigerian Offshore Oil and Gas Industry: Is  
Gender a Prerequisite?**

Thank you for your application to the Faculty Research Ethics & Integrity Committee (FREIC) seeking ethical approval for your proposed research.

The committee has considered your revised application and is fully satisfied that the project complies with Plymouth University's ethical standards for research involving human participants.

Approval is for the duration of the project. However, please resubmit your application to the committee if the information provided in the form alters or is likely to alter significantly.

The FREIC members wish you every success with your research.

Yours sincerely  
*(Sent as email attachment)*

Mr Derek Shepherd  
Chair  
Faculty Research Ethics & Integrity Committee  
Faculty of Arts, Humanities & Business(SoLCG & PBS)

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Derek Shepherd, Chair, Faculty Research Ethics & Integrity Committee, Faculty of Arts & Humanities (SoLOG & PBS),  
Roland Levinsky Building, University of Plymouth, Drake Circus, Devon PL4 8AA, United Kingdom  
T +44(0)1752 585687 E [FoAHEthics@plymouth.ac.uk](mailto:FoAHEthics@plymouth.ac.uk) W [www.plymouth.ac.uk](http://www.plymouth.ac.uk)

### **9.3 Appendix 3: Data Management Plan**

## **INVESTIGATING EMPLOYMENT IN THE NIGERIAN OFFSHORE OIL AND GAS INDUSTRY: IS GENDER A PREREQUISITE?**

*A Data Management Plan created using DMP online*

**Creators: Victor Apiafi**

**Affiliation:** University of Plymouth

**Last modified:** 03-05-2020

## **INVESTIGATING EMPLOYMENT IN THE NIGERIAN OFFSHORE OIL AND GAS INDUSTRY: IS GENDER A PREREQUISITE?**

### **DATA COLLECTION**

#### **What data will you collect or create?**

The objectives of this research will be to collect primary data. Using the survey method, quantitative data will be collected from respondents to address the research questions. The idea is for the researcher to send out 2000 questionnaires, this figure was achieved using G\*Power 3.1.9.2, power analysis and effect size estimation software.

#### **How will the data be collected or created?**

The deductive approach using the survey strategy will be used to collect primary quantitative data for this research. A 6-point Likert scale designed questionnaire will be emailed to respective individuals that represent the targeted sample population for this research. The questionnaire method will be structured comprising of a closed-ended question, requiring respondents to select an answer from a set of pre-coded numeric answers from a scale ranging from one to six, (one representing strongly agree and six representing strongly disagree).

## **DOCUMENTATION AND METADATA**

### **What documentation and metadata will accompany the data?**

The research data will be created and maintained following the data quality standards set in the University's Data Quality Policy. The research data should be accurate, valid, reliable, relevant, and complete.

The research data will be organised and documented to ensure its future discovery and reusability, also, consideration will be given to the use of open or widely available file formats and metadata standards that will facilitate the discovery, interpretation, and reusability of the data.

## **ETHICS AND LEGAL COMPLIANCE**

### **How will you manage any ethical issues?**

The research data will be created, managed, and shared in a manner that is compliant with The University's Code of Good Research Practice, and the Research Ethics Policy. The researcher will also apply for ethical approval from the University's Research Ethics and Integrity Committee.

The introduction to the survey questionnaire for the research will contain an introduction to the research and a consent section, where participants are informed about their rights to withdraw, it will include provision for participants to tick a box signifying that they have read and understood the information for participation and that they voluntarily consent to take part in the research study.

### **How will you manage copyright and Intellectual Property Rights (IPR) issues?**

The researcher owns all rights to the data generated for this research. Online and archival sources will be cited and acknowledged in the database and research outputs. This research will be given a level 2 Confidential security classification, meaning that Disclosure could cause harm to individuals or the University.

Therefore, Permission should be sought from secondary sources to share the findings of the research on public websites.

## **STORAGE AND BACKUP**

### **How will the data be stored and backed up during the research?**

The researcher will ensure that data is stored in a secure location and managed in accordance with the University's Information Security Classification Policy and any additional ethical and legal requirements.

