

2022

# The Effect of Female Leadership on Organizational Effectiveness in the Nigerian Oil and Gas Sector

KADILO BADOM  
*Walden University*

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>



Part of the [Psychology Commons](#)

---

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact [ScholarWorks@waldenu.edu](mailto:ScholarWorks@waldenu.edu).

# Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Kadilo Badom

has been found to be complete and satisfactory in all respects,  
and that any and all revisions required by  
the review committee have been made.

## Review Committee

Dr. Richard Thompson, Committee Chairperson, Psychology Faculty  
Dr. Donna Dimatteo-Gibson, Committee Member, Psychology Faculty  
Dr. Brian Cesario, University Reviewer, Psychology Faculty

Chief Academic Officer and Provost  
Sue Subocz, Ph.D.

Walden University  
2022

Abstract

The Effect of Female Leadership on Organizational Effectiveness in the Nigerian Oil and  
Gas Sector

by

Kadilo Badom

MS, Aston Business School, Birmingham, UK, 2005

BS, Rivers State University of Science & Technology, 2002

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Industrial/Organizational Psychology

Walden University

May 2022

## Abstract

Female participation in economic production remains a vital discourse in the public space irrespective of the type of activity or economic jurisdiction. The Nigerian economy is not left out as successive governments in the country have continued to encourage the participation of women in governance, public institutions, and private sector firms. These targeted efforts notwithstanding, there are still sectors where male dominance remains a major issue. Prior research shows that among the reasons for not promoting females to leadership positions include specific organizational stereotypes, ideologies, lack of female motivation-to-lead, and societal values, and lack of role-models. Within the Nigerian oil and gas sector, there is cultural belief that males will not be as productive or satisfied if reporting to a female leader. Leveraging the theory of external control of organizations (ECO), this study examined the relative effectiveness of the female leaders operating in the Nigerian oil and gas sector with their male colleagues in enhancing employees' job satisfaction and productivity. The study examined employees' perceptions of job satisfaction and productivity to compare the effectiveness of female and male leaders using the MANCOVA statistical technique. The results show that female leaders had significantly higher level of reported productivity, but not job satisfaction where leader gender was not significant. The results provided positive social change by demonstrating that the belief that female leaders will hurt productivity or satisfaction for male employees was not supported. Instead, female leaders had more productive employees.

The Effect of Female Leadership on Organizational Effectiveness in the Nigerian Oil and

Gas Sector

by

Kadilo Badom

MS, Aston Business School, Birmingham, UK, 2005

BS, Rivers State University of Science & Technology, 2002

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Industrial/Organizational Psychology

Walden University

May 2022

## Dedication

I dedicate this work to my friend Odosa Victor Okoro who pushed me to embark on this journey, and my son Munachimso Ikegwuoha-Badom for his understanding when Mummy was too tired to play with him as often as we would have loved.

Ultimately, I dedicate this work to God.

## Acknowledgements

This work would not have been possible without the support of a lot of people. My family and friends for their understanding, encouragement and creating the enabling environment for me to work throughout the process. My gratitude to the organization where I work for their policy of study leave with guaranteed job security.

My friend Dr. Michael Mba for being my mentor, my personal cheer leader, my sounding board, my script reader, my muse and my friend. Without you, this work would not have been completed.

Thank you, Dr. Richard Thompson for your advice, inspiration and seamless combination of observation and expertise.

## Table of Contents

List of Tables .....	iv
List of Figures .....	v
Chapter 1: Introduction to the Study.....	1
Introduction.....	1
Background of the Study .....	3
Problem Statement .....	8
Purpose of the Study .....	9
Research Questions and Hypotheses .....	10
Theoretical Framework for the Study.....	11
Nature of the Study .....	11
Definitions.....	12
Assumptions.....	13
Scope and Delimitations .....	13
Limitations .....	14
Significance.....	14
Summary.....	15
Chapter 2: Literature Review .....	16
Introduction.....	16
Literature Search Strategy.....	18
Theoretical Framework.....	18
Gender, Leadership, and Organizational Effectiveness.....	22



Leadership styles: Transactional and Transformational .....	28
Employee Perception, Leadership Style and Organizational Effectiveness .....	30
Women in Leadership: Evidence and Practices in the Oil & Gas Sector .....	38
Summary .....	42
Chapter 3: Research Method.....	46
Introduction.....	46
Research Design and Rationale .....	46
Methodology .....	48
Population .....	48
Sampling and Sampling Procedures .....	50
Sample size determination .....	51
Procedures for Recruitment, Participation, and Data Collection.....	52
Instrumentation and Operationalization of Constructs .....	54
Data Analysis Plan.....	58
Threats to Validity .....	61
Ethical Procedures .....	63
Summary.....	64
Chapter 4: Results.....	65
Introduction.....	65
Data Collection .....	66
Results of the Data Analysis.....	67
Descriptive Analysis.....	67

Results from the Multivariate Analysis of Covariance (MANCOVA) .....	69
Summary .....	73
Chapter 5: Discussion, Conclusions, and Recommendations .....	75
Introduction .....	75
Interpretation of the Findings .....	75
Limitations of the Study .....	77
Recommendations .....	78
Implications .....	79
Summary .....	80
References .....	81
Appendix A: G*Power Analysis .....	110
Appendix B: Participants Informed Consent Form .....	111
Appendix C: Study Questionnaire .....	113
Appendix D: Permission to Use IWPQ .....	116
Appendix E: CITI Certificate .....	117

List of Tables

<b>Table 1.</b> <i>Percentage Distribution of Employees by Supervisor’s Gender</i> .....	68
<b>Table 2.</b> <i>Percentage Distribution of Employees by Educational Level and Gender</i> .....	68
<b>Table 3.</b> <i>Percentage Distribution of Respondents by Educational Level</i> .....	69
<b>Table 4.</b> <i>Test of Normality</i> .....	70
<b>Table 5.</b> <i>Levene's Test of Equality of Error Variances</i> .....	71
<b>Table 6.</b> <i>Result of the Multivariate Tests</i> .....	72
<b>Table 7.</b> <i>Test of Between-Subjects Effects – Model 1</i> .....	72
<b>Table 8.</b> <i>Tests of Between-Subjects Effects – Model 2</i> .....	73

## List of Figures

Figure 1. Thematic representation of theory.....	19
--	----

## Chapter 1: Introduction to the Study

### **Introduction**

Organizations are effective to the extent that the people in the organization remain focused on achieving the organizational goals of providing value to its various stakeholders. Reporting structures, work processes and procedures, which are integral components of a functional organization, helps to delineates job functions and who directs what, how, and where? (Pfeffer & Salancik, 2016; Rhod & Packel, 2014; Saleh, Zaid, Shurafa, Maigoshi, Mansour, & Zaid, 2021) This scenario plays out in every organization irrespective of the industry or sector including organizations in the oil and gas sector. In executing these work processes and procedures, organizations would always delegate leadership roles at various levels of the reporting structure to ensure that its activities remain synchronized with the ultimate objective of value creation for its stakeholders. Thus, the cognitive capabilities of the leaders become an important factor in the organization's value chain because their inputs remain vital in achieving a coordinated system that points to the overriding objectives. As posited by various scholars, leadership is about influence to get a group of people to achieve a common goal (Glass & Cook, 2016; Northouse, 2018; Smith, Ortiz, Buhbe, & van Vugt, 2018), the same applies in organizational settings at various reporting levels. In a bid to maximize value, most profit-oriented organizations prefer a gender group to occupy their leadership positions due to certain factors and considerations peculiar to the organization or sector-wide (Dappa, Bhatti, & Aljarah, 2019; Glass & Cook, 2016).

The gender preference for leadership positions in organizations remains a burning issue among scholars as empirical evidence depict different outcomes with each gender-type across various sectors and organizations (Dappa, Bhatti, & Aljarah, 2019; Schwab, Werbel, Hofman, & Henriques, 2016; Strøm, D'Espallier, & Mersland, 2014; Joshi, 2017; Paustian-Underdahl, Walker, and Woehr, 2014; Stutzman, 2017). For instance, in a meta-analysis of empirical works on gender effect on organizational performance, Rhode and Packel (2014) found that the results of the studies reviewed indicated mixed performance outcomes. However, most of the results from various countries and organizations portrayed the positive effects of having a higher proportion of the female-gender on corporate boards. In Nigeria, a study conducted by the Nigerian Women in Business (2012) group showed that Nigerian companies remain male-dominated as of women contribute only 10.5 per cent leadership positions. The study, however, showed that companies in the oil and gas sector were among the top companies that had a higher proportion of females in their corporate boards. In terms of impact, using the data from publicly listed companies in Nigeria, Akpan and Amran (2014), however, found that female presence in the boards of these companies had negative effects on performance. The findings from Akpan and Amran contradicted an earlier study by Oba and Fodio (2013), which found a positive effect of female leaders on organizational performance in Nigeria. Considering the periods and methodologies adopted by these scholars to decipher the effect of female leaders on organizational performance in Nigeria, this study provides an enhancement to the discourse by looking at the oil and gas sector specifically using a different methodology.

The social change implication of this study would be to provide further justification to Nigerian corporate organizations for increased inclusion of women in their corporate boards in line with the United Nations desire for increased female participation in the decision-making process (Domingo, Holmes, O'neil, Jones, Bird, Larson, & Valters, 2015; Fapohunda, 2018; Pirtskhalaishvili, Paresashvili, & Kulinich, 2021). This study will further improve the Nigerian government's policy on improving female-gender education and participation in the economy and ultimately enhance the girl-child education in Nigeria. Based on its scholarly content, the study would further enhance the literature and empirical discourse on genders effect on organizational performance from a developing country perspective. This chapter is, therefore, structured into thirteen major sections with a detailed background and problem statement provided after this introductory part. The other sections of the chapter include the purpose of the study, research questions, research hypotheses, theoretical framework, nature of the study, definition of concepts, basic assumptions, scope and delimitations, limitations of the study, significance, and summary of the chapter.

### **Background of the Study**

Female participation in organizational leadership continues to attract the attention of scholars as it remains an issue in organizations within the public and private sector (Brescoll, 2016; Flabbi, Macis, Moro, & Schivardi, 2016; Joshi, 2017; Sojo, Wood, Wood & Wheeler, 2016; Stutzman, 2017). While the public-sector organizations are complying with extant country-specific legislation on the quota for women in leadership (Sojo, Wood, Wood & Wheeler, 2016), private entities are learning to become more

inclusive, albeit slowly, due to enduring stereotypes, cultural orientation, and personality bias (Brescoll, 2016; Kaiser & Wallace, 2016; Sidani, Konrad, & Karam, 2015; Stutzman, 2017). Scholars continue to posit various reasons why female leaders remain scarce in corporate organizations. Elprana, Felfe, Stiehl, and Gatzka (2015) argue that women on their part fail to contend for leadership positions in organizations due to their lower motivation-to-lead when compared to men. Vial, Napier, and Brescoll (2016) argue that the performance of female leaders suffers from the legitimacy factor, which occurs when subordinates fail to recognize their ability to occupy such positions. Therefore, most corporate organizations hinge their argument against selecting a female leader on low performance or ineffectiveness (Dappa, Bhatti, & Aljarah, 2019; Zhuwao, Ngirande, Ndlovu, & Setati, 2019).

Various studies have explored the leadership capabilities of female leaders compared with their male counterparts and found mixed outcomes in their relative effectiveness (Adam, 2016; Christiansen, Lin, Pereira, Topalova, & Turk-Ariss, 2016; Flabbi, Macis, Moro, & Schivardi, 2019; Kaiser & Wallace, 2016). Whereas some researchers argue that female leaders are more effective in certain leadership settings, others posit that male leaders remain more effective in actualizing organizational goals. For instance, Adams (2016) argues that in measuring the effectiveness of female leaders, it is important for the researcher to consider other factors as well that make the female leader thrive in an organization. Although part of his research found that increasing the proportion of women in corporate boards of 1,500 S&P firms had an incremental effect on the returns on equity (ROE) of the firms, this was accentuated when firm size was



added as a variable, thereby indicating that female leadership effectiveness may depend on other factors and organizational settings. Corroborating the issue of leadership settings, Kaiser and Wallace (2016) claim that gender differences in behavior affect leadership styles. According to their study, while male leaders were rated high on the use of strategic-focused styles, their female counterparts were more of forceful-operational style suitable for lower and middle management leadership. The strategic-oriented leadership style is suitable for executive management positions which affect performance and productivity in the long run.

Another perspective to the leadership-gender discourse was presented by Stutzman (2017), whose study did not find any significant differences in the performance of male leaders from the female leaders which were attributed to their differing personality traits. The study, however, found a personality differential for male and female leaders as the traits that predicted performance for female leaders differed from that of the male leaders. On the other hand, Chizema, Kamuriwo, and Shinozawa (2015) stated that while some countries have made substantial process in increasing women participation organizational leadership, in some other countries women were not allowed to lead organizations based on societal beliefs and stereotyping on gender-roles. Such beliefs tend to ascribe leadership capacity to men rather than women thereby inhibiting chances for female leadership roles in the first instance. The propositions on societal perceptions by Chizema, Kamuriwo, and Shinozawa (2015), therefore, relates to the findings by Flabbi, Macis, Moro, and Schivardi (2019) which echoed the fact that female executives had made significant impacts on productivity in organizations with a larger

share of female employees, adducing a connection with the mentoring flow between the female leaders and the female employees. Their findings, therefore, connotes that female leaders are more effective in female-dominated organizations than male-dominated firms, which throws up the influence of societal beliefs and stereotyping issues. In addition to the fact that female leaders perform better in organizations with a higher proportion of women, Christiansen, Lin, Pereira, Topalova, and Turk-Ariss (2016) found them more effective specifically in high-tech and knowledge-intensive sectors especially for organizations that require complementing creative skills with critical thinking. These findings, therefore, portend that leadership gender has become a vital factor in determining the performance and effectiveness of an organization.

Despite these diverse findings and arguments on the effect of gender, personality traits, and socially constructed gender-roles, the need to examine how leaders of each gender contributes to organizational effectiveness for specific sectors remains an interesting research area. The leadership gender will connote effectiveness if it produces positive employee outcomes that contributes to organizational performance and effectiveness. The need for increased research in this regard stems from the various benefits associated with gender diversity in corporate organizations across countries in the world (Adams, 2016; Christiansen et al., 2016; Flabbi et al., 2018)). Therefore, this study attempts to add to the existing literature using firms in the Nigerian oil and gas sector, where there is scant research on the effectiveness of female leaders in the performance of organizations. The study would utilize the multivariate analysis of covariance (MANCOVA) framework to compare the relative effectiveness of female

versus male leaders in promoting productive outcomes for an organization. The intention of this analysis is not to establish causality as such may not always be the case given that employees start their jobs with some skills before coming in contact with the leader. The use of employees' perception scores about their leaders' capacity to engender job satisfaction and productivity would assist in this comparison. Thus, the outcome of the study would add to the scholarly literature on whether female leaders engender effective outcomes like their male counterparts, particularly for the societally stereotyped sector and setting like the oil and gas in Nigeria which is a male-dominated environment.

Experiences from around the world have shown that women have provided effective leadership in specific sectors such as politics, education, technology, healthcare, research, and engineering (Christiansen et al., 2016; Sidani, Konrad, & Karam, 2015). In Nigeria, there are instances of women that excelled in the corporate world and key leadership positions (Lincoln, 2012; Okafor, & Akokuwebe, 2015). For instance, Okafor and Akokuwebe (2015) listed some Nigerian women that excelled in leadership positions including the Late Prof. Mrs. Dora Akunyili, who as Director-General of the National Food and Drug Administration and Control (NAFDAC), fought and won a war against drug and food adulteration in the country. But due to the low percentage of women in leadership positions (Boone, Veller, Nikolaeva, Keith, Kefgen & Houran, 2013; Kaiser & Wallace, 2016) particularly in Nigeria where "women constitute less than 3% of boardroom seats" (Fapohunda, 2018, p.21), empirical research that measures the effectiveness of female leaders is minimal when compared with studies that focus on male leadership in Nigeria.

In a meta-analysis on gender differences in leadership, Paustian-Underdahl, Walker, and Woehr (2014) found that considering all leadership contexts various studies show that there is no difference in leadership effectiveness between male and females. Recent research had focused on factors that affect female leaders such as emotions (Brescoll, 2016; Stutzman, 2017), family commitment, and culture (Sidani, Konrad, & Karam, 2015). In Nigeria, studies have explored the glass ceiling effect on female employees and gender discrimination in organizations (Ogunleye & Babatola, 2013; Ogunleye & Osekita, 2016). However, there are no existing studies that relate to the effectiveness of the male and female gender groups in leadership positions in Nigeria, particularly in the oil and gas sector. Thus, this study will exploit the perception of subordinates of female and male leaders in the Nigerian oil and gas sector to evaluate the effect of female leadership on organizational outcomes and effectiveness.

### **Problem Statement**

The thought of a woman occupying a top management position in some organizations comes with mixed feelings among employees and stakeholders largely due to the perception that men possess better skills to manage situations than women (Chizema, Kamuriwo, & Shinozawa, 2015; Fischbach, Lichtenthaler, & Horstmann, 2015). The argument that female leaders possess lesser emotional and cognitive ability relative to their male counterparts (Brescoll, 2016). Also, Elprana, Felfe, Stiehl, and Gatzka (2015) suggest that women possess lower Motivation-to-Lead (MtL) when compared to men. However, other empirical evidence shows that women perform well in

leadership positions in organizations operating in some sectors of the economy (Christiansen et al., 2016; Smith, Ortiz, Buhbe, & van Vugt, 2018). In Nigeria, particularly in the oil and gas sector, the issue of gender disparity is larger due to cultural perceptions associated with gender roles. Everyday experience in the industry shows that many people believe that the sector is most suitable for men especially when the work involves oil and gas exploration and offshore operations (Scott, Dakin, Heller, & Eftimie, 2013). Thus, the problem is that female employees in the Nigerian oil and gas firms are not given much opportunity to lead like their male counterparts due to the perceptions about their capability to lead effectively (Ismail & Ibrahim, 2008; Scott, Dakin, Heller, & Eftimie, 2013; Syarnubi, Sembiring, Siswaya, & Zuraida, 2018; Williams, Kilanski, & Muller, 2014). An explorative study of this nature, therefore, becomes necessary to change such perceptions and offer female employees in the Nigerian oil and gas sector the opportunity to take up leadership roles in their organizations. The study will also add to the reservoir of knowledge in the field of organizational psychology that female leaders in the oil and gas sector perform just as well as their male counterparts and are proficient and competent in leadership positions.

### **Purpose of the Study**

The purpose of this quantitative study is to examine whether female and male leaders differ in terms of subordinate job satisfaction and performance in the Nigerian oil and gas sector, which is predominantly male-dominated, controlling for the leader's age, level of education, years of service, and the number of years employee had worked with the leader.

### **Research Questions and Hypotheses**

To assess the effect of the leadership gender on job satisfaction and productivity of employees in the Nigerian oil and gas industry, this study proposes the following research questions:

RQ1: Is there a significant difference in employee job satisfaction based on the gender of the leader and considering other factors?

H<sub>0</sub>: There is no significant difference in employee job satisfaction based on the gender of the leader, leader's age, level of education, years of service, and the number of years working together

H<sub>1</sub>: There is a significant difference in employee job satisfaction based on the gender of the leader, leader's age, level of education, years of service, and the number of years working together

RQ2: Is there a significant difference in employee productivity based on the gender of the leader and considering other factors?

H<sub>0</sub>: There is no significant difference in employee productivity based on the gender of the leader, leader's age, level of education, years of service, and the number of years working together

H<sub>1</sub>: There is a significant difference in employee productivity based on the gender of the leader, leader's age, level of education, years of service, and the number of years working together

### **Theoretical Framework for the Study**

Leadership remains a major source of employee motivation and team performance (Hogan & Kaiser, 2005). On the other hand, poor leadership will inhibit employee performance and overall organizational effectiveness (Zoogah, Peng, & Woldu, 2015). These arguments make the case that effective leadership engenders effectiveness in organizations (Bastida, 2018; Bui, Zeng, & Higgs, 2017; Zhuwao, Ngirande, Ndlovu, & Setati, 2019). This study will compare the leadership effectiveness of female and male leaders in Nigeria's oil and gas industry on subordinate job satisfaction and performance. Thus, the study will leverage the theory of organizational effectiveness as captured in the framework of external control of organization (ECO) expounded by Pfeffer and Salancik (2016). Pfeffer and Salancik argue that the survival of an organization and a measure of its effectiveness depends on its resources including the structure, leadership, procedures, goals, and environment. This postulation means that the efficiency of employees, which can be measured by the ratio of resources used to the total output (productivity), contributes significantly to the overall effectiveness of an organization (Kataria, Rastogi, & Garg, 2013). Using this theoretical framework, therefore, the study will utilize employee outcomes (job satisfaction and productivity) to evaluate the effect of female leaders on organizational effectiveness when compared with their male colleagues.

### **Nature of the Study**

The study will utilize a quantitative, non-experimental design for this research. This approach will entail using quantitative methods to capture and analyze the data for the study. Thus, the strategy will involve the use of a combination of simple random

sampling and purposive sampling techniques to select participants for the study (Frankfort-Nachmias, & Nachmias, 2015). The dependent variables for the study will be employee job satisfaction and productivity, while the independent variables will be leader's gender, and covariates will include leader's age, level of education, years of service, and the number of years employee had worked with the leader. Data collection for the study would involve administering questionnaires to employees of companies operating the Nigerian oil and gas sector using online and mailing approaches. The data analysis would involve the use of relevant statistical tests in the IBM SPSS to answer the research questions and hypotheses.

### **Definitions**

*Leadership* definition provided by Northouse (2018) adequately fits into the context of this study. Northouse defined leadership as “a process whereby an individual influences a group of individuals to achieve a common goal” (p.6). In this study, a leader in the oil and gas sector is an employee that has other employees under his/her control to the extent s/he exercises some influence on them towards achieving a goal for the organization.

*Job satisfaction* implies the inherent personal and emotional satisfaction derived by an employee while executing their job. Buitendach and Rothmann (2009) state that this emotional fulfilment comes from a personal evaluation of the job by comparing “actual outcomes with the required outcomes” (p.1).

*Employee productivity* is a critical element in measuring organizational effectiveness as it contributes significantly to the attainment of organizational goals.



Productivity measures the ratio of work output relative to input (Syarnubi, Sembiring, Siswaya, & Zuraida, 2018), which means that for employees, it is the ratio of the value of work done (output) over the total cost of getting each employee to do their work.

*Organizational effectiveness* connotes the ability of an organization using available resources to achieve its set outcomes and provide value to all stakeholders.

### **Assumptions**

The major assumption of this study is that female leaders working with firms operating in the Nigerian oil and gas sector contributes significantly to their organizational performance and effectiveness. Establishing this assumption through this study would boost the career ambitions of many female employees of these oil and gas firms and further reinforce the need for more leadership opportunities for women in the sector.

### **Scope and Delimitations**

Female participation in taking up leadership positions in organizations remains an important subject in global policy discourse. Despite various attempts by researchers to unveil the possible factors for the existence of glass ceilings in organizations, the percentage of women that gets to leadership positions where they can influence organizational outcomes remains marginal. Thus, the choice of studying what is happening in the Nigerian oil and gas sector. The study will establish the effectiveness of female leaders if they significantly exist in the sector by comparing the performance of their subordinates with that of their male counterparts. The focus would be on firms operating in the upstream, midstream, or downstream of the Nigerian oil and gas sector.

The sample size for the study would be sufficiently large to ensure that the outcome of the study will be applicable in similar locations or sectors including sectors with comparable characteristics in Nigeria.

### **Limitations**

The theory on the Control of Organizations which is the fulcrum of this study postulates that every organization has both internal and external stakeholders that influence its effectiveness. However, in establishing the leadership effectiveness of female leaders, this study focuses on the assessment from internal stakeholders (subordinates) without capturing the opinion of the external stakeholders. The non-inclusion of external stakeholders in the impact assessment remains a major limitation of the study.

### **Significance**

The significance of the study for the Nigerian oil and gas sector and the corporate world rests on the recognition that female leaders have the required skill sets to lead effectively based on the level of subordinate job satisfaction and performance. On the other hand, the oil and gas sector remain critical to the Nigerian economy as it contributes about 10 percent to the economy and over 80 percent to government revenue (Omoregie, 2019). Thus, the sector occupies a vantage position in corporate activities in the country, which makes it suitable for a study on the effect of gender diversity on organizational performance. The positive social change implication of the study is that it will engender increased support for female leaders in corporate entities in Nigeria especially in the oil and gas sector and contribute to the scholarly discourse on the benefits of including more

female leaders in the Nigerian work environment. The study will further ease the work of I-O professionals operating in Nigeria and similar environments to promote gender-friendly work setting in their organizations.

### **Summary**

The focus of this chapter is the provision of justifiable evidence that female leaders can be as effective as their male counterparts in actualizing effective organizations in the Nigerian oil and gas sector. As justified in findings from various research studies that there are no significant differences in the leadership effectiveness of male and female leaders in most organizations (see Paustian-Underdahl, Walker, & Woehr, 2014), this chapter contends that the same would hold in the Nigerian oil and gas sector. The background review and problem statement in this chapter provide a reasonable argument to support the conduct of this study as it will fill the existing gap in the literature on the existence of the glass-ceiling effect in the Nigerian corporate world and particularly the oil and gas sector.

However, it is pertinent to note that understanding the effect of female leaders versus their male counterparts in actualizing organizational effectiveness from the perspective of their subordinates is a major limitation of the study as it leaves out the views of external stakeholders of these organizations.

## Chapter 2: Literature Review

### **Introduction**

The relationship between female leadership and firm performance has been the subject of research inquiry for so many decades (Ali, Kulik, & Metz, 2009; Dezso & Ross, 2012; Flabbi, Macis, Moro, & Schivardi, 2016; Joshi, 2017; Grissom, Nicholson-Crotty, & Keiser, 2012; Schwab, Werbel, Hofman, & Henriques, 2016; Smith, Smith, & Verner, 2006; Strøm, D'Espallier, & Mersland, 2014). Nonetheless, if organizations were to turn to the available literature for insights to drive their mission objectives, they would be hard-pressed to find consistent evidence on what to do (Rhod & Packel, 2014).

Although some studies have reported that fostering gender diversity improves firm outcomes (Ali, Kulik, & Metz, 2009; Schwab; Schwab, Werbel, Hofman, & Henriques, 2016), others claim the opposite is true (Grissom, Nicholson-Crotty, & Keiser, 2012; Strøm, D'Espallier, & Mersland, 2014;). Another set of studies reveals that there is no significant difference between female leadership and organizational performance (Joshi, 2017; Paustian-Underdahl, Walker, and Woehr, 2014; Stutzman, 2017). Therefore, private organizations rely mostly on previous experiences, organizational culture and stereotypes, and subjective reasoning to make decisions related to increasing gender diversity (Brescoll, 2016; Kaiser & Wallace, 2016; Sidani, Konrad, & Karam, 2015; Stutzman, 2017).

This study draws inspiration from the result of the meta-analysis conducted by Paustian-Underdahl, Walker, and Woehr (2014) on gender and leadership effectiveness, which found that there is no difference in leadership effectiveness between male and

females irrespective of the leadership context. With the findings like Elprana, Felfe, Stiehl, and Gatzka (2015) which showed that females possess a lower motivation to lead than their male counterparts, the debate continues as to which leadership gender will produce better results for an organization. Kaiser and Wallace (2016) posit that the leadership style of the two gender groups differ considerably in most cases as female leaders tend to adopt forceful operational styles, whereas the male leaders applied strategic-enabled styles of leadership. Notwithstanding the differences in leadership styles, the fact remains that gender diversity as a tool for improved organizational performance has been established in the literature (Adams, 2016; Ali, Kulik, & Metz, 2009). Nevertheless, there continues to exist some level of resistance on gender diversity in some sectors such as the oil and gas industry (Williams, Kilanski, & Muller, 2014). Hence, narrowing the discussion down to Nigeria, various studies have confirmed that certain factors such as economic status, culture, gender-perceptions, male-dominance, lack of equal opportunity, and lop-sided gender roles against women, among other factors has repressed gender diversity in the country (Ikegbu & Odey, 2018; Ogunleye & Osekita, 2016; Okafor & Akokuwebe, 2015; Olafuunke, 2014). This challenge has remained visible in all sectors of the Nigerian corporate life including the oil and gas sector where according to Ismail and Ibrahim (2008), there exists a practice of unequal opportunity to female employees to lead because they are perceived to be less effective when compared with their male colleagues. This study relies on this premise of low gender diversity in the Nigerian oil and gas sector. Thus, the purpose of this quantitative study is to examine whether female and male leaders differ in terms of subordinate job

satisfaction and performance in the Nigerian oil and gas sector, considering the male-dominated nature of the sector.

The rest of this chapter presents the literature search strategy used to obtain relevant studies, the development of a theoretical framework for the study, and a review of existing literature related to gender, leadership, and organizational effectiveness.

### **Literature Search Strategy**

The databases accessed for this study include EBSCO Discovery Service, ProQuest Central, Researchgate.net, Emerald Insight, Universalteacher.com, Imedpub.com, Punchng.com, Simanticsscholar.org, Journals.sagepub.com, UNSECO.org, Scirp.org, Jstor.org, Harvard business school: hbswk.hbs.edu, Journal of Applied Behavioral Science, PDXscholar, Blueprint.ng, Gordon Institute of Business Science, University of Pretoria, United States Department for Labour, Bureau of Labour Statistics, Portland State University. The search engines used were Google Scholar, Google Search, and Walden University Library search engine. Some of the phrases used during the search include *organizational effectiveness*, *employee performance*, *African women in leadership*, *employee perception on the effectiveness of female boss*, *Gender*, *Gender diversity*, *employee motivation and satisfaction in a female lead workplace and gender leadership*. The literature included peer-reviewed journal articles, working papers, e-books, study reports, conference papers, dissertations, and discussion papers.

### **Theoretical Framework**

Organizational effectiveness is a concept that involves a wide range of variables at different stages of activities within an organization (Pfeffer & Salancik, 2016).

Measuring organizational effectiveness connotes different outcomes that contribute to the existence such as "..., subordinate satisfaction with the leader, subordinate commitment to group goals, the psychological well-being and development of group members, and the leader's retention of status in the group" (Erkutlu, 2008; pp.710). Also, Cameron and Whetten (1983) noted that the concept of organizational effectiveness is complex as it sometimes requires the use and understanding of multiple models to measure outcomes at different organizational levels. Indeed, since there is no generally accepted model for organizational effectiveness, understanding and appreciating its meaning requires a thorough knowledge of applicable models and their inter-connectedness.

As a component of organizational theory, organizational effectiveness continues to serve as a proxy dependent variable in organizational studies (Cameron, 1980; Goodman & Pennings, 1977) despite the lack of consensus among scholars on how best to conceptualize, quantify, and describe the construct (Eydi, 2015). It remains a widely used construct to study complex and contentious issues in organizational behavior (Chelladurai, Szyszlo, & Haggerty, 1987). However, notwithstanding the lack of consensus, there are multiple criteria used to evaluate organizational effectiveness such as incorporating the mechanism of measuring both means (processes) and ends (outcomes) of the activities of an organization (Hartnell, Ou, & Kinicki, 2011; Pfeffer & Salancik, 2016), which informs the existence of various effectiveness models as there are models of organizations (Herman & Renz, 2004). Each model usually reflects the direction of some school of thought in the field of organizational theory (Vail, 1986). According to Mba (2019), the theoretical model for this study derives from the External Control of

Organizations (ECO) propounded and published by Pfeffer and Salancik in 1978, and later revised in 2003, 2006, and recently in 2016.

The theory posits that the survival of an organization and a measure of its effectiveness depends on its resources including the structure, leadership, procedures, goals, and environment (Pfeffer & Salancik, 2016). The theory examines the internal and external factors that influence organizational outcomes such as the internal and external stakeholders. The theory stipulates that an organization is effective to the extent that its internal processes are efficient, whereas its external factors such as economic cycle, tariff, regulations, and taxes portend a critical factor in achieving its outcomes. A major internal component of an organization recognized in the ECO is the critical role of management. Pfeffer and Salancik (2016) argue that the leader or manager is a symbol and the focal point for organizational success or failure. Poor leadership, therefore, inhibits performance and overall organizational effectiveness (Zoogah, Peng, & Woldu, 2015). In achieving organizational outcomes, leaders exert a considerable level of influence on the social actors within the organization particularly the employees. Thus, this study will leverage the management component of the theory to ascertain whether leadership gender constitutes an internal factor that determines the effectiveness of an organization by spurring employees' job satisfaction and productivity level.

The ECO has been applied in empirical research to study different issues in various organizational contexts except in leadership studies as I couldn't find such in the literature. Some of the studies that applied the ECO in studying organizational effectiveness include Arik, Clark, and Raffo (2016) on the response of non-profit



organizations to the economic crisis in the United States; Al-Shareem, Yusof, and Kamal (2015) to examine the external factors that influence the readiness of organizations in Yemen to implement public-private partnerships; Zoogah, Peng, and Woldu (2015) to understand the influence of African context on the performance of organizations operating within the continent; and Mba (2019) to study the effectiveness of public sector organizations in delivering entrepreneurship development programs in Nigeria.

In this study, the theory on the external control of organizations provides a context given that the objective is to understand the internal dynamics that propel organizational effectiveness arising from interactions between leaders or managers and their subordinates within the organizations operating in the Nigerian oil and gas sector. Specifically, the theory applies to this research given the relevance of leadership or managerial actions in achieving organizational outcomes. As posited by previous researchers that organizational processes ensure that leaders or managers possess a range of skills, characteristics, and behaviors (Pfeffer & Salancik, 2016), it becomes very pertinent to evaluate leadership effectiveness based on gender differences. Thus, using the internal workings of an organization, in this case, the leader – subordinate relationship as a factor, I will examine the effect of female leaders on organizational effectiveness by comparing the outcomes, job satisfaction and productivity, of employees working under male and female leaders in the Nigerian oil and gas sector. Thematically, the flow is as follows:

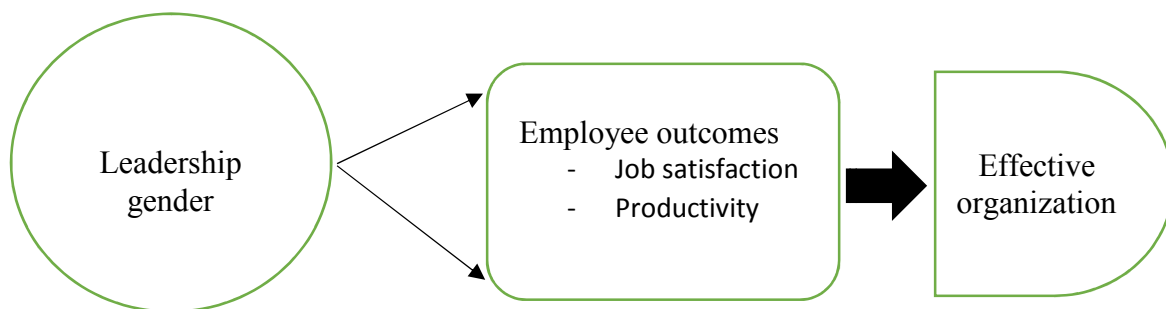


Figure 1: Thematic representation of theory

The above thematic representation connotes that the leadership gender influences the organizational effectiveness to the extent that it influences employee job satisfaction and productivity level.

### **Gender, Leadership, and Organizational Effectiveness**

The evolution of female leadership has continued to attract global attention and raised questions on how the leadership style of each gender affect employee productivity and organizational performance (Ali, Kulik, & Metz, 2009; Dezso & Ross, 2012; Flabbi, Macis, Moro, & Schivardi, 2016; Joshi, 2017; Grissom, Nicholson-Crotty, & Keiser, 2012; Schwab, Werbel, Hofman, & Henriques, 2016; Smith, Smith, & Verner, 2006; Strøm, D’Espallier, & Mersland, 2014). There are diverse opinions among researchers with some of them arguing that gender has little or no relationship with leadership style and effectiveness (Eagly & Johnson, 1990; Northouse, 2018). The dynamics of leadership theory and the dimensions of the earliest research could offer some answers to the questions. Some studies have suggested that women possess certain traits that make them less task-oriented than men, but most of the empirical research suggests no such difference (Goethals & Hoyt, 2017). However, other researchers indicate that women are more likely to have communal skills rather than agentic skills, that is, skills focused on

achievement and advancement (Carli & Eagly 2011). But if men and women can be communal, agentic or both, then it is imperative to know that there is a distinction on how individuals and groups of individuals differ. In other words, the average difference between male and female is smaller than the range of individual differences within the female and male populations (Goethals & Hoyt, 2017). Northouse (2018), however, summarizes that both male and female leaders are effective in leadership roles that are compatible with their gender.