Data will be backed up regularly, because of likely problems with viruses and storage space. Quantitative data for this research will be backed up and secured by the researcher regularly and metadata will include clear labelling of versions and dates.

### **How will you manage access and security?**

Due to the potential sensitivities around some of the data that will be collected, the research will establish a system for protecting data while it is being processed, including the use of passwords and safe backup hardware.

## **SELECTION AND PRESERVATION**

### **Which data are of long-term value and should be retained, shared, and/or preserved?**

Selected data from this research will be stored in PEARL, with the researcher's consent to archive, share, or publish. This data will be suitably documented in preparation for publication.

### **What is the long-term preservation plan for the dataset?**

In line with the University of Plymouth research data retention policy, research data for this survey will be retained for 10 years, from the date of data collection,

data for this research can also be held for over 10 years if required to meet legal, statutory, contractual or funder requirements.

## **DATA SHARING**

### **How will you share the data?**

Research papers written and published during the research period will be made available with a subset of data necessary to verify the research findings, in accordance with the University's Information Security Classification Policy and any additional ethical requirements.

### **Are any restrictions on data sharing required?**

The researcher will make digital data available within 6 months of project completion. This restriction period is requested to allow time for additional analysis and further publication of research findings to be performed.

## **RESPONSIBILITIES AND RESOURCES**

### **Who will be responsible for data management?**

The researcher will be responsible for overall quality assurance and data management for this research, ensuring that proper quality control is maintained throughout the research process.

### **What resources will you require to deliver your plan?**

G\*Power 3.1.9.2, power analysis and effect size estimation software will be used to determine the sample size for this research, while Jisc online survey will be used to generate and distribute the survey questionnaire, Jisc online survey is a paid-for software available from the University of Plymouth, then ANOVA statistics analysis will be used for data analysis.

#### **9.4 Appendix 4: Survey Questionnaire for Gender Inequality in the Nigerian Offshore Industry**

## **Survey Questionnaire R03**

**Research Title: Investigating Employment in the Nigerian Offshore Oil and Gas Industry: Is Gender a Prerequisite?**

**Questionnaire Title: A Questionnaire on Gender Inequality in Employment in the Nigerian Offshore Oil and Gas Sector.**

**Introduction:** This survey questionnaire is aimed at collecting data on the above topic to assist the researcher to determine if patriarchy and male dominance are the major factors surrounding the shortage of women in the Nigerian offshore oil and gas industry. This research is in partial fulfilment for the requirement for the award of a Doctorate in Business Administration (DBA) Degree at the University of Plymouth, United Kingdom.

Please note that all information provided to aid successful completion of this research shall be treated confidentially.

### **Section 1**

#### **Confidentiality Statement**

Your responses will always be treated with confidence, and data will be presented so that your identity cannot relate to specific published data.

- ***Your participation is voluntary, and it is up to you whether you wish to participate.***
- ***If you decide that you do not want to continue to take part in the study, you are free to withdraw at any time until 31 September 2020).***
- ***Please answer the following questions by selecting the answer most applicable to you.***

- **Click on the link provided, or if you are completing the attached version, please return to Victor Apiafi, email: [victor.apiafi@plymouth.ac.uk](mailto:victor.apiafi@plymouth.ac.uk) once completed.**
- **For enquiries about the questionnaire, please contact Victor Apiafi by call, text or WhatsApp on +447533431885.**

1. By ticking yes, you have consented to voluntarily take part in this research study.

1. Yes
2. No

## **Section 2**

**Please select the answer which applies to you**

2. Gender?

1. Male.
2. Female.
3. Other, there will be a box to specify if they want to.

3. Marital Status?

1. Married.
2. Singled.
3. In a Relationship.
4. Divorced.
5. Widowed.

4. Do you have children?

1. Yes.
2. No.

5. Does your partner work offshore?

1. Yes.
2. No.

6. Do you have a qualification relating to the offshore industry?
  1. Yes.
  2. No.
  
7. Are you seeking employment in the Nigerian offshore oil and gas industry?
  1. Yes.
  2. No.
  
8. Are you currently employed in the Nigerian offshore oil and gas industry?
  1. Yes.
  2. No.
  
9. What is your level of education?
  1. No formal education.
  2. Secondary school certificate.
  3. Vocational training.
  4. National diploma.
  5. Higher national diploma.
  6. Bachelor's degree and above.
  