Despite the arguments supporting the relationship between gender and societal roles, the connection and how this relationship plays out in an organizational setting remains unexplored in empirical literature (Pafford & Schaefer, 2017). In addition, the marginal representation of women in leadership positions in organizations continues to inhibit the empirical link between leadership effectiveness and gender (Ignatius, 2013).

Unfortunately, most organizational stereotyping continues to see top leadership roles as more of a masculine affair than a feminine role (Datta, Doan, & Toscano, 2021; Heilman, 2001; Kyriakidou, 2012). Women activists have debated that information gathered on male experiences represents not only a partial knowledge but also a lopsided view of reality (Domingo et al., 2015). They agree that the best way to make an informed decision (with regards to leadership positions) and correct this gender contention, is to take women's daily experiences (or an employee's experience under a female boss) including their achievements and gauge their effectiveness. Additionally, being supervised and controlled directly under female leaders, the employees are undoubtedly better-informed candidates to make rational and valuable feedback on their female

leaders' leadership effectiveness. Unfortunately, despite the current global emphasis on gender equality, which aims to create awareness and enhance women participation in the political and social-economic spheres of life, very little is known about women and leadership (Alsubaie & Jones 2017). Only a few studies have been conducted to evaluate the perception of subordinates of female leaders on their leaders' characteristics, performance, leadership styles and effectiveness (Ong & Tan, 2015). Conducting studies using the perception of subordinates becomes an important addition to the scholarly literature on leadership effectiveness.

Some leadership scholars have extensively compared leader's gender and effectiveness to establish that both genders can be effective leaders depending on circumstances such as their work environment (Carly & Eagly, 2001; Eagly, Karau, & Makhijani, 1995; Ridgeway 2000; Ranganathan & Shivaram, 2017; Rudman & Glick, 1999). However, these studies only investigated the perceived effectiveness of gender leadership rather than actual effectiveness. This could be due to the type of data used and the subjective evaluations of the authors (Eagly 2013). Other current studies that have tried to explain the different dimensions of leadership styles are advocating for more research on specific managerial practices that comprise different leadership styles (van Knippenberg & Sitkin, 2013). Studies on the factors that promote worker productivity may be diverse, the influence of the managers themselves on workers' productivity is understudied because of low workplace gender diversity until recent times (Ranganathan & Shivaram, 2017), or due to less scholarly interest on the effect of leadership gender on workers' productivity (Lazear, Shaw, & Stanton, 2015). According to Ranganathan and

Shivaram (2017), the manager's gender happens to be one specific characteristic of leadership that remains unexplored in the past. This relates to the findings of Kanter (1977), which showed most studies on employee productivity had not considered the effect of leadership gender differences, and posits that managerial positions are usually reserved for men in most cases. Nevertheless, women representation at managerial levels are gradually gaining prominence on the global leadership stage as organization increase gender diversity among their managers, while its effect on workers' productivity remains unexplored (Ranganathan & Shivaram, 2017).

In Nigeria, the general issues of marginalization and discrimination among women are highly prevalent (Ogunleye & Osekita, 2016; Okafor & Akokuwebe, 2015). Most leadership positions in the country are still dominated by the male gender and this poses a major constraint to national development (Ikegbu & Odey, 2018). Suffice it to say that Nigerian women have a distinguished history of activism and public service no less than the men (Ikegbu & Odey, 2018; Okafor & Akokuwebe, 2015). Regrettably, many people find it difficult to comprehend why progress for more advancement appears to have stalled (Oke, 2018). Even with the government's attempt to institute policies geared towards fostering gender diversity with the hope of encouraging more women to pursue leadership positions in their workplace, many of them have fallen short in practice (Okafor & Akokuwebe, 2015). This is maybe partly because of their limited take-up from private sector actors, who lack consistent evidence on how gender diversity shapes their outcomes (Joshi, 2017). Also, male dominance of the corporate space has remained a major impediment to female progression in leadership roles around the world. For

instance, Rick, Marten, and von Lonski (2017) argue that the limited number of women and girls venturing into technical education has adversely affected efforts at gender balancing in the US oil and gas sector. Although the oil and gas industry embraced the gender diversity view only in recent times, there has been a reversal as more women engage in studying geosciences and other scientific paths relevant in the oil and gas sector (Williams, Killanski, & Muller, 2014). However, in developing countries like Nigeria, the situation is more worrisome as the female gender constitutes a small percentage of the corporate workforce across sectors (Ogunleye & Osekita, 2016). Thus, with special reference to the Nigerian oil and gas sector, this lack of consistent evidence has prompted this study to investigate the extent to which female leadership influence organizational performance.

Since the petroleum industry is the mainstream of the Nigerian economy (Donwa, Mgbame, Ogbeide, 2015), any form of mismanagement in the sector automatically affects all other sectors. Therefore, if increased gender diversity at the team level could enhance the innovative capacity and performance of both individuals and teams, and consequently for firms (Turner, 2009; IMF, 2016). This study intends to provide insight into the link between gender leadership styles and organizational effectiveness in this industry. As such, it will focus on quantitatively examining whether female and male leaders differ in terms of subordinate job satisfaction and performance in the Nigerian oil and gas sector, while controlling for the leader's age, level of education, years of service, and the number of years employee had worked with the leader. Although there are various studies on effective female leadership little had been done on the effectiveness of female

leadership in the oil and gas sector, particularly in Nigeria. The increasing level of globalization, as well as the struggle among firms to check competition and the low percentage of women taking leadership positions, prods organizations to pay closer attention on how best to diversify our resources for optimal benefit. More specifically, determining whether a relationship exists between firm's performance and female leadership can create the much-needed attention in developing countries like Nigeria on the contributions of women in a leadership position and the benefits of harnessing their abilities for national development. This is indeed very pertinent because the case for advancing women into managerial roles may depend on their demonstrable contributions to organizational performance (Dezso & Ross, 2012; Smith, Smith, & Verner, 2006) through workers' engagement, productivity, including a leader's ability to optimize human resources are perhaps some of the most important indicators of effective organizations.

In terms of measuring effectiveness which is important in organizational studies and vital in understanding organizational behavior (Chelladurai & Haggerty, 1991), this study looks at the framework of organizational effectiveness using employees' satisfaction and productivity as the outcome variables. There is a convergent view among scholars that concepts such as employee engagement, trust, commitment, etc. are essential stimulants to workers' compliance with their organizational objectives and strategies (Andrew & Sofian, 2012). Given the foregoing, this study takes from the theory of external control of organizations (ECO) to establish a causal relationship between leadership gender and using employee outcomes as proxies for organizational effectiveness.

Furthermore, by adopting the ECO framework from the school of organizational effectiveness, this study investigates the effects of manager gender on employee productivity and job satisfaction. The emphasis on objective worker productivity is a digression from existing literature which has predominately focused on subjective measures rather than objective measures of performance (Eagly, Karau, & Makhijani, 1995; Eagly & Johannesen-Schmidt, 2001). Although subjective evaluations are essential, there is the possibility of biases rather than genuine differences in effectiveness (Eagly 2013). Also, scholars have recommended that future research should include more precise and distinct elements and effects of leadership (van Knippenberg & Sitkin, 2013). Propelled by these gaps in existing literature, this study also explores other constructs that explain the difference in perceived effectiveness of male and female leaders. This study will focus on employee actual effectiveness under male and female leadership styles that leads to organizational effectiveness. In other words, this study argues that the leadership style of women fosters inclusiveness which ultimately leads to organizational effectiveness. The next section focuses on two prominent leadership styles among women and the extent of their influence on employees' performance and organizational effectiveness.

### **Leadership styles: Transactional and Transformational**

Regardless of the advocates' general belief on what defines a leader, it is still a debatable issue regarding whether female leaders' characteristics and leadership qualities are of similar to men leaders, let alone the gender distinctiveness of leadership



effectiveness. Recently, scholars have turned their focus to understanding possible differences in leaders' psychology that may affect the way leaders lead. Within this context, empirical research supports the view that the leadership style women often tend to adopt is applicable to the complexity of modern organizations which ultimately translates into effectiveness. (Eagly & Carli, 2003; Gartzia & Carli, 2014).

Various studies have investigated the difference as well as the impact of transactional and transformational leadership style on organizational performance (Atmojo, 2015; Erkutlu, 2008; Grove-Heuser, 2016; Northouse, 2018). According to Northouse (2018), "Transformational leadership is the process whereby a person engages with others and creates a connection that raises the level of motivation and morality in both the leader and the follower" (pp.162). In contrast, Transactional leadership is seen as a win-win situation whereby the leaders achieve task completion while the followers receive monetary or non-monetary rewards for their job performance. Occasionally, transactional leaders are more action and outcome-oriented; but they tend to focus less on employees' intrinsic motivational or emotional needs (Beerel, 2009).

The difference between transformational leaders and transactional leaders is that the former engages in people whereas the latter deals merely in exchange (Nicholls, 1988). According to Farey (1993), transactional leadership is seen as enthusiasm for improvement, productivity, solving problems, being efficient, cost-effective and fair, doing things right and carrying out single-loop learning. While transformational leadership has the enthusiasm for new and unique ideas, taking risks, being proactive, having a vision and being future-oriented, being creative and innovative, showing

initiative, looking beyond their current role, doing the right things and engaging in double-loop learning. In other words, while transformational leaders encourage, motivate, and prod followers to discover and develop their skills, they are often compared with transactional leaders who also motivate followers by providing a reward-based system (Bass, 1998). Scholars in general regard the transformational leadership style as more communal and likely to be adopted by women. It is also considered one of the major leadership styles that guarantee inspiration, motivation and more participation by followers than transactional leadership.

Transformational leadership comprises four behaviors. The first is "idealized leadership" or charisma, which arises when leaders are worthy of emulation. They set high goals and express confidence in followers. The second is "inspirational motivation" which states that symbols and emotional appeals are deployed by leaders to the employee. The third is "intellectual stimulation" here, leaders deliberately challenge employees to innovative ways of accomplishing set targets and the fourth is where leaders treat each employee's needs through "individualized consideration". Irrespective of the leadership style adopted by the leader-manager, the imperative in this study is to discover which gender influences employees in the oil and gas sector in Nigeria to attain organizational effectiveness.

### **Employee Perception, Leadership Style and Organizational Effectiveness**

Ong and Tan (2015) carried out research to determine employee perceptions of leadership effectiveness of female leaders in working organizations in Malaysia. Their findings revealed that female leaders were the underlying cause of greater improvement

of employee skills and dedication to work. The uttermost significant consequence of these findings would be a spike in employees' satisfaction and motivation levels. The authors concluded that the success and effectiveness of female leaders in the corporate world regardless of the type of organizations would lie behind the practice of an appropriate leadership style to accomplish and fulfil the organization objectives.

Another similar study carried out by Abbas and Samaila (2016), on the attitudes of some Nigerian public sector employees towards having a female manager found that there is an attitudinal difference between male and female employees under a female leader. Their study showed that female employees do not want to work under male supervisors, while the majority of male employees were ambivalent about working under a supervisor of the opposite sex. The study further found that income as an incentive did not induce either the male or female employees' preference to work under a female boss . On the contrary, a large percentage of female employees feel more comfortable and fairly treated under a female manager than a male supervisor. Male and female employees have a different way of dealing with the prejudice they face at work. Males feel worthless if they face bias in the hands of a female leader but take it as a challenge if it is coming from a male supervisor. On the other hand, female employees take it as a challenge irrespective of the supervisor's gender but may express anger and frustration. Interestingly, the study further reported that age, education, income and work experience have no statistically significant effect on the attitude of Nigerian female managers.

In yet another study conducted within four Australian hospitals, Reuvers, Van Engen, Vinkenburg, and Wilson & Evered (2008) explored the relationship between

transformational leadership and employee innovative work behavior. They found that there exists a positive relationship between transformational leadership and innovative work behavior. Furthermore, the authors also found that employee exhibited more innovative work behavior when male supervisors demonstrate transformational leadership style than female supervisors.

Fitch and Agrawal (2015) using data from a Gallup survey found that employees who work with female managers in the United States tend to be more engaging than employees working with male managers. The study also revealed that a greater percentage of women are engaged at work compared to male. This is to say that female managers are more engaged than their male counterparts, which has significant implications for organizational effectiveness. Their study further posits that higher levels of engagement of workers portend higher productivity and group performance. The implication of the research suggests that female managers are likely to enhance current and future organizational performance than their male counterparts. This may not be far from reality because other studies have found that organizations facing a high risk of collapsing are known to appoint female leaders into a managerial position to help navigate the firm through challenges (Goethals & Hoyt, 2017; Ryan et al., 2016). Fitch and Agrawal (2015) further discovered that female managers were not only more engaged than male managers, but they were also known to exceedingly meet employee's requirements. They take a step further to inspire, communicate and encourage viability in a team effort to provide a positive work environment that will meet the basic expectation of both the workers and the organization itself.

In exploring various questions about women's leadership, Goethals and Hoyt (2017) found that female managers attained a higher score than male managers on all four fundamentals of transformational leadership, with a notable difference in the factor of individualized consideration. Their study also reveals that apart from differences in leadership style, female managers are also known to demonstrate attitudes and behaviors that make them more effective. Unlike a male leader, female leaders are known to exhibit cooperation and promote worker's welfare, social and ethical values which enhance effectiveness (Borkowski & Ugras 1998; Eagly, Gartzia, & Carli 2014; Schwartz & Rubel 2005). According to Wright and Cropanzano (2004), a happy worker will indulge in higher work performance than the unhappy ones. In their study, they viewed the happiness of a worker as psychological well-being (PWB) illustrating how happiness can benefit both employers and employees. By implication, happiness produces better job performance by maximizing both personal betterment and employees job performance.

Pradeep and Prabhu (2011) examined the relationship between effective leadership and employee effectiveness and found that transformational leaders were preferred more than leaders with transactional leadership style. Using the scores obtained from the Garrett ranking technique of leadership preferences to test leaders' effectiveness, they found that although the reward-based mechanics of the transactional leadership style proves to be effective, it is still less effective when compared with other behavioral mechanisms employed by transformation leaders. The author's correlation analysis collaborates these findings and indicates that the transformational leadership style brings about work effectiveness, satisfaction, creativity and innovation more than

transactional leadership. Other leadership styles such as the laissez-faire did not improve employee performance in the selected public and private sector enterprises.

There is evidence of gender difference on leadership styles depending on the organizational setting. For instance, Eagly, Johannesen-Schmidt, and van Engen, (2003) showed that female leaders use more of transformational leadership style than male leaders. Also, a separate meta-analysis of 87 studies found a significant relationship between effectiveness and transformational leadership (Judge & Piccolo, 2004). The result of these studies suggests that women tend to use a leadership style associated with effectiveness. Bono and Judge (2003) also found that employees supervised by a transformational leader exhibit commitment, job satisfaction, motivation, and higher performance. In a similar study, Judge and Piccolo (2004) found that transformational leadership represents the highest overall validity when compared with transactional leadership but there were no significant differences to their validity when it comes to employee motivation and team performance. Notwithstanding this result, the authors also found through a meta-analysis, that transformational leadership had a significant effect on employee work satisfaction, motivation and organizational effectiveness.

Another study by Kent, Blair, and Rudd (2010) looked at the differences between transformational leaders of both men and women in Germany and found no difference in leadership behavior. In other words, there was little difference to suggest that men and women leaders behave differently under a transformational leadership style. The authors noted that the result of their analysis may be attributed to the type of industry studied. It may be that in a male-dominated industry, the few females who made it to a leadership

position were most likely to alter their leadership behaviors to conform with their male colleagues' leadership behavior (Gardiner & Tiggemann, 1999). This could be one of the reasons why their study shows little bearing on the conclusions of many leadership studies. It is, in fact, true that the study was carried out in some German organizations, which are typically male dominated. Females represent a small percentage of managers, about 5% of Germany's top managers. As a result, female managers represented 20.9% of the sample in contrast to male managers with 79.1%. There is no doubt that women were slightly underrepresented in the study due to their low representation in a male-dominated industry. Therefore, it would be safe to conclude that the female managers in a male-dominated industry could adopt leadership behaviors that may reflect those of their corresponding male managers within the same industry. The authors recommended the inclusion of additional variables apart from gender in future research such as tenure, education, age, education, and job roles.

In a recent study that investigated whether the manager's gender affects work productivity, Ranganathan and Shivaram (2017) observed that workers perform optimally under female supervisors rather than male supervisors. The authors noted that the female supervisors usually go beyond their normal work routine and attend to some of the personal problems of their subordinates, which, motivates the employees to put extra effort in getting their task done. This has helped yield more productive interaction than the workers supervised by a male. In contrast, workers described the leadership style of their male supervisors as ineffective. To them, the authoritative leadership deployed by their male supervisors (as documented by Eagly, Wood, & Diekmann, 2000) are

ineffective at ensuring timely execution of the task. Further findings revealed that the male supervisors' ineffectiveness is not because of their negligence in enforcement but because their efforts do not translate into desired results due to their leadership style. With this finding, the authors uncovered a unique managerial practice that shows how female supervisors are likely to outperform other male supervisors. Female supervisors are known to go beyond the normal daily routine of supervision by further engaging employees and involving them in their official and personal welfare. By taking these extra steps, the female supervisors greatly improve worker's productivity, engagement, and performance, which has been hypothesized by some scholars as a requirement for entry into a profession (Kellogg, 2010; Pratt, Cullen, Blevins, Daigle, Madensen, 2006) or as a strategy to develop relationships with clients (Huising, 2014). Bringing this concept to the study of management in organizations, Ranganathan and Shivaram (2017) recognize it as a managerial strategy to improve worker's productivity.

Ranganathan and Shivaram (2017) used a scientific description of culture and experimental data from an Indian garment factory to determine and capture a wide range of gender experience using gender and productivity as the independent and dependent variables, respectively. The main fulcrum of the study was to assess gender effectiveness in motivating and increasing worker's productivity. Other control variables in the study were worker's demographic characteristics such as age, tenure in the factory, time-based variation in the production cycle and skill level that could affect worker productivity. In conclusion, Ranganathan and Shivaram noted that male and female supervisors have a unique way of motivating productivity. The author suggested that future research on



gender effectiveness should concentrate on the gender composition of managers to understand how employees' productivity was affected.

Ranganathan and Shivaram's research seems to corroborate the work of other past scholars, including the work of Grunberg (1984), which found that the nature of supervision a worker receives from supervisor(s) plays an important role in determining job performance, commitment and productivity (Locke (1984; Locke & Latham, 1990). In other words, when either of these three variables is in the opposite direction, then the effectiveness is affected.

A study conducted by Agbionu, Ogadi, and Agbasi (2013) on job satisfaction and organizational effectiveness in public organizations in Anambra State, Nigeria, found that job satisfaction positively influences organizational productivity and profitability, which are strong measures of organizational effectiveness. They concluded that job satisfaction is positively associated with organizational effectiveness and recommended that organizations should put in place definite plans to continually ensure that employees are satisfied with their jobs. Additionally, Amah (2013) found that employee involvement positively influences organizational effectiveness. According to the authors, the independent variable "employee involvement" was measured using capacity development, team orientation and empowerment. While the dependent variable "organizational effectiveness" was measured using market share, productivity and profitability. The results obtained showed a positive significant relationship between employee involvement and market share, productivity and profitability.

Organizational effectiveness is a function of the collaborative effort of the leaders' continued engagement with the subordinates (Bakker, 2011). Motivated and engaged employees usually feel a sense of organizational ownership and are more innovative and contributory to organizational goals and effectiveness (Saks, 2008; Schaufeli & Bakker, 2004). Indeed, the concept of employee engagement and its psychological process has recently become an important management strategy for attracting and retaining an optimistic and spontaneous employee (Wei, Han, & Hus, 2010). Thus, with the findings by Fitch and Agrawal (2015) that the female leader is more engaging in the workplace, it would be ideal to examine how this trait transmits into organizational effectiveness from the leader. Consequently, this study attempts to merge organizational effectiveness and employee outcomes to ascertain the potential effect of female leaders on their employee satisfaction and productivity.

### **Women in Leadership: Evidence and Practices in the Oil & Gas Sector**

Research work on female leadership and organizational performance has followed several dimensions. For instance, the Gender Forward Pioneer Index was developed to track the gender disparity of large corporate entities and validate the evidence that women in senior management level enhance a company's performance (Schandwick, 2016). The index helps Fortune 500 companies to raise the visibility of their top female executives by bolstering their reputation and talents. The recent index showed that only 10.9% of women are senior executives in the Fortune 500 companies, with no company having equal representation of men and women in their top management. The index further revealed that about 40% of the companies had an all-male top leadership team

(Schandwick, 2016). This is worth highlighting considering the findings of some surveys indicate that top women executives significantly contribute to organizational growth and development. In February 2016, a study sponsored by the Peterson Institute for International Economics found that women at the C-Suite level significantly increased the net margins of their firms (Noland, Moran, & Kotschwar, 2016). The survey which covered 21,980 firms from 91 countries showed that firms with women constituting up to 30 per cent of its leaders have the potential to increase its profit margin by one percentage point than a firm with fewer female leaders. Also, some researchers from the Harvard Business School (HBS) validated this result when they found that it was profitable to hire more women in an organization than men. HSB's Gompers and Kovvail (2018) highlighted that most venture capital firms (typically known as a male-dominated industry) recorded a 1.5% increase in total revenue annually with a 9.7% increase in profit as they significantly increased the proportion of their female partners. Gompers and Kovvail's (2018) research tried to establish a causal relationship between gender diversity and organizational performance in male-dominated large corporate companies, which was earlier established in a 2008 Mckinsey's survey report. One of the major findings of the Mckinsey survey was that companies with higher gender diversity in their management team were likely to have more than a 21% increase in their average profitability compared to companies having less gender diversity (Desvaux & Devillard, 2008). The HBS findings corroborates other scholarly research that increased gender diversity improves financial performance of organizations, which concurs with the global concern on the women underrepresentation in managerial positions. Although, gender

diversity campaigners have focused on the broad benefits, there are no concrete evidences on the expected impact on organizational effectiveness (Charlton, 2018), which drowns the calls for a global action on gender diversity.

The arguments in support of gender equality in corporate organizations notwithstanding, it is regrettable to find that the average proportion of women in senior civil service positions among G20 nations is just 26.4%, (Global Government Forum, 2017). Predescu and Chen (2018) reported that while the overall female representation varies from industry to industry, the leadership gap is universal. According to them, this scenario can also be found in industries in which women are overrepresented. A typical example is the healthcare sector where women make up 62% of the workforce but only 49% of leadership positions (indicating a leadership gap of 13%); whereas the overall gender ratio can reveal barriers to entry, leadership gaps demonstrate barriers to advancement. Cruz (2016) noted that women comprise less than a quarter of Science, Technology, Engineering and Mathematics (STEM) professionals worldwide. Besides, women are underrepresented at every senior level and are more likely to leave. Cruz findings further noted that the proportion of women in STEM drops as they progress higher in seniority. This can be said to be true in the most economic sectors including oil and gas. A 2017 report by Boston Consulting Group (the BCG) and the World Petroleum Council (WPC), highlighted that women represent a very small proportion of executives in almost every sector (including, oil and gas, health, manufacturing, agriculture etc.) in the global economy (Rick, Marten, & von Lonski, 2017). Indeed, the proportion of women in the oil and gas industry shrinks as one moves up the management ladder

(Akinkugbe-Filani, 2018). The BCG-WCP survey buttresses this pattern by revealing how the proportion of women in the oil and gas industry workforce declines consistently from 25% to 17% in the middle-management to senior management positions (Rick, Marten, & von Lonski, 2017).

This situation is likely to exacerbate as world oil prices decrease and management is forced to restructure. Akinkugbe-Filani (2018), noted that between the year 2016 to 2017, most African oil and gas companies, including the oil field service providers, experienced tight regulation, declining capital and credit resources, sliding revenues, and restructured their workforce due to increasing welfare demands. In this context, the level of flexibility open to an organization may tend to reduce during an economic downturn as management tries to minimize activities and their action may be less accommodating of certain work styles, which is part of co-operating diversity. In the offshore operations, the gender balance is more skewed. Women are often assumed to be more uncompromising than men and this makes them less suitable for certain positions especially those positions requiring field assignments or offshore rigs. However, on the flip side, industry experts believe that the pace of global technological advancement may reverse the lack of retention of women in the oil and gas managerial cadre. This prediction may be valid as global economies continue to embrace digitization, remote execution of assignments, thereby giving women opportunities for a flexible work environment and possibly make them eager to hold higher positions for over a longer period. Unfortunately for the Nigeria, there is scanty empirical work on gender diversity in the corporate world. As found in a study conducted by the Nigerian Women in Business (2012), companies in the

oil and gas sector were among the top firms that had a higher proportion of females in their corporate boards, but another study by Akpan and Amran (2014) found that female presence in the boards of these companies had negative effects on performance.

Therefore, this forms the fulcrum of the motivations for this study using the Nigerian oil and gas sector.

### **Summary**

Recognizing that women's participation is necessary to achieve sustainable development, this Chapter reviewed women leadership and their performance in the oil and gas industry with special reference to the Nigerian context. Although research for this chapter encompasses surveys of different kinds of literature that discuss issues related to the research topic, it is pertinent to mention that data on women in the energy industry, particularly those in leadership positions poses an arduous challenge and even more when seeking for data specifically relating to African oil and gas sector. Hence one might not be expected to find a significant difference in the oil and gas gender balance between regions or countries. This scenario tends to suggest that the cultural practice of the global oil and gas industry are usually consistent that it reduces any regional differences that might exist Akinkugbe-Filani (2018).

Although it is the primary objective of organizations to be profitable, it still must be effective and perform optimally. However, it requires more than just profit to presume that an organization is effective. Even though profit may assure business growth, it, however, does not singularly determine organizational effectiveness. This is because organizational effectiveness is a function of multiple variables such as product/service

innovation, ability to attract viable investment, motivated and committed workforce, gender diversity and fair career progression, the leadership style of management, corporate image, etc. Organizational effectiveness is also a function of the ability of organizations to identify and resolve workplace issues at both individual and organizational level. Studies have shown that motivation is one very important variable that can influence employees' attitude to work (Dobre, 2013; Locke & Latham, 1990). Motivating employees goes beyond ensuring job satisfaction (Moorehead & Griffin, 2014), it influences and constantly direct employee work behavior to accomplish a specific task.

Organizations are increasingly recognizing the crucial roles employees' job satisfaction plays in engendering effectiveness and are continuously seeking to determine how to balance the contribution of employees in the achievement of organizational goals and the contribution of organizations in ensuring that employees are satisfied with their jobs (Agbionu et al., 2013). Since human resources are the most critical resources in an organization, it is very important to retain efficient and experienced workers to enhance the overall performance of an organization (Danish & Usman, 2010). In their review, Danish and Usman found that motivated employees generate considerable profit and value to their organizations. The author's findings support the research of Oosthuizen (2001); who concluded that greater organizational effectiveness can be attained when managers deliberately influence the behavior of their employees through motivation. Entwistle (1987) also argues that the motivational element of an employee lies in their performance because it leads to organizational reward. Although there is no universally

accepted approach to organizational effectiveness or the most effective leadership style, certain recurring elements that appear in the literature reviewed, allows this study to conclude that leadership gender impacts on organizational effectiveness. Therefore, if the leadership style of women significantly motivates the employee to perform optimally and increases their marginal productivity, then, it will be safe for this study to agree that female leadership roles foster an inclusionary climate that motivates employees in the workplace and directly enhances organizational effectiveness.

The extent to which an organization is effective can be measured using a different approach as illustrated in organizational theory. Organizations can use one or more of these approaches to meet their objectives, enhance their competitive strategy and ensure future business sustainability (Pfeffer & Salancik, 2016; Oji, 2001). This cannot be achieved without recognizing and appreciating the human resource factor in the achievement of organizational goals. Employees' job satisfaction, therefore, is very vital to the concept of organizational effectiveness. When compared to financial resources, human resources give organizations a competitive edge over their competitors and enhances their future market share. As Ali & Ahmed (2009) noted, that the goals of an engaged and motivated employee are distinctively aligned with that of the organization. Employees are knowledgeable enough to realize that the improved organizational performance, ultimately benefits them and so they constantly seek better ways to improve on their work and perform optimally (Kamalian, Yaghoubi, & Moloudi, 2010). From the literature reviewed, it can be deduced that the leader's effectiveness can be measured by the performance of their followers and the extent of their engagement and



commitment to actualizing the overall objectives of the organization. (Afolabi, Obude, Okediji, & Ezeh, 2009). Additionally, the debate on effective leadership has opened new insights into its positive effect on organizational performance and effectiveness (Charlton, 2018; Bass, 1997). The study carried out by Behling and McFillen (1996) also confirms that effective leadership gives subordinates a sense of belonging that are necessary for them to go beyond borders and become innovative and committed to their organization. By implication, the leadership style of a leader can have a substantial effect on the career commitment and job performance of their subordinates, which ultimately affects the overall performance of the organization. Because of this implication, the study adopted the theory of control of the organization to analyze leadership and its effect on an organization. Within this context, various research studies were reviewed and synthesized to highlight the effect of female leadership with an emphasis on their influence on subordinates, the difference with male leadership, and how it contributes to organizational effectiveness. This section concludes that the effect of gender on organizational effectiveness is paramount in enhancing the discourse in organizational theory and adds to the emerging models and framework that explains what happens in the ever-changing organizational environments, and how organizations can use gender diversity as a tool to achieve superior performance, happiness, and job satisfaction of their employees. Chapter 3 will detail the methodology that will be used to evaluate these relationships in the Nigerian oil and gas industry.

## Chapter 3: Research Method

### **Introduction**

The purpose of this quantitative study was to examine whether female and male leaders differ in terms of subordinate job satisfaction and performance in the Nigerian oil and gas sector. Gender imbalance in leadership positions across the society had been a major point of scholarly discourse in recent times (Brescoll, 2016; Gipson, Pfaff, Mendelsohn, Catenacci, & Burke, 2017; Stutzman, 2017). Some scholars had argued that women were less competent and lacking in leadership potential (Gino, 2017). This chapter provides details of the research design and the methodological framework adopted for the study with a focus on the target population, sampling design, and the method of data collection including relevant ethical considerations, as well as internal and external validity issues.

### **Research Design and Rationale**

The dependent variables for this study were employee job satisfaction and employee productivity, while the leader's gender served as the independent variable with covariates such as employee's gender, employee's education in years, employee's age, and the number of years employee had worked with the leader. Experiences from around the world have shown that women have provided effective leadership in specific sectors such as politics, education, technology, healthcare, research, and engineering (Sidani, Konrad, & Karam, 2015). On the other hand, Elprana, Felfe, Stiehl, and Gatzka (2015) posited that women possess lower Motivation-to-Lead (MtL) when compared to men. Also, an earlier study by Ismail & Ibrahim (2008) had suggested that female employees

in the oil and gas firms were not opportune to lead like their male counterparts due to the perceptions about their capability to lead effectively. Therefore, leveraging on the theory of organizational effectiveness (Eydi, 2015; Pfeffer & Salancik, 2016), this study adopted a posttest-only control-group quasi-experimental design to establish the validity of this argument. This type of research design defines a research method with the absence of the hallmark features of experiments, such as manipulation of independent variables and random assignment to conditions (Leatherdale, 2018). The quasi-experimental design operates under a natural setting without assigning the participants randomly to any intervention but selecting them in their natural state (Coolican, 2014; Leavy, 2017). Coolican (2014) posits that a major feature of the quasi-experimental design is the use of non-equivalent groups, which applies to this study with the interest being on the employees that are working under female leaders being compared with their counterparts working under male leaders. Also, this design is suitable for the study given that participants were not randomly assigned to their leaders instead, they participated in the study in their current state and responded to questions as it was related to their immediate leaders whether male or female. However, it is important to note that the benefit of the quasi-experimental design is that it allows the researcher to deduce causal relationships between the dependent and independent variables which are usually not feasible in non-experimental studies (Howitt & Cramer, 2017; Neuman, 2014). Thus, the adoption of a quasi-experimental design with a control group in this study consisting of employees working under male leaders will enhance the validity of the results in establishing the effect of female leaders in organizational effectiveness.

## **Methodology**

This section on research methodology for this quasi-experimental quantitative study provides a detailed account of the population of interest, procedures for collecting data about the study participants, the instruments for data collection, the data analysis plan, identified threats to validity, and the ethical issues considered in the study. The study implemented a quasi-experimental design using a cross-sectional survey that involved a random sample selection of workers in the Nigerian oil and gas sector. As opined in Kesmodel (2018), the study participants provided their responses using a structured questionnaire which supplied quantifiable data on gender effects towards their job satisfaction and productivity. The survey responses formed the basis for the comparative analysis of male and female leaders on their leadership effectiveness. The study grouped the variables of interest as dependent variable (employee job satisfaction and productivity), the independent variable (leader's gender), and the covariates, which included other related variables such as employee's gender, age, level of education, and the number of years employee had worked with the leader. These groupings provide insights into the type of statistical analysis required for this study.

## **Population**

The population for this study was employees of the oil and gas industry in Nigeria. The oil and gas sector remain a critical component of the Nigerian economy, being the largest industry in Africa. It is the major source of foreign exchange earnings and government revenue for the country (Ajayi, 2019). The sector was largely operated

by multinational corporations until the early 1990s when local participation became prominent with the implementation of the Nigerian Content Directives by the Nigerian National Petroleum Corporation (NNPC), and the passage of the Nigerian Oil and Gas Industry Content Development (NOGIC) Act in 2010 (Ajayi, Salami, Babem, & Phido, 2014). This piece of legislation transformed the sector with a sizeable component of its activities handled by indigenously owned companies. However, due to the lack of access to capital and long-term funding by fully Nigerian-owned companies, the major activities in the sector remain under the control of foreigners-owned companies.

The sector currently consists of the upstream, downstream, and service subdivisions. The Upstream division is characterized by crude oil and gas exploration and production; downstream majorly relates to oil refining, importation, storage and distribution of refined oil and gas products but also includes the midstream subdivision which consists of processing, storage, marketing and transportation of crude oil, gas, gas-to Liquids and liquefied natural gas; while the service sub-sector comprises of exploration support services, drilling services, and production support services, as well as research & development (Ajayi et al., 2014). Although there are over 50 oil and gas companies operating in Nigeria with varying workforce sizes, their methods of operations remain relatively similar (Nwuzoh, 2018). Thus, this study drew its sample from one of the oil and gas companies operating in the Niger Delta region of the country where most of the activities in the sector occur. The Niger Delta region consists of states where oil and gas exploration and production take place and these include Abia, Akwa Ibom, Bayelsa, Delta, Edo, Imo, Ondo, and the Rivers States.

## **Sampling and Sampling Procedures**

In quantitative research, the investigator's concern is on testing hypotheses derived from theory and estimating the size of the phenomenon of interest. The process of getting a representative sample from a population to generalize to other similar populations is the primary aim of sampling (Etikan & Bala, 2017). Once a researcher intends to generalize the outcome from the research participants to a larger population or other populations with similar characteristics, the type of sampling procedures will more often depend on theories of probability for which a participant's (or event's) likelihood of being selected for inclusion in the sample is known (Alvi, 2016). Participants may be randomly assigned to different treatments depending on the research enquiry to provide an unbiased representation of the attributes of the population (Frankfort-Nachmias, Nachmias, & DeWaard, 2015), but is not always the case in studies that are quasi- or non-experimental in nature.

In this study, a simple random sampling procedure in which each employee had an equal chance of being selected was applied to ensure that the sample generated gives a true representative of the population of oil and gas workers (Alvi, 2016). This process was implemented using the list of employees obtained from the participating company. The sample selection leveraged on the assumption that every employee had worked with a leader who is either a male or a female with the term 'leader' representing direct supervisor of the employee. Based on the information obtained from the participants, the study made inferences on the relative influence of male and female leaders on their

subordinates with emphasis on productivity and job satisfaction which is the purpose of this study.

### **Sample size determination**

Generally, the choice of sample size is mostly influenced by the purpose of the study, the population size if known, the level of precision (allowable sampling error), the confidence level and the degree of variability in the measured attributes (Charan & Biswas, 2013). To derive the sample size required for the results of the analysis, the study relied on recommendations of previous studies for 0.80 statistical power (Bujang & Baharum, 2016) and significance level for psychological studies of 0.05 (Djimeu & Houndolo, 2016; American Educational Research Association, 2006; American Psychological Association, 2010). In a study comparing male and female employees' preference of leadership gender in the Nigerian public sector, Abbas and Samaila (2016) used a sample 105 employees and found a significant effect with the effect size derived from the Chi-square results as 0.24. In another study involving 400 bank employees in North Cyprus, Dappa et al., (2019) in comparing leadership effectiveness on employee job satisfaction obtained a correlation coefficient (effect size) of 0.33. Thus, based on effect sizes derived from these two similar studies, I obtained an average effect size of 0.29 which served as the effect size for the sample size calculation in this study.