10. Do you have previous offshore experience?
  1. Yes.
  2. No.
  
11. How long have you worked in the Nigerian offshore oil and gas industry?
  1. One to two years.
  2. Three to five years.
  3. Over five years.
  4. Never.

### Section 3

**Please select an answer from strongly agree to strongly disagree that is most applicable to you.**

12. Can mothers who stay at home establish a better relationship with their families than mothers who work in the Nigerian offshore oil and gas sector?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

13. How much do you agree or disagree that it is better for the family that the man works outside the home?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

14. How much do you agree or disagree that there is discrimination against women in the Nigerian offshore oil and gas industry?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

15. How much do you agree or disagree that gaining employment in the Nigerian offshore oil and gas industry is gender-driven?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

16. How much do you agree or disagree that men are given more preferences than women during selection for job roles in the Nigerian offshore oil and gas industry?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

17. How much do you agree or disagree that working in the Nigerian offshore oil and gas industry should be based on gender?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

18. How much do you agree or disagree that your gender influenced your chances of gaining employment in the Nigerian offshore oil and gas industry?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

19. How much do you agree or disagree that women should work in STEM roles in the Nigerian offshore oil and gas industry?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

20. How much do you agree or disagree that females are stereotyped regarding their work ethic while working in the Nigerian offshore?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

21. How much do you agree or disagree that the offshore industry is suited for females?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

22. How much do you agree or disagree that there should be gender diversity in the Nigerian offshore oil and gas industry?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

23. How much do you agree or disagree that the news media should pay more attention to discrimination against females in the Nigerian offshore oil and gas industry?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

24. Do you feel that the Nigerian female seek favouritism when demanding equality in the Nigerian offshore oil and gas industry?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

25. Do you feel that employers often discriminate against females during hiring and promotion?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

26. How much will you agree or disagree that you have ever lost a job opportunity because of your gender?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

27. Do you feel it encourages more public awareness towards gender inequality in the workforce if females complain about discrimination?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

28. How much do you agree or disagree that you receive the respect you deserve from your colleagues at work?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

29. How much do you agree or disagree that your manager encourages you at work concerning your daily task?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

30. How much do you agree or disagree that you have to work harder at your job because of your gender to be respected?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

31. How much do you agree or disagree that males and females should be treated as equals in the Nigerian offshore oil and gas industry?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

32. How much do you agree or disagree that a woman should fill a top position in the Nigerian offshore oil and gas industry?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

33. How much do you agree or disagree that working in the Nigerian offshore oil and gas industry is a male role?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

34. In the Nigerian offshore oil and gas industry today, how much do you agree or disagree that males have more advancement opportunities than females?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Answers	1	2	3	4	5	6

Thank you so much for filling out my survey; your time is sincerely appreciated. I assure you of confidentiality and that your details will not be included in any part of my research or made public.

**9.5 Appendix 5: Result in Percentage of the Theoretical Framework for Gender Inequality in the Nigerian Offshore Industry for Male and Female Respondents Together**

<b>Theoretical Framework Areas</b>	<b>Gender</b>	<b>Strongly Agree to Slightly Agree (%)</b>
<b>Gender Roles</b>	<b>Male and Female</b>	65%
<b>Females in the Nigerian Offshore</b>	<b>Male and Female</b>	66%
<b>Male Dominance</b>	<b>Male and Female</b>	75%
<b>Gender Discrimination</b>	<b>Male and Female</b>	71%

**9.6 Appendix 6: Result in Percentage of the Theoretical Framework for Gender Inequality in the Nigerian Offshore Industry for Male and Female Respondents Separately**

Theoretical Framework Areas	Gender	Strongly Agree to Slightly Agree (%)
Gender Roles	Female	63%
	Male	66%
Females in the Nigerian Offshore	Female	81%
	Male	68%
Male Domination	Female	64%
	Male	67%
Gender Discrimination	Female	77%
	Male	65%