Using power analysis recommended by Field (2013) for determining sample size for quantitative studies, the study adopted the G\*Power software (Faul, Erdfelder, Buchner, & Lang, 2009) by selecting the F-tests with MANOVA global effects as the statistical test, statistical power of 0.80, a significance level of 0.05, effect size of 0.29,

and set the number of groups as two. Thus, the power analysis produced the required sample size of 38 for the study (see Appendix A for details). However, based on the need to have a large sample size for the analysis, I over sampled by 100 percent such that the overall sample of size of 76 participants would be sufficient to provide a reasonable number of participants working under each leadership gender. To mitigate the risk of non-response from the selected participants, I also adopted a round-figure of 100 employees in the oil and gas sector for the study.

### **Procedures for Recruitment, Participation, and Data Collection**

#### **Recruitment**

The study targeted to recruit 100 participants (50 employees under male leaders, and 50 working with female leaders) with the assistance of the Human Resource Department of the participating oil and gas firm in the Niger Delta region of Nigeria. I secured approval from the HR Department of the company by sending a request for cooperation to allow their employees to participate in the study and requested for a list of employees that can participate in the study with their contact details including the sex of their supervisors. The company accepted to participate in the study with their employees on the condition of anonymous participation, which implied that the names of the company and its participating staff will not be mentioned in the research publication. The list collected from the firm served as the survey frame which was arranged by supervisors' sex and formed the basis for participants' selection through a random selection procedure. Thus, the survey frame had two strata (male supervisors and female supervisors). The researcher randomly selected 100 participants to respond to the survey



questions comprising of 50 participants from each stratum of supervisors' gender group above the estimated size from the power analysis to accommodate non-responses during the survey. This selection approach ensured that I had equal representation of participants from each gender group and eliminate any associated statistical bias.

### **Participation**

I contacted each of the selected participants through a phone call and in some cases using instant messages to formally invite them to participate in the study with an explanation on what they were expected to do and the benefits of the study. The invitation process helped me to replace selected participants that were not interested in participating in the study to ensure that the sample size remains attainable. During this stage of extending invitations, participants were required to indicate their preferred method of receiving the link to the questionnaire, whether by email or through an instant message as the questionnaire was compatible with smartphones and other devices including a personal computer. The questionnaire was administered only to the participants that accepted the invitation to participate in the study. All the participants were assured of the confidentiality of their responses, which gave them the liberty to provide suitable responses to the study questions.

### **Data collection procedures**

I used the Google Form to design the survey questionnaire for this study as it was easily assessable to users of smart electronic devices. As recommended by the Walden University Institutional Review Board (IRB) to maintain anonymity of the participants while ensuring confidentiality of information and non-duplication of responses, the link

was sent once to each respondent. Another benefit from using Google Form was the ease in accessing the responses in a spreadsheet format which makes data cleaning and management easier for the investigator. The data collated through the Google spreadsheet can easily be transferred into the SPSS software for coding and further analysis. The consent form for the study was made the landing page on the Google Form to ensure that each participant reads through it before accepting and proceeding to partake in the study (see consent form approved by Walden University IRB in Appendix B). The use of the participants' preferred method of sharing the Google link (mobile phone or private email addresses) was to guarantee their privacy and the confidentiality of their responses. The survey lasted for over three months starting from April 12, 2021 to August 5, 2021, with reminders sent to each respondent through their preferred channel of communication. These reminders were sent twice a week to avoid over-burdening the respondents with excessive messages. The duration for the retrieval of the questionnaire was extended beyond the planned three weeks due to low response rate at the end of the first three weeks coupled with the complaints about busy schedules by some of the participants. At the completion of the survey, the responses were extracted from the Google spreadsheet, where the responses were cross-checked, and cleaned before moving them to the SPSS software for coding and analysis.

### **Instrumentation and Operationalization of Constructs**

The purpose of this study was to establish the effect of female leaders in organizational effectiveness using their relative impact on employees' job satisfaction and productivity compared to their male counterparts. Thus, the measurement of all the

variables of interest were expressed quantitatively to capture their variations and provide the input for statistical data analysis. Variables definition remain an important element in quantitative studies (Allen, 2017), and for studies using survey techniques, the questionnaire is the main source of capturing the relevant variables. The major operational variables in this study were nominal and scale variables for the independent and dependent variables, respectively. The independent variable, gender, was a nominal variable with two categories, male and female, whereas the dependent variables job satisfaction and employee productivity were continuous variables. Other covariates required in the study were a mix of nominal and scale variables such as the employees' gender, age, education in years, and number of years employee had worked with the leader.

The study captured the employee job satisfaction index using the short form of the Minnesota Satisfaction Questionnaire (MSQ) developed and freely distributed by the University of Minnesota Work Adjustment Project for scholarly research. The short form of the MSQ uses 20 items drawn from the long MSQ form based on the best measure for each of the 20 scales. The Project Team had carried out a factor analysis of the 20 items to validate and arrive at two major factors, Intrinsic and Extrinsic Satisfaction including the procedure for deriving a General Satisfaction score from these two factors (Weiss, Dawis, & England, 1967). The response categories used in the questionnaire were *Not Satisfied*, *Somewhat Satisfied*, *Satisfied*, *Very Satisfied*, *Extremely Satisfied*. These categories formed the basis for deriving the scores for each employee canvassed in the survey as a measure of job satisfaction. In a study involving a randomly selected sample

of 50 public service employees in Tanzania, Marijani (2016) validated the MSQ and found that the intrinsic rather than extrinsic and demographic factors influenced the satisfaction of most public service employees. However, application of the MSQ in selected organizations in South Africa showed that all the three factors were significant in determining job satisfaction among employees (Buitendach & Rothmann, 2009). Thus, the choice of the MSQ is expedient for Nigeria given its successful validation among employees in two African countries.

Measuring workers productivity at the individual level remains an interesting area of research as researchers adopt varying methods depending on the industry and objectives of the research (Sauermann, 2016). However, performance self-rating by individual employees have become a recent method adopted by scholars to estimate workers productivity to gauge whether an individual adds value to the organization or not. One of the popular instruments for measuring employee productivity through self-rating is the Individual Work Performance Questionnaire (IWPQ) which was conceptualized through a heuristic study using a systematic review derived from medical, psychological, and management databases (Koopmans et al., 2011). It is a form of individual self-reporting questionnaire that measures individual work performance through self-rating (Widyastuti, & Hidayat, 2018). Dåderman, Ingelgård, and Koopmans (2018) posit that the IWPQ is a useful instrument in measuring relationships between employee performance, job satisfaction, and leadership styles including the effectiveness of organizational interventions.

The conceptual framework for the IWPQ was originally derived from four dimensions of individual work performance comprised of task performance, contextual performance, adaptative performance, and counter-productive work behavior with 47-items (Koopmans et al., 2013). The questionnaire was revised to 18-items covering three dimensions (task performance, contextual performance, and counter-productive work behavior) with a scaled score generated for each dimension. The score for each dimension ranges from 0 to 4 with the highest score reflecting higher task and contextual performance and higher counter-productive work behavior (Koopmans et al., 2016). The IWPQ was originally developed and tested in Dutch language and with Dutch workers, and later tested in other locations such Sweden, Indonesia, and Qatar based on a simplified version developed for cross-cultural usage and translated into American English. The cross-cultural version achieved high reliability results with Cronbach values ranging from acceptable ( $> 0.70$ ) to good levels ( $>0.80$ ) (Dåderman, Ingelgård, & Koopmans, 2018; Syarnubi, Sembiring, Siswaya, & Zuraida, 2018; Widyastuti, & Hidayat, 2018). The internal consistency of the 18 items of the IWPQ were validated by Dåderman, Ingelgård, and Koopmans (2018) and Koopmans, Bernaards, Hildebrandt, De Vet, and Van der Beek, (2014) using Dutch and Swedish participants, respectively. Using correlations with instruments having related constructs (values  $>0.30$ ), they found acceptable construct validities of the IPWQ. Thus, in measuring the second dependent variable for this study (employee productivity), I adopted the revised IWPQ with 18-items under the three dimensions of performance.

This approach followed an earlier attempt by Syarnubi, Sembiring, Siswaya, and Zuraida (2018) using the Qatar oil and gas industry. Their study adopted the IWPQ with modifications to capture health and safety indicators in the oil and gas sector. However, in adopting the IWPQ for the Nigerian oil and gas sector, I adapted the earlier revised 18-items version from Koopmans et al., (2016) and Dåderman, Ingelgård, and Koopmans (2018) See Appendix D for permission to use from Koopmans. The instrument had a 5-point rating scale consisting *Seldom, Sometimes, Quite often, Often, and Always* for the task and contextual performance dimensions and *Never, Seldom, Sometimes, Quite often, Often* for the counter-productive dimension. I computed the performance scores for each participant using the rated score for each item across the dimensions. The dimension scores were the mean score of the items. See Appendix C for the study questionnaire that combined the MSQ, IWPQ, and other relevant variables required for the analysis.

### **Data Analysis Plan**

I used the Microsoft Excel for the data extraction, cleaning, transformation, and derivation of participants' scores, and used the IBM Statistical Package for Social Sciences (SPSS) to code the variables and carry out the statistical analysis of the survey results. The Excel and SPSS software applications made the coding of survey responses and analysis very convenient and easy as they come with features that assist in data cleaning and techniques of data analysis. Frankfort-Nachmias et al. (2015) recognize the data screening and cleaning process as an important step before the final analysis. The data editing process involved checking for errors and omissions to ensure that

participants completed all the relevant sections of the questionnaire and verifying any form of inconsistencies in the responses. The data cleaning process ensured that the data coding followed the logical consistency and that the coding of related questions remained consistent with the study variables.

Quasi-experimental studies often focus on testing whether a variable of interest causes an event or makes people react in certain ways to a stimulus. According to Dehejia (2015), such studies frequently measure the variable of interest, mostly by requiring the participants to report their beliefs, perceptions, or assessments, while the researcher uses statistical procedures to relate the participants' responses to measures of other variables also influenced by the initial variable. In this study, employees in the Nigerian Oil & Gas Sector which served as participants reported their perceptions on job satisfaction and productivity in the workplace, which the study used to compare for difference based on the leadership gender. Thus, the following research questions guided the analysis:

RQ1: Is there a significant difference in employee satisfaction measured by the Minnesota Satisfaction Questionnaire based on the gender of the leader?

H0: There is no significant difference in employee satisfaction measured by the Minnesota Satisfaction Questionnaire based on the gender of the leader

H1: There is a significant difference in employee satisfaction measured by the Minnesota Satisfaction Questionnaire based on the gender of the leader

RQ2: Is there a significant difference in employee productivity measured by the Individual Work Performance Questionnaire based on the gender of the leader?

H0: There is no significant difference in employee productivity measured by the Individual Work Performance Questionnaire based on the gender of the leader

H1: There is a significant difference in employee productivity measured by the Individual Work Performance Questionnaire based on the gender of the leader.

Given the nature of the study with two dependent variables and one factor (gender) with covariates, the study adopted the multivariate analysis of covariance (MANCOVA) technique to analyze the existence or otherwise of gender differences relative to the employees' job satisfaction and productivity taking into cognizance other associated factors (covariates). The MANCOVA technique analyzes relationships between a linear combination of dependent variables against one or more independent variables while controlling the effect of other independent variables usually measured on a continuous scale (Dattalo, 2013). The MANCOVA procedure tests the hypotheses about mean differences between two or more groups of the target-independent variable based on the values of the dependent variables that are conceptually or statistically related (Finch, 2016; Ramos, Carolino, Oliveira, & Bicho, 2012).

The basic assumptions of MANCOVA require the use of a structured questionnaire to generate all the variables of interest through a random probability sampling procedure. The study derived the dependent variables (job satisfaction and productivity) using the indexes computed from the responses of the participants on the perception measurement scale. The independent variable (leader's gender) had two categories (male and female), while the covariates (employee's gender, age, level of education in years, and number of years employee worked with the leader) were



continuous variables. The inclusion of the covariates was to reduce the determinant of the error covariance matrix and thus increase the precision of the analysis (Rayalu, Ravisankar, & Mythili, 2017). Increasing the precision makes for higher reliability of the results in describing what happens in the Nigerian oil and gas sector on the effect of female leaders.

The use of scale variables as dependent variables (DVs) and categorical variable as the independent variable (IV) satisfies the MANCOVA assumption and also clarifies how job satisfaction and productivity change with changes in the gender of leader while controlling for the employee's gender, age, level of education in years, and number of years employee worked with the leader, thereby giving credence to the level of measurements, the statistical procedure, and the level of mathematical precision expected (Crossman, 2019; Dattalo, 2013; Hardle & Simar, 2015). The study adopted the correlation analysis technique to establish that the dependent variables were moderately related to each other to avoid spurious results. Researchers recommend a correlation coefficient of  $r = 0.20$  to  $0.50$  as moderate values for this type of study (Stevens, 2009; Tabachnick & Fidell, 2012). The statistical tests confirmed the multivariate normality of the sample data and the between-groups variance equality for a robust analysis.

### **Threats to Validity**

The notions of validity are reflected in how well a study was conducted (its structure), and how applicable the findings reflected the real world. According to Gundry and Deterding (2018), a critical question that borders on validity always arise at the end of a study as to what extent the data collected from participants align with inferences

drawn from them. The study internal validity guarantees the covariation of the outcome variable with the experimental variables (Frankfort-Nachmias et al., 2015). The internal validity of a study further strengthens its external validity which considers the generalizability of the study results or outcomes.

Gundry and Deterding (2018) identified four kinds of validity as statistical conclusion validity, internal validity, construct validity and external validity. Statistical conclusion validity relates to issues like statistical power and choice of suitable statistical methods for analysis, internal validity explores whether the covariation between the outcome and experimental variables is not influenced by other factors not captured in the analysis. Construct validity concerns arise from the suitability of the measurement instruments capture the relevant variables of the study, whereas external validity relates to applicability and generalizability of the study findings in similar settings. Khorsan and Crawford (2014) opined that a study's internal validity is a function of a properly demonstrated causal inference (reciprocal relationship) through the following criteria: the cause precedes the effect in time (temporal precedence); the cause and the effect are related (covariation), and there is no probable alternative explanation for the effect other than the cause (non-spuriousness).

I controlled for these validity threats by ensuring the use of appropriate statistical methods and adhering to underlying statistical assumptions with high statistical power. I used these tests to control for the interaction effects of selection biases and the experimental variable such that the sample and outcome measures used in the study accurately operationalize the constructs under investigation, and any observed

correlations held across settings and measures, ensuring the generalizability of the study results (Mohajan, 2017). The inclusion of covariates in the analysis was to mitigate the internal validity threat arising between the dependent and independent variables, whereas the scores generated from the standardized and tested questionnaires, the MSQ and IWPQ, eliminated any form of construct validity in the study.

### **Ethical Procedures**

The protection of participants and the application of appropriate ethical principles remain vital in all research studies (Arifin, 2018). In this study, ethical considerations was a top priority due to the nature of the study. Participants were required to voluntarily consent to be part of the study and received enough information to enable them to understand the study requirements including the benefits of participating. The study details were adequately simplified in non-ambiguous terms so that participants were able to comprehend the information and provide consent or decline from participating in the study in line with the National Code of Health Research Ethics for the conduct of research involving human participants in Nigeria (National Health Research Ethics Committee of Nigeria, 2007). In line with the Walden University Institutional Review Board (IRB) requirements which conforms with Nigeria National Code on handling human subjects in research, I undertook the CITI certification program on handling of human participants in research (see Appendix E). By these requirements, I ensured the anonymity of responses and protected the confidentiality of the participants in the data collection, analysis, and reporting of the study findings.

### **Summary**

This chapter provided a detailed insight on how the use of quasi-experimental design and the application of multivariate analysis of covariance (MANCOVA) assisted me in actualizing the objective of estimating the effect of female leadership on organizational effectiveness in the Nigerian oil and gas sector. The use of two-scale measured dependent variables (DVs), a categorical independent variable (IV), and other covariates satisfied the MANCOVA requirements and provide statistical evidence on how employee job satisfaction and productivity varied due to the leader's gender while controlling for other factors. The sampling procedure was robust enough to allow for generalization from a representative sample about the population other than the selected participants. This objective was possible based on strict adherence to the variable measurements, statistical procedures, and mathematical precision in the analysis.

## Chapter 4: Results

### Introduction

The purpose of this quantitative study is to examine whether female and male leaders differ in terms of subordinate job satisfaction and performance in the Nigerian oil and gas sector. Using a quasi-experimental quantitative design, the study attempts to answer the following research questions based on the analysis of the responses received from selected employees from a firm operating in the sector:

RQ1: Is there a significant difference in employee satisfaction measured by the Minnesota Satisfaction Questionnaire based on the gender of the leader?

H0: There is no significant difference in employee satisfaction measured by the Minnesota Satisfaction Questionnaire based on the gender of the leader

H1: There is a significant difference in employee satisfaction measured by the Minnesota Satisfaction Questionnaire based on the gender of the leader

RQ2: Is there a significant difference in employee productivity measured by the Individual Work Performance Questionnaire based on the gender of the leader?

H0: There is no significant difference in employee productivity measured by the Individual Work Performance Questionnaire based on the gender of the leader

H1: There is a significant difference in employee productivity measured by the Individual Work Performance Questionnaire based on the gender of the leader.

Given the nature of the study with two dependent variables and one factor (gender) with covariates, I adopted the multivariate analysis of covariance (MANCOVA) technique (Dattalo, 2013; Finch, 2016; Ramos, Carolino, Oliveira, & Bicho, 2012), which

I had earlier proposed to analyze the existence or otherwise of gender differences in generating organizational outcomes based on the productivity and job satisfaction level of the employees considering other confounding factors (covariates). Prior to this analysis, the researcher carried out a descriptive analysis of the data collected from the study participants to enable me observe patterns and similarities in behavior relative to the different demographic characteristics of the respondents. Some of the descriptive evidence were presented in the form of tables and charts to depict the narratives portrayed in the data.

### **Data Collection**

Following the approval for me to commence the final phase of my study by the Institutional Review Board (IRB) of Walden University, I started the data collection process on March 29, 2021. First, I reached out to the oil and gas firm that had agreed to cooperate with me in the study and requested for the list of their employees with their contact details (email and phone numbers) and the gender of their immediate supervisors. The list served as the sampling frame for the study. Based on my earlier sample size estimation of 100 participants, 50 from each group, I used the simple random sampling technique to select from each group. In other words, I selected 50 employees from those supervised by females and same number from among the staff supervised by the males. I sent out invitations to the selected participants on April 12, 2021, which contained the link to the study questionnaire. Each participant was expected to read through the consent form which was the landing page of the questionnaire before proceeding to respond to the survey. Due to anonymity of the responses, reminders were sent to all the participants at

the end of each week with a caveat to ignore the reminder for those that had responded. The survey lasted till July 30, 2021, with a total of 81 responses producing a response rate of 81.0 percent. Out of the 81 responses received in the survey, 25 responses came from employees working under female supervisors, whereas 56 responses came from those working with male supervisors. The number of responses from the male-supervised group exceeded the sample size of 50, which was attributable to issues emanating from changes in supervisors during the survey from female to male supervisor.

### **Results of the Data Analysis**

This section provides the details of the analysis carried out on the responses received from the participants to answer the research questions for this study including a descriptive presentation of the findings and few characteristics of the respondent employees.

#### **Descriptive Analysis**

The descriptive analysis was used to reflect the basic characteristics of the respondents such as their gender distribution across the two supervisory gender roles, respondent's level of education, and age group. Also, a descriptive representation of the employees' outcomes in terms of productivity and job satisfaction were analyzed.

Out of the 81 participants that completed the survey, 46 of them were male employees while 35 were females. The responses indicated most of the employees working with both female and male supervisors were males, 52.0% and 58.9%, respectively. However, when compared with their female counterparts, a greater

percentage of the female employees worked under female leaders (48.0%) compared to 41.1% of females working under male supervisors (Table 1).

**Table 1.**

*Percentage Distribution of Employees by Supervisor's Gender*

		Supervisor's gender	
		Female	Male
Respondent gender	Male	52.0	58.9
	Female	48.0	41.1
	Total	100.0	100.0

The larger proportion of the respondents (55.6%) hold a master's degree followed by those with a bachelor's degree (40.7%), whereas employees with a doctorate degree constituted 3.7% of the respondents. The male respondents were mostly master's degree holders (60.9%) same pattern as the female respondents with 48.6%. However, the proportion of female respondents with doctorate degree was higher at 5.7% than their male counterparts at 2.2% (Table 2).

**Table 2.**

*Percentage Distribution of Employees by Educational Level and Gender*

		Respondent gender		
		Male	Female	Total
Level of education	Bachelor's degree	37.0	45.7	40.7
	Master's degree	60.9	48.6	55.6
	Doctorate	2.2	5.7	3.7
	Total	100.0	100.0	100.0



Majority of the respondents (74.1%) covered in the survey were of the 30 – 45 years old age-group and mostly male employees (82.6%). The female respondents had more employees aged above 60 years (5.7%).

**Table 3.**

*Percentage Distribution of Respondents by Educational Level*

		Respondent gender		
		Male	Female	Total
Respondent age	less than 30 years	0.0	17.1	7.4
	30 – 45 years	82.6	62.9	74.1
	46 – 60 years	17.4	14.3	16.0
	above 60 years	0.0	5.7	2.5
	Total	100.0	100.0	100.0

**Results from the Multivariate Analysis of Covariance (MANCOVA)**

This sub-section used the multivariate analysis of covariance (MANCOVA) to evaluate the effect of the female gender on organizational outcomes (employees' productivity and job satisfaction). The benefit of using the MANCOVA was the potency to accommodate the interactions between the two dependent variables (productivity and job satisfaction in this case) across the two gender groups while accounting for the presence of the covariates (Dattalo, 2013; Field, 2017). Prior to the analysis, the two dependent variables, productivity and job satisfaction, were tested for relevant statistical assumptions including the normality and multicollinearity assumptions on the dependent variables and homogeneity of covariance across the two gender groups. Field (2017) posits that since the SPSS cannot execute multivariate normality tests, the univariate normality for each dependent variable would suffice "because univariate normality is a necessary condition for multivariate normality" (p.1096). Thus, the univariate normality

test was applied for the two dependent variables and the correlation of the two continuous variables was used to check for the presence of multicollinearity. The Box and Levene tests were used to test the assumptions for multivariate homogeneity of variance and homogeneity of error variances across gender groups, respectively.

The result of the normality tests for the dependent variables indicated that the employee job satisfaction score was normally distributed based on the Kolmogorov–Smirnov test with  $D(81)=.098$ ,  $p=.051$ , whereas the employee productivity score was not normally distributed  $D(81)=.119$ ,  $p=.006$ . The non-significance of the normality test for the productivity score was not expected to affect the outcome of the multivariate analysis due to the large sample size in line with the central limit theorem.

**Table 4.**

*Test of Normality*

	Kolmogorov-Smirnov		
	Statistic	df	Sig.
Job satisfaction score	.098	81	.051
Employee Productivity score	.119	81	.006

Further investigation of the assumptions required for the MANCOVA model indicated that the two dependent variables were significantly correlated at  $p < .05$  level of significance with a correlation coefficient of 0.57. This level of relationship was however expected given the nature of the variables coming from the same employees but was not sufficiently large to affect the outcome of the multivariate analysis.

As required for the test of multivariate homogeneity, the Box test for equality of covariance matrices was not significant  $F(9,14932.13)=1.214$ ,  $p = 0.281$ , which connotes

equal covariance across the two dependent variables. The Levene homogeneity test for equality of error variances of the dependent variables were not significant,  $F(3,77)=.565$ ,  $p = 0.640$  for employee productivity and  $F(3,77)=.300$ ,  $p = .825$ ) for employee job satisfaction. With the validation of these assumptions for the MANCOVA analysis, the next step was to evaluate the SPSS results of the analysis.

**Table 5.**

*Levene's Test of Equality of Error Variances*

	F	df1	df2	Sig.
Employee Productivity score	.565	3	77	.640
Job satisfaction score	.300	3	77	.825

Using the SPSS general linear model (GLM) technique, I specified the MANCOVA model for the two dependent variables (employee productivity and job satisfaction), whereas the gender of the employee and supervisor served as the grouping variables. I also included the following covariates: employee's level of education, age, and number years worked with immediate supervisor. The result indicated that only the supervisor's gender could influence the dependent variables as indicated in the outcome of the multivariate tests using Pillar's trace, Wilk's Lambda, Hotelling, and Roy's largest root which were all significant  $F(2,73) = 4.005$ ,  $p = 0.022$ , but not significant for employee gender  $F(2,73) = 1.446$ ,  $p = 0.242$ . None of the covariates were significant in influencing the dependent variables considering the independent gender groups. However, the number of years worked with supervisor was significant at  $p < .10$  level of significance in influencing the dependent variables  $F(2,73) = 3.000$ ,  $p = 0.056$ . The

partial eta squared measuring the effect of the female leader was small at 0.10 on employee outcomes.

**Table 6.**

*Result of the Multivariate Tests*

Effect		Value	Sig.	Partial Eta Squared
Worked with Supervisor	Pillai's Trace	.076	.056	.076
	Wilks' Lambda	.924	.056	.076
	Hotelling's Trace	.082	.056	.076
	Roy's Largest Root	.082	.056	.076
Supervisor gender	Pillai's Trace	.099	.022	.099
	Wilks' Lambda	.901	.022	.099
	Hotelling's Trace	.110	.022	.099
	Roy's Largest Root	.110	.022	.099

Further evaluation of the result using the tests of between-subjects effects indicated that the female leadership gender influences employees' productivity  $F(1,74)=7.751$ ,  $p=.007$  with a small effect size of .095 but does not impact employee job satisfaction  $F(1,74)=1.145$ ,  $p=.288$ . Among the covariates, only the number of years employee had worked with immediate supervisor was significant in influencing employee's productivity  $F(1,74)=4.921$ ,  $p=.030$ . Thus, employee gender, age, and educational level were not significant predictors of organizational outcomes.

**Table 7.**

*Test of Between-Subjects Effects – Model 1*

Source	Dependent Variable	F	Sig.	Partial Eta Squared
Worked with Supervisor	Employee Productivity score	4.921	.030**	.062
	Job satisfaction score	.132	.718	.002
Supervisor gender	Employee Productivity score	7.751	.007**	.095
	Job satisfaction score	1.145	.288	.015
Employee gender	Employee Productivity score	2.927	.091*	.038

Job satisfaction score	.827	.366	.011
------------------------	------	------	------

\*\* significant at  $p < .05$ .  
\* significant at  $P < .10$

I also eliminated the covariates from the model to observe if the gender groups of the supervisors and employees will influence the organizational effectiveness through employee productivity and job satisfaction. The result of the analysis was very similar with the earlier MANCOVA with covariates, with only the female leadership gender having a significant influence on the employee's productivity  $F(1,77)=5.699$ ,  $p=.019$ . However, at the  $p<.10$  level of significance, the employee's gender was found to be a predictor of employee's productivity  $F(1,77)=3.073$ ,  $p=.084$  in the absence of the covariates.

**Table 8.**

*Tests of Between-Subjects Effects – Model 2*

Source	Dependent Variable	F	Sig.	Partial Eta Squared
Supervisor gender	Employee Productivity score	5.699	.019**	.069
	Job satisfaction score	.995	.322	.013
Employee gender	Employee Productivity score	3.073	.084*	.038
	Job satisfaction score	.650	.423	.008

\*\* significant at 5%

\* significant at 10%

### Summary

The objective of this section was to evaluate the research questions based on the responses received from the study participants. The anecdotal evidence may tend to postulate that the effectiveness of organizations operating in the Nigerian oil and gas sector would be propelled majorly by the actions of its male leaders due to the dominance of the males in the industry. However, this study set out to establish the effect of female

leaders within the oil and gas firms in promoting positive organizational outcomes. Thus, using the multivariate analysis of covariance (MANCOVA) technique, the section presented both the descriptive and causal evidence that the presence of female leaders in the oil and gas firm covered in this study was significant, as the effect of the female supervisors influenced the productivity levels of the employees but did not impact their job satisfaction levels. The analysis further indicated that the number of years that employees had worked with a supervisor could be an important covariate that influences the extent of the effect. These analyses have far-reaching implications on what currently obtains in the Nigerian oil and gas sector which operates with high rate of male-dominance but has been proved to derive higher productivity through the female leaders in the industry.

## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

The purpose of this quantitative study is to examine whether female and male leaders differ in terms of subordinate job satisfaction and productivity in the Nigerian oil and gas sector. Although there was anecdotal evidence that the sector thrives due to its male-dominated nature, the outcome of the study has shown otherwise.

In summary, the outcome of the data analysis using the MANCOVA technique indicated that the actions of the female leaders in the industry influences the productivity levels of the employees considering other factors such as the number of years that employee had worked with the female leader, employee's age, gender, and level of education. I will further elucidate the result from the analysis with existing knowledge in the subsequent sections of this chapter.

### **Interpretation of the Findings**

As earlier stated in Chapter 2, this study draws inspiration from the meta-analyses conducted by Paustian-Underdahl, Walker, Woehr (2014) on gender and leadership effectiveness, where they concluded that there was no difference in leadership effectiveness between the two gender groups irrespective of the context. Thus, this study had set out to establish the effect of female leaders in engendering organizational effectiveness when compared with their male counterparts in the Nigerian oil and gas sector. This inspiration was further propelled by the resistance to gender diversity in the oil sector (Williams, Kilanski, & Muller, 2014) and unequal opportunity for female employees to lead in the Nigerian oil and gas sector (Ismail & Ibrahim, 2008). In

actualizing this inspiration, the study digressed from the subjective measures used by previous studies (Eagly, 2013) in exploring organizational effectiveness by adopting objective measures of performance such workers' productivity and job satisfaction. Thus, filling the gap in literature about measuring gender leadership effectiveness in organizations and particularly in the oil and gas sector.

The outcome of the multivariate analysis applied in this study to compare the leadership effect of the female versus the male leaders indicated that the female leaders in the Nigerian oil gas sector impacted on employees' productivity more than their male counterparts. This result agrees with the findings of Ranganathan and Shivaram (2017) using the Indian garment industry, where they found that workers performed optimally under female supervisors than those working under male leaders. They argued that this effect was possible due to the attitude of female leaders to go an extra mile in motivating their subordinates by attending to their personal challenges apart from work-oriented issues. This approach tends to create a bond between the leader and led which is not usually the case with male leaders who often operate task-oriented leadership styles. This finding is most agreeable in the Nigerian context given the cultural attachment to family and social groups which often puts unwarranted pressure on some employees apart from the ones experienced in the workplace.

On the other hand, employees' job satisfaction was not significantly impacted by the activities of female leaders in the Nigerian oil and gas sector when compared with their male counterparts. This finding goes to confirm earlier assertions by scholars that employees' job satisfaction indirectly affects organizational effectiveness through its



impact on workers' productivity (Agbionu, Ogadi, & Agbasi, 2013; Amah, 2013; Saks, 2008; Schaufeli & Bakker, 2004). These studies posit that motivated and happy employees usually possess higher sense of organizational ownership with the propensity to contribute to the organizational goals and effectiveness. Thus, deriving from Fitch and Agrawal (2015) which concluded that female leaders were more engaging and applies problem solving leadership styles, they tend to promote employee confidence and satisfaction in the workplace which transmits into improved productivity and organizational effectiveness.

### **Limitations of the Study**

One of the limitations in this study based on the outcome of the analysis was inadequacy of the sample size of 80 participants below the estimated size of 100 participants. In addition, most of the respondents were working with male leaders. Thus, the small sample size of employees working with the female leaders was not sufficient to accommodate the covariates in the MANCOVA framework using the SPSS, thereby affecting the statistical validity of the result. A more robust sample size in subsequent studies of this nature would enable the investigator to detect the least effect with considerable statistical validity. The study was also limited by the ability of the investigator to collect data from more than one firm in the sector. Due to resource constraints, the study utilized data collected from the employees of a single firm operating in the Nigerian oil and gas sector.

### **Recommendations**

The male-dominated nature of the Nigerian oil and gas sector was reflected in the outcome of the survey results. Despite the efforts made to ensure a balanced design in the sample size for the study using the list of employees and their supervisors provided by the partnering firm, the outcome showed that most of the respondents were working with the male supervisors. Thus, the need for more robust sampling approaches to detect the least effect of female leaders on organizational effectiveness. The use of employees from multiple firms will be ideal for subsequent investigations in the Nigerian oil and gas sector to minimize the attrition effect on the design from employees working with female supervisors. This recommendation, however, will require more resources including time to reach out to larger group of employees in the sector.

Given the finding from the study which corroborates with existing findings on the effect of female leaders in promoting organizational effectiveness by enhancing employees' productivity, it becomes expedient for firms operating in the Nigerian oil and gas industry to exploit the capabilities of their female employees more than they are currently doing. The body of literature reviewed in this study has shown that female leaders possess requisite soft skills and transformational leadership styles that produces more effective organizations particularly, in the cultural context found in Nigeria. The adoption such practices of given equal opportunities to women in the industry to led will attract more of such soft skills and build a body of transformational leaders for the industry. It will further engender higher gender diversity in the sector and eliminate the glass ceiling existing for female workers in the industry.

### **Implications**

The increased attention on gender diversity in the Nigerian business space and corporate world has become necessary to create more value from the growing population of females in the country. Currently, population estimates for Nigeria indicates a 50:50 gender ratio which necessitates the need to optimally harness the female potentials available in labor force. More so, the oil and gas sector remain a prominent economic sector in the country as a major source of government revenue, foreign exchange earnings, and job creation. Thus, the sector needs to leverage on the existing population structure to actualize its organizational outcomes.

The positive social change implication of this study is the evidence to support increased women participation in the operations of the Nigerian oil and gas sector and specifically, granting them the opportunities to lead in the sector. Occupying leadership positions to drive organizational goals and effectiveness starts through the rudimentary process of leading from the bottom. Using employees working with different strata of supervisory leadership in a Nigerian oil and gas firm, this study has shown that these female leaders at their various levels of supervision has engendered improved employees' productivity more than their male counterparts who are more in number. Thus, human resource and I-O professionals working in the Nigerian oil and gas sector including similar jurisdictions can leverage on the outcome of this study to make informed decisions on employee hiring and placements including justifications for promotions and appointments.

### **Summary**

The main objective of this study was to establish that female leaders in the Nigerian oil and gas sector can competently lead and engender higher organizational outcomes as much as their male counterparts if not more. Relating the results from the data analysis with the existing findings in the literature, this chapter has justified the objective of the study. The attainment of the study objectives was further enhanced with the recommendations for subsequent attempts in this regard and identification of valid positive social change implications of the study for the sector and the industrial/organizational psychology field in Nigeria and across the globe.

## References

- Abbas, S.M.S. & Samaila, H. (2016), Nigeria Study on Public Sector Female Manager and Supervisors of Opposite Sex: Stereotype, Gender Differential, Bias, Attitudes and Perceptive Reality. *GE-International Journal of Management Research*. 4. 2321-1709.
- Adams, R. B. (2016). Women on boards: The superheroes of tomorrow? *The Leadership Quarterly*, 27(3), 371-386.
- Afolabi, O.A., Obude, O.J., Okediji, A.A., & Ezeh, L.N. (2009), Influence of Gender and Leadership Style on Career Commitment and Job Performance of Subordinates. *Global Journal of Humanities*. 7(1&2).
- Agbionu, U.T., Ogadi, P.N., & Agbasi, O.E. (2013). Job Satisfaction and Organisational Effectiveness: A study of Public Organisations in Anambra State, *Humberside Journal of Social Science*, 2 (1), 57 -63.
- Ajayi, A., Salami, A.L., Babem, O., & Phido, M. (2014). Nigeria's Oil and Gas Industry Brief. *KPMG Advisory Services*, 5-21.
- Ajayi, W. (2019, April 23). Nigerian Oil and Gas Update. *KPMG Advisory Services*, 1-4.
- Akinkugbe-Filani, R. (2018), *Women in Energy: Oiling the wheels of talent*. July 2018 Guardian Publication. <https://guardian.ng/guardian-woman/women-in-energy-oiling-the-wheels-of-talent/>
- Akpan, E. O., & Amran, N. A. (2014). Board characteristics and company performance: Evidence from Nigeria. *Journal of Finance and Accounting*, 2(3), 81-89.

- Ali, M., Kulik, C. T., & Metz, I. (2009). The Impact of Gender Diversity on Performance in Services and Manufacturing Organizations. *In Academy of management proceedings* (Vol. 2009, No. 1, pp. 1- 6). Briarcliff Manor, NY 10510.
- Ali, R., & Ahmed, M. S. (2009). The impact of reward and recognition programs on employee's motivation and satisfaction: an empirical study. *International review of business research papers*, 5(4), 270-279.
- Allen M. (2017). *The SAGE Encyclopedia of Communication Research Methods*.  
<https://dx.doi.org/10.4135/9781483381411>.
- Al-Shareem, K. M., Yusof, N. A., & Kamal, E. M. (2015). External factors influencing the readiness for implementing public-private partnerships among public and private organizations in Yemen. *Journal of Science & Technology Policy Management*, 6(1), 56-75. DOI/abs/10.1108/JSTPM-07-2014-0030
- Alsubaie, A., & Jones, K. (2017). An overview of the current state of women's leadership in higher education in Saudi Arabia and a proposal for future research directions. *Administrative Sciences*, 7(4), 36.
- Alvi, M. (2016). A Manual for Selecting Sampling Techniques in Research. *MPRA Paper No. 70218*, Retrieved from at <https://mpra.ub.uni-muenchen.de/70218/>
- Amah, E. (2013). Employee Involvement and Organisational Effectiveness. *Journal of Management Development*, 32(7), 661-674. <https://doi.org/10.1108/JMD-09-2010-0064>

- American Educational Research Association. (2006). Standards for Reporting on Empirical Social Science Research in AERA Publications. *Educational Researcher*, 35, 33-40.
- American Psychological Association. (2010). *Publication Manual of the American Psychological Association (6th ed.)*. Washington, DC.
- Andrew, C., & Sofian, S. (2012). Individual Factors and Work Outcomes of Employee. *Proceedings-Social and Behavioral Sciences*, 40, 498-508.  
<http://dx.doi.org/10.1016/j.sbspro.2012.03.222>
- Andrew, C., & Sofian, S. (2012). Individual Factors and Work Outcomes of Employee. *Proceedings-Social and Behavioral Sciences*, 40, 498-508.  
<http://dx.doi.org/10.1016/j.sbspro.2012.03.222>
- Arifin, S. R. M. (2018). Ethical Considerations in Qualitative Study. *International Journal of Care Scholars*, 1(2), 30-33.
- Arvey, R. D., Zhang, Z., Avolio, B. J., & Krueger, R. F. (2007). Developmental and genetic determinants of leadership role occupancy among women. *Journal of Applied Psychology*, 92(3), 693.
- Atmojo, M. (2015). The influence of transformational leadership on job satisfaction, organizational commitment, and employee performance. *International research journal of business studies*, 5(2).
- Bakker, A. B. (2011). An evidence-based model of work engagement. *Current Directions in Psychological Science*, 20, 265–269.

- Baron, R. A. (1983). *Behavior in organizations*. New York: Allyn& Bacon.
- Bass, B. M. (1998). *Transformational leadership: Industry, military, and educational impact*. Mahwah, NJ: Erlbaum.
- Bastida, M. (2018). Yes, they can do it! Exploring female expatriates' effectiveness. *European Research on Management and Business Economics*, 24(2), 114-120.
- Beerel, A. (2009). *Leadership and Change Management*. SAGE.
- Behling, O. & Mcfillen, J. (1996). A Syncretical Model Charismatic or Transformational Leadership. *Group and Organisation Management*, 21(2), 120 -160.
- Boone, J., Veller, T., Nikolaeva, K., Keith, M., Kefgen, K., & Houran, J. (2013). Rethinking a glass ceiling in the hospitality industry. *Cornell Hospitality Quarterly*, 54(3), 230-239.
- Borkowski, S. C. & Ugras, Y. (1998). Business students and ethics: A meta-analysis. *Journal of Business Ethics*, 17, 1117 - 1127. DOI: I0.1023/ A: I005748725174
- Brescoll, V. L. (2016). Leading with their hearts? How gender stereotypes of emotion lead to biased evaluations of female leaders. *The Leadership Quarterly*, 27(3), 415-428.
- Bui, H.T.M., Zeng, Y., & Higgs, M. (2017). The role of person-job fit in the relationship between transformational leadership and job engagement, *Journal of Managerial Psychology*, 32(5), 373-386.



- Buitendach, J. H., & Rothmann, S. (2009). The validation of the Minnesota Job Satisfaction Questionnaire in selected organisations in South Africa. *SA Journal of Human Resource Management*, 7(1), 1-8.
- Bujang, M A. & Baharum, N. (2016) Sample Size Guideline for Correlation Analysis.
- Cameron, K. S., & Whetten, D. A. (1983). *Organizational effectiveness: one model or several? In Organizational Effectiveness* (pp. 1-24). Academic Press.
- Cameron, K., (1980). Critical questions in assessing organizational effectiveness. *Organizational Dynamics*, 4(2), 66-80.
- Carli, L. & Eagly, A. (2011). Gender and leadership. In A. Bryman, D. Collinson, K. Grint, B. Jackson, and M. Uhl Bien, (Eds.), *The sugar Handbook of Leadership*. 269-85. SAGE.
- Carli, L. L., and Eagly, A. H. (2001). Gender, Hierarchy, and Leadership: An Introduction. *Journal of Social Issues*, 57, 629– 636.
- Charlton, E. (2018). Hiring More Female Leaders is Good for Profit. December 2018, *World Economic Forum Report*.  
<https://www.weforum.org/agenda/2018/12/hiring-more-female-leaders-boosts-companies-profits-here-s-the-evidence/>
- Chelladurai, P, (1987). Multidimensionality and multiple perspectives of organizational effectiveness. *Journal of Sport Management*, 1, 37-47.

- Chelladurai, P. & Haggerty, T.R. (1991). Measures of organizational effectiveness in Canadian national sport organizations. *Canadian Journal of Sport Science*, 16, 126-133
- Chelladurai, P., Szyszlo, M., & Haggerty, T. R. (1987). Systems-based dimensions of effectiveness: The case of national sport organizations. *Canadian Journal of Sport Science*, 12, 111-119.
- Chizema, A., Kamuriwo, D. S., & Shinozawa, Y. (2015). Women on corporate boards around the world: Triggers and barriers. *The Leadership Quarterly*, 26(6), 1051-1065.
- Christiansen, L., Lin, H., Pereira, J., Topalova, P. B., & Turk-Ariss, R. (2016). Gender diversity in senior positions and firm performance: Evidence from Europe. *IMF Working Paper*, WP/16/50, 1 – 29.
- Christine Newcomb (2017), Women in Leadership: A comprehensive case study of successful leadership. *University of Massachusetts, Boston*. Retrieved from [http://scholarworks.umb.edu/honors\\_theses](http://scholarworks.umb.edu/honors_theses)
- Connolly, T., Conlon, E. J., & Deutsch, S. J, 1980. Organizational effectiveness: a multiple-constituency approach. *Academy of Management Review*, 5, 211-217.
- Coolican, H. (2017). *Research methods and statistics in psychology*. Psychology Press.
- Crossman, A. (2019a, November 13). Pilot Study in Research. Retrieved from <https://www.thoughtco.com/pilot-study-3026449>

- Crossman, A. (2019b, June 30). Understanding Levels and Scales of Measurement in Sociology. Retrieved from <https://www.thoughtco.com/levels-of-measurement-3026703>
- Cruz, E. (2016). *The Gap Between Women and Men in STEM*. July 2016, LinkedIn Talent Blog Publication. <https://business.linkedin.com/talent-solutions/blog/trends-and-research/2016/the-gap-between-women-vs-men-in-stem-and-what-you-can-do-about-it-infographic>
- Daft, R.L. (1998). *Organization Theory and Design* 6th Ed. South-Western College Publishing Cincinnati
- Danish, R. Q., & Usman, A. (2010). Impact of reward and recognition on job satisfaction and motivation: An empirical study from Pakistan. *International journal of business and management*, 5(2), 159.
- Datta, S., Doan, T., & Toscano, F. (2021). Top executive gender, board gender diversity, and financing decisions: Evidence from debt structure choice. *Journal of Banking & Finance*, 125, 106070.
- Dattalo P. (2013). Multivariate Analysis of Covariance. In: Analysis of Multiple Dependent Variables, Oxford Scholarship  
Online.DOI:10.1093/acprof:oso/9780199773596.001.0001
- Dehejia, R. (2015). Experimental and Non-Experimental Methods in Development Economics: A Porous Dialectic. *JGD*, 6(1), 47–69
- Desvaux, G., & Devillard, S. (2008). Female Leadership, a Competitive Edge for the Future. *Women matter*, 1(2), 1-23.

- Dezsö, C. L. & Ross, D. G. (2012). Does female representation in top management improve firm performance? A panel data investigation. *Strategic Management Journal*, 33: 1072–1089.
- Djimeu, E. W., & Houndolo, D. G. (2016). Power calculation for causal inference in social science: sample size and minimum detectable effect determination. *Journal of Development Effectiveness*, 8(4), 508-527.  
DOI:10.1080/19439342.2016.1244555
- Dobre, O. I. (2013). Employee motivation and organizational performance. *Review of applied socio-economic research*, 5(1).
- Domingo, P., Holmes, R., O'neil, T., Jones, N., Bird, K., Larson, A., Presler-Marshall, E., & Valters, C. (2015). *Women's voice and leadership in decision-making*. London: ODI.
- Donwa, P. A., Mgbame, C. O., & Julius, O. M. (2015). Corruption in the oil and gas industry: Implication for economic growth. *Nigerian Chapter of Arabian Journal of Business and Management Review*, 62(2468), 1-16.
- Eagly, A. H. (2013). *Gender and Work: Challenging Conventional Wisdom*. Harvard Business School.
- Eagly, A. H., & Carli, L. L. (2003). The female leadership advantage: An evaluation of the evidence. *The leadership quarterly*, 14(6), 807-834.
- Eagly, A. H., & M. C. Johannesen-Schmidt (2001). The Leadership Styles of Women and Men. *Journal of Social Issues*, 57, 781–797.

- Eagly, A. H., Gartzia, L., & Carli, L. L. (2014). Female advantage: Revisited. In S. Kumra, R. Simpson, & R. J. Burke (Eds.), *The Oxford handbook of gender in organizations* (pp. 153-174). New York, NY, US: Oxford University Press.
- Eagly, A. H., Johannesen-Schmidt, M. C., & van Engen, M. (2003). Transformational, transactional, and laissez faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, 129(4), 569-591. DOI:10.1037/0033-2909.129.4.569
- Eagly, A. H., Karau, S. J. & Makhijani, M. G. (1995). Gender and the effectiveness of leaders: A meta-analysis. *Psychological Bulletin*, 117: 125–145.
- Eagly, A. H., Wood, W., & Diekmann, A. B. (2000). Social role theory of sex differences and similarities: A current appraisal. *The developmental social psychology of gender*, 12, 174.
- Elprana, G., Felfe, J., Stiehl, S., & Gatzka, M. (2015). Exploring the sex difference in affective motivation to lead. *Journal of Personnel Psychology*, 14(3), 142–152. DOI: 10.1027/1866-5888/a000137
- Entwistle, N. (1987). Motivation to learn, conceptualization and practices. *British Journal of Education Studies*, 35(2), 129-148.
- Erkutlu, H. (2008). The impact of transformational leadership on organizational and leadership effectiveness: The Turkish case. *Journal of management development*, 27(7), 708-726.

- Etikan, I. & Bala, K. (2017). Sampling and sampling methods. *Biometrics & Biostatistics International Journal*, 5(6), 215–217.
- Etzioni, A. (1960). Two approaches to organizational analysis: A critique and a suggestion. *Administrative Science Quarterly*, 5(2), 257-278.
- Eydi, H. (2015). Analysis of Organizational Effectiveness Approaches (Case Study: Sporting Organizations Field). *International Journal of Management Science*, 2(3), 1-8.
- Fapohunda, T. M. (2018). The Glass Ceiling and Women's Career Advancement. *BVIMSR's Journal of Management Research*, 10(1), 21-30.
- Farey, P. (1993). Mapping the Leader/Manager. *Management Education and Development*, 24(2), 109-121.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 4, 1149-1160.
- Finch W. H. (2016). *Comparison of Multivariate Means Across Groups with Ordinals Dependent Variables: A Monte Carlo Simulation Study*. *Frontiers in Applied Mathematics and Statistics*,
- Fischbach, A., Lichtenthaler, P. W., & Horstmann, N. (2015). Leadership and Gender Stereotyping of Emotions. *Journal of Personnel Psychology*, 14(3), 153–162.  
DOI: 10.1027/1866-5888/a000136

- Fitch, K. & Agrawal, S. (2015). Female Boss Are More Engaging Than Male Boss. *Gallup Business Journal*. Retrieved from <https://news.gallup.com/businessjournal/183026/female-bosses-engaging-male-bosses.aspx>
- Flabbi, L., Macis, M., Moro, A., & Schivardi, F. (2019). Do female executives make a difference? The impact of female leadership on gender gaps and firm performance. *The Economic Journal*, 129(622), 2390-2423.
- Franke, G. R.; Crown, D. F.; & Spake, D. F. (1997). Gender differences in ethical perceptions of business practices: A social role theory perspective. *Journal of Applied Psychology*, 82, 920-934.
- Frankfort-Nachmias, C., Nachmias, D., & DeWaard, J. (2015). *Research methods in the social sciences* (8th ed.). New York: Worth.
- Gardiner, M., & Tiggemann, M. (1999). Gender differences in leadership style, job stress and mental health in male- and female-dominated industries. *Journal of Occupational & Organizational Psychology*, 72, 301-315
- Gino, F. (2017). *Women May Find Management Positions Less Desirable*. *Behavior and Society*. Retrieved from <https://www.scientificamerican.com/article/>
- Gipson A.N, Pfaff D.L., Mendelsohn D.B., Catenacci L.T., and Burke W.W. (2017). *The Journal of Applied Behavioral Science* 2017, 53(1), 32 –65.

- Global Government Forum (2017). *Women Leaders Index – Gender Equality Study*.  
<https://www.globalgovernmentforum.com/women-leaders-index-gender-equality-2017/>
- Goethals, G. R., & Hoyt, C. L. (2017). *Women and leadership: History, theories, and case studies*. Berkshire Publishing Group LLC.
- Gompers, P. & Kovvail, S. (2018), The Other Diversity Dividends. July – August, 2018  
*Harvard Business Review*. <https://hbr.org/2018/07/the-other-diversity-dividend>
- Goodman, P. S., & Pennings, J. M. (1977). *New perspectives on organizational effectiveness* (pp. 1-12). San Francisco: Jossey-Bass.
- Green, S.B. & Salkind, N.J. (2014). *Using SPSS for Windows and Macintosh: Analyzing and Understanding Data* (7th ed.). New Jersey: Pearson.
- Grissom, J. A., Nicholson-Crotty, J., & Keiser, L. (2012). Does my boss's gender matter? Explaining job satisfaction and employee turnover in the public sector. *Journal of Public Administration Research and Theory*, 22(4), 649-673.
- Grove-Heuser, J. R. (2016). Women as transformational leaders: Learning to lead in the community college. *Dissertations and Theses*, Portland State University.
- Grunberg, M.M. (1984). *Satisfaction at Work in Psychological and Social Problems*. Southern Minors University Press
- Gundry D. E. and Deterding C. S. (2018). Validity Threats in Quantitative Data Collection with Games: A Narrative Survey. *Simulation & Gaming*. 50(3), 302-328. Doi: <https://doi.org/10.1177/1046878118805515>



- Hardle, W. K. & Simar, L. (2015). *Applied Multivariate Statistical Analysis 4* (New York: Springer-Heidelberg).
- Hartnell, C. A., Ou, A. Y., & Kinicki, A. (2011). Organizational culture and organizational effectiveness: A meta-analytic investigation of the competing values framework's theoretical suppositions. *Journal of applied psychology*, 96(4), 677.
- Heilman, M.E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues*, 57(4), 657-674.
- Herman, R. and Renz, D. (2004). Doing things right: effectiveness in local non-profit organizations, a panel study. *Public Administration Review*, 64, 694-704.
- Hogan, R., & Kaiser, R.B. (2005). What we know about leadership. *Review of General Psychology*, 9(2), 169-180.
- Howitt, D., & Cramer, D. (2017). *Research methods in psychology (5<sup>th</sup> ed)*. Harlow: Pearson.
- Huising, R. (2014). To Hive or to Hold? Producing Professional Authority through Scut Work. *Administrative Science Quarterly*, 60, 263–299.
- ICLG.Com: Nigeria: OIL & GAS REGULATION 2019: <https://iclg.com/practice-areas/oil-and-gas-laws-and-regulations/nigeria>
- Ignatius, A. (2013). Now is our time. *Harvard Business Review*, 91(4), 84-88.

Ikegbu, E.A. & Odey, M. (2018). Gender Sensitivity and Leadership Style in Nigeria.

*Global Journal of Research and Review*, ISSN239-8854, 5(2:7), 1-6. DOI:

10.21767/2393-8854.100036

IMF (2016). *Gender Diversity in Senior Positions and Firm Performance: Evidence from*

*Europe*. Retrieved from

<https://www.imf.org/external/pubs/ft/wp/2016/wp1650.pdf>

Ismail, M., & Ibrahim, M. (2008). Barriers to career progression faced by women: An

Evidence from a Malaysian multinational oil company. *Gender in Management:*

*International Journal*, 23(1), 51-66.

James L. Price (1972), The study of organizational effectiveness. *The sociological*

*quarterly*, 13(1), 3-15.

Muczyk, J. P. (2004). A systems approach to organizational effectiveness: The alignment

of critical organizational dimensions with selected business/competitive

strategies. *Journal of Comparative International Management*, 7(1).

Joshi, R. (2017), *Does Gender Diversity Improve Firm Performance*. Retrieved from

[https://www.undp.org/content/dam/india/docs/poverty/JustJobs\\_Disha\\_report.pdf](https://www.undp.org/content/dam/india/docs/poverty/JustJobs_Disha_report.pdf)

Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A

meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5),

755-768. DOI:10.1037/0021-9010.89.5.755

- Kaiser, R. B., & Wallace, W. T. (2016). Gender bias and substantive differences in ratings of leadership behavior: Toward a new narrative. *Consulting Psychology Journal: Practice and Research*, 68(1), 72-98.
- Kamalian, A. R., Yaghoubi, N. M., & Moloudi, J., (2010). Survey of Relationship between Organizational Justice and Empowerment (A Case Study). *European Journal of Economics, Finance and Administrative Sciences*, 24, 165-171.
- Kanter, R. M. (1977). *Work and Family in the United States: A Critical Review and Agenda for Research and Policy*. Russell Sage Foundation.
- Kataria, A., Rastogi, R., & Garg, P. (2013). Organizational effectiveness as a function of employee engagement. *South Asian Journal of Management*, 20(4), 56.
- Kellogg, K. C. (2010). Hot Lights and Cold Steel: Cultural and Political Toolkits for Practice Change in Surgery. *Organization Science*, 22: 482–502.
- Kent, T.W., Blair, C.A., & Rudd, H.F. (2010). Gender Difference and Transformational Leadership Behavior: Do booth German Men and Women Lead the same way. *International Journal of Leadership Studies*, 6 (1).
- Kesmodel, U. S. (2018). Information bias in epidemiological studies with a special focus on obstetrics and gynaecology. *Acta obstetricia et Gynecologica Scandinavica*, 97(4), 417-423.
- Khorsan, R., & Crawford, C. (2014). External validity and model validity: a conceptual approach for systematic review methodology. *Evidence-Based Complementary and Alternative Medicine*, 2014.

- Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., De Vet, H. C., & Van der Beek, A. J. (2014). Construct validity of the individual work performance questionnaire. *Journal of occupational and environmental medicine*, 56(3), 331-337.
- Koyuncu, M., Burke, R.J. & Fiksenbaum, L. (2006). Work engagement among women managers and professionals in a Turkish bank. *Equal Opportunities International*, 25(4), 299–310.
- Kwaku Ohemeng, F. L., & Adusah-Karikari, A. (2015). Breaking through the glass ceiling: Strategies to enhance the advancement of women in Ghana's Public Service. *Journal of Asian and African studies*, 50(3), 359-379.
- Kyriakidou, O. (2012). Gender, management and leadership. *Equality, Diversity and Inclusion: An International Journal*, 31(1), 4-9.
- Lazear, E. P., Shaw, K. L. & Stanton, C. T. (2015). The Value of Bosses. *Journal of Labor Economics*, 33: 823–861.
- Leatherdale, S. T. (2018). Natural Experiment Methodology for Research: A Review of how Different Methods can Support Real World Research. *International Journal of Social Research Methodology*, 22:1, 19-35, DOI: 10.1080/13645579.2018.1488449
- Leavy, P. (2017). *Research design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches*. Guilford Publications.
- Lincoln, A. (2012). Nature of leadership practices of Nigerian female entrepreneurs. *International Journal of Business and Social Science*, 3(10).

- Locke, E. A. (1984). Job satisfaction. In M. Gruneberg, & T. Wall (Eds.), *Social psychology and organizational behaviour*. New York: John Wiley and Sons.
- Locke, E. A., & Latham, G. P. (1990). Work motivation and satisfaction: Light at the end of the tunnel. *Psychological science*, 1(4), 240-246.
- Malik, M.E., Ghafoor, M.M. and Naseer, S. (2011). Organizational Effectiveness: A Case Study of Telecomm and Banking Sector of Pakistan. *Far East Journal of Psychology and Business*, 2, 37-38.
- Marijani, R. Y. M. (2016). The Validation of the Minnesota Job Satisfaction Questionnaire (MSQ) in Tanzania: A Case of Tanzania Public Service College. *International Journal of African and Asian Studies*, 23, 162-172.
- Mba, M. K. (2019). *Evaluating the Effectiveness of Public Sector Interventions in Entrepreneurship Development in Nigeria* (Doctoral dissertation, Walden University). Retrieved from <https://scholarworks.waldenu.edu/dissertations/6615/>
- Mohajan, H. K. (2017). Two criteria for good measurements in research: Validity and reliability. *Annals of Spiru Haret University. Economic Series*, 17(4), 59-82.
- Moon-Gi, S. (2004). Organizational Effectiveness in the IT Industry: The Case of South Korea. *Development and Society*, 33(2), 207-227.
- Moorehead, G., & Griffin, R. W. (2014). *Organizational behavior: Managing people and organizations*. South-Western/Cengage Learning.

- National Health Research Ethics Committee of Nigeria (2007). *National Code of Health Research Ethics*. Retrieved from <http://nhrec.net/download-nchre/>
- Neuman, W. L. (2014). *Social Research Methods: Qualitative and Quantitative Approaches: Pearson New International Edition*. Pearson Education Limited.
- Nicholls, J. R. (1988). Meta-Leadership in Organisations: Applying Burns' Political Concept in Transforming Leadership. *Leadership and Organisation Development Journal*, 9(2),17-22
- Noland, M., Moran, T., & Kotschwar, B. R. (2016). Is gender diversity profitable? Evidence from a global survey. *Peterson Institute for International Economics Working Paper*, (16-3).
- Northouse, P. G. (2016). *Leadership: Theory and practice* (7th ed.). Thousand Oaks: CA: Sage Publications.
- Nwuzoh, I. (2018). *25 Top oil and gas companies in Nigeria*. Retrieved from <https://infoguidenigeria.com/oil-and-gas-companies/>
- Oba, V. C., & Fodio, M. I. (2013). Boards' gender mix as a predictor of financial performance in Nigeria: an empirical study. *International Journal of Economics and Finance*, 5(2), 170-178.
- Ogunleye, A. J., & Babatola, O. D. (2013). Gender is a psychological issue. *International Journal of Humanities and Social Science Invention*, 2 (3), 40-44
- Ogunleye, A. J., & Osekita, D. A. (2016). Effect of Job Status, Gender, and Employees' Achievement Motivation Behavior on Work Performance: a Case Study of

- Selected Local Government Employees in Ekiti State, Nigeria. *European Scientific Journal, ESJ*, 12(26).
- Oji, B.O. (2001). *The Effect of Strategic Management on Organizational Effectiveness: A Study of Indigenous Oil Serving Firms in P.H.* An Unpublish MBA Thesis of the FMS University of Port Harcourt.
- Okafor, E. E., & Akokuwebe, M. E. (2015). Women and leadership in Nigeria: Challenges and prospects. *Developing Country Studies*, 5(4), 1 - 10.
- Oke, T. (2018). *Dearth of Female Nigerian Leaders*. The Punch newspapers. Retrieved from <https://punchng.com/dearth-of-female-Nigeria-leaders/>
- Olorunsola, E.O. (2010). Job Satisfaction and Gender Factor of Adm staff in South West Nigeria Universities. *Contemporary Issues in Education Research*, 3(10).
- Olufuunke, A. J. (2014). Women's Political Participation at the Local Government Level: A Case Study of Akoko South West Local Government Area, Ondo State, Nigeria. *European Scientific Journal, ESJ*, 10(10).
- Omoriegbe, U. (2019). Nigeria's Petroleum Sector and GDP: The Missing Oil Refining Link. *J. Adv. Econ. Financ*, 4(4).
- Ong, I.F. & Tan, E.M. (2015). Employees' Perception on Leadership Effectiveness of Female Leaders in Work Organizations. *AFBE Journal*, 6(2).
- Oosthuizen, T. F.J. (2001). Motivation influencing worker performance in a technical division of Telkom SA. *Acta Commercii*, 1, 19-30.

- Organ D.W. (1994). Personality and organizational citizenship behavior. *Journal of Management*, 20, 465-478.
- Pafford, S. & Schaefer, T. (2017). Women at Work and Business Leadership. *Journal of Organisational Culture, Communications and Conflict*, 21(1).
- Papadimitriou, D., & Taylor, R, 2000. Organizational effectiveness of Hellenic national sports organizations: A multiple constituency approach. *Sport Management Review*, 3: 23-46.
- Paustian-Underdahl, S. C., Walker, L. S., & Woehr, D. J. (2014). Gender and perceptions of leadership effectiveness: A meta-analysis of contextual moderators. *Journal of Applied Psychology*, 99(6), 1129.
- Pelham, B. W., & Blanton, H. (2003). *Conducting research in psychology: Measuring the weight of smoke* (2nd ed.). Toronto: Thompson/Wadsworth.
- Pfeffer, J, (1977). Usefulness of the concept. In P. S. Goodman & J. M. Pennings (Eds.), *New perspectives on organizational effectiveness*. (pp. 132-143).
- Pfeffer, J. & Salancik, G.R. (2016). External Control of Organizations: A Resource Dependent Perspective. In J.M. Shafritz, J.S. Ott, & Y.S. Jang (Eds.), *Classics of Organization Theory*. (8th ed) (pp. 389 – 400). Belmont, CA: Wadsworth, Cengage Learning.\
- Pirtskhalaishvili, D., Paresashvili, N., & Kulinich, T. (2021). The gender aspects of career development and leadership in organizations. *Journal of Eastern European and Central Asian Research (JEECAR)*, 8(2), 255-266.



- Pradeep, D. D., & Prabhu, N. R. V. (2011). The relationship between effective leadership and employee performance. *Journal of Advancements in Information Technology*, 20, 198-207.
- Pratt, T., F. T. Cullen, K. Blevins, L. Daigle, and T. D. Madensen (2006). The Empirical Status of Deterrence Theory: A Meta-Analysis. *Taking Stock*, 15, 367–395.
- Predescu, S. & Chen, K. (2018), *Data Reveals How the Percentage of Women has Changed over the Past 15 years*. July 2018 LinkedIn Talent blog Publication.  
<https://business.linkedin.com/talent-solutions/blog/trends-and-research/2017/data-reveals-how-the-percentage-of-women-in-leadership-has-changed-over-the-past-15-years>
- Price, J. L. (1968). The study of organizational effectiveness. *Sociological Quarterly*, 13, 3-15.
- Quinn, R. E., & Rohrbaugh, J., (1981). A competing values approach to organizational effectiveness. *Public Productivity Review*, 5, 122-140.
- Raffo, D. M., Clark, L. A., & Arik, M. (2016). Strategic responses of non-profit organizations to the economic crisis: Examining through the lenses of resource dependency and resourced-based view theories. *Academy of Strategic Management Journal*, 16(1), 48-70.
- Ramos, M. R., Carolino, E., Oliveira, T., & Bicho, M. (2012, September). Two-way MANCOVA: An application to public health. *In AIP Conference Proceedings* (Vol. 1479, No. 1, pp. 1716-1719). American Institute of Physics.

- Ranganathan, A., & Shivaram, R. (2017). *Leading by Doing: How Female Supervisors Motivate Worker Productivity through Subordinate Scut Work* (No. RePEc: ecl: stabus: 3366).
- Rayalu, G M., Ravisankar, J. & Mythili, Gy. (2017). MANCOVA for One Way Classification with Homogeneity of Regression Coefficient Vectors. *IOP Conf. Series: Materials Science and Engineering*, (263) 042134.
- Reuvers, M., Van Engen, M. L., Vinkenbug, C. J., & Wilson□Evered, E. (2008). Transformational leadership and innovative work behaviour: Exploring the relevance of gender differences. *Creativity and Innovation Management*, 17(3), 227-244.
- Rhalid, K., Salim, H.M. & Locke, S.P. (2011). The Impact of Rewards and Motivation on Job Satisfaction in Water Utility Industry. *International Conference on Financial Management & Economics*, Vol. II IPEDR, LACSIT Press, Singapore.
- Rhode, D. L., & Packel, A. K. (2014). Diversity on corporate boards: How much difference does difference make. *Del. J. Corp. L.*, 39, 377.
- Rick, K., Marten, I., & von Lonski, U. (2017). *Untapped Reserves: Promoting Gender Balance in the Oil and Gas*. July 2017 report.
- Rudman, L. A., & P. Glick (1999). Feminized management and backlash toward agentic women: The hidden costs to women of a kinder, gentler image of middle managers. *Journal of Personality and Social Psychology*, 77, 1004–1010.

Ryan, M. K., Haslam, S. A., Morgenroth, T., Rink, F., Stoker, J., & Peters, K. (2016).

Getting on top of the glass cliff: Reviewing a decade of evidence, explanations, and impact. *The Leadership Quarterly*, 27(3), 446-455.

Saks A.M (2008). The meaning and bleeding of employee engagement. How muddy is the water? *Industrial and Organizational Psychology*, 1, 40-43.

Saleh, M. W., Zaid, M. A., Shurafa, R., Maigoshi, Z. S., Mansour, M., & Zaid, A. (2021).

Does board gender enhance Palestinian firm performance? The moderating role of corporate social responsibility. *Corporate Governance: The International Journal of Business in Society*.

Schandwick (2016). *Gender Forward Pioneer Index: World's Most Reputable*

*Companies Have More Women in Senior Management*. Retrieved from

<https://www.webershandwick.com/news/gender-forward-pioneer-index-most-reputable-companies-have-more-senior-wome/>

Schaufeli, W. B., & Bakker, A. B., & Salanova, M. (2006). The measurement of work

engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66, 701-716.

Schaufeli, W.B. & Bakker, A.B. (2004). Job demands, job resources and their

relationships with burnout and engagement. *Journal of Organizational Behavior*, 25, 293-315.

- Schwab, A., Werbel, J., Hofman, H. & Henriques, P. (2016). Managerial Gender Diversity and Firm Performance: An Integration of Different Theoretical Perspectives. *Group and Organization Management*, Vol. 41(1), 5-31.
- Schwartz, S. H. & Rubel, T, (2005). Sex differences in value priorities: Cross-cultural and multimethod studies. *Journal of personality and social psychology*, 89, 1010-1028.
- Scott, J., Dakin, R., Heller, K., & Eftimie, A. (2013). Extracting lessons on gender in the oil and gas sector: A survey and analysis of the gendered impacts of onshore oil and gas production in three developing countries. *World Bank Oil, Gas, and Mining Unit Working Paper*, Extractive Industries for Development Series No.28.
- Sidani, Y.M., Konrad, A., & Karam, C.M. (2015). From female leadership advantage to female leadership deficit: A developing country perspective. *Career Development International*, 20(3), 273-292.
- Smith, J. E., Ortiz, C. A., Buhbe, M. T., & van Vugt, M. (2018). Obstacles and opportunities for female leadership in mammalian societies: A comparative perspective. *The Leadership Quarterly*. Doi:10.1016/j.leaqua.2018.09.005
- Smith, N., Smith, V., & Verner, M. (2006). Do women in top management affect firm performance? A panel study of 2,500 Danish firms. *International Journal of Productivity and Performance Management*, 55: 569–593.

- Sojo, V. E., Wood, R. E., Wood, S. A., & Wheeler, M. A. (2016). Reporting requirements, targets, and quotas for women in leadership. *The Leadership Quarterly*, 27(3), 519-536.
- Sowa, J. E., Selden, S. C., & Sandfort, J. R. (2004). No Longer Immeasurable? A Multidimensional Integrated Model of Nonprofit Organizational Effectiveness. *Nonprofit and Voluntary Sector Quarterly*, 33(4): 711-728.
- Stevens, J. P. (2009). *Canonical correlation*. In *Applied multivariate statistics for the social sciences* (pp. 395–411). New York: Routledge.
- Strøm, R. Ø., D'Espallier, B., & Mersland, R. (2014). Female leadership, performance, and governance in microfinance institutions. *Journal of Banking & Finance*, 42, 60-75.
- Stutzman, N. (2017). *Exploring the relationship between personality and performance: Does personality predict performance for female leaders?* (Order No. 10274139). Available from ProQuest Dissertations & Theses Global. (1896586745).
- Syarnubi, A., Sembiring, R. A., Siswaya, T., & Zuraida, R. (2018, December). Performance, productivity, and safety & health among employee of oil & gas company in Qatar. In *IOP Conference Series: Earth and Environmental Science* (Vol. 195, No. 1, p. 012075). IOP Publishing.
- Tabachnick, B.G. & Fidell, L.S. (2012). *Using multivariate statistics (6th ed.)*. Boston, MA: Pearson.

- Turner, L. (2009). Gender diversity and innovative performance. *Int. J. Innovation and Sustainable Development*, 4(2/3), 123–134
- Vail, S.E. (1986). *Organizational effectiveness and national sport governing bodies: a multiple constituency approach*. University of Ottawa (Canada).
- van Knippenberg, D., & S. B. Sitkin (2013). A Critical Assessment of Charismatic—Transformational Leadership Research: Back to the Drawing Board? *Academy of Management Annals*, 7: 1.
- Vial, A. C., Napier, J. L., & Brescoll, V. L. (2016). A bed of thorns: Female leaders and the self-reinforcing cycle of illegitimacy. *The Leadership Quarterly*, 27(3), 400-414.
- Wallace, W. T. (2017). The journey for women in the transition to senior leadership. *People & Strategy*, 40(1), 34-38.
- Wegener, D. T., & Fabrigar, L. R. (2000). Analysis and design for nonexperimental data: Addressing causal and noncausal hypotheses. In: H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 412—150). New York: Cambridge University Press
- Wei, Y.C, Han T.S., & Hus I.C. (2010). High performance HR practice and OCB: A Cross-Level Investigation of a Casual Path. *The International Journal of Human Resource Management*, 21(10), 1631-1648.

- Weick, K.E. & Draft, R.L. (1982). The Effectiveness of Interpretation System. In Kim S. Cameron and David S. Whetten, Eds. *Organizational Effectiveness: A comparison of multiple models* (New York: Academic Press)
- Weiss, D. J., Dawis, R. V., & England, G. W. (1967). Manual for the Minnesota satisfaction questionnaire. *Minnesota studies in vocational rehabilitation*.
- Williams, C. L., Kilanski, K., & Muller, C. (2014). Corporate diversity programs and gender inequality in the oil and gas industry. *Work and Occupations*, 41(4), 440-476.
- Wright, T.A. & Cropanzano, R. (2004). The Role of Psychological Well-Being in Job Performance: A Fresh Look at an Age-Old Quest. *Organizational Dynamics*, 33(4), 338 – 351.
- Zhuwao, S., Ngirande, H., Ndlovu, W., & Setati, S. T. (2019). Gender diversity, ethnic diversity and employee performance in a South African higher education institution. *SA Journal of Human Resource Management*, 17(1), 1-8.
- Zhuwao, S., Ngirande, H., Ndlovu, W., & Setati, S.T. (2019). Gender diversity, ethnic diversity and employee performance in a South African higher education institution. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronsbestuur*, 17(0), a1061. <https://doi.org/10.4102/sajhrm.v17i0.1061>
- Zoogah, D. B., Peng, M. W., & Woldu, H. (2015). Institutions, resources, and organizational effectiveness in Africa. *Academy of Management Perspectives*,

29(1), 7-31.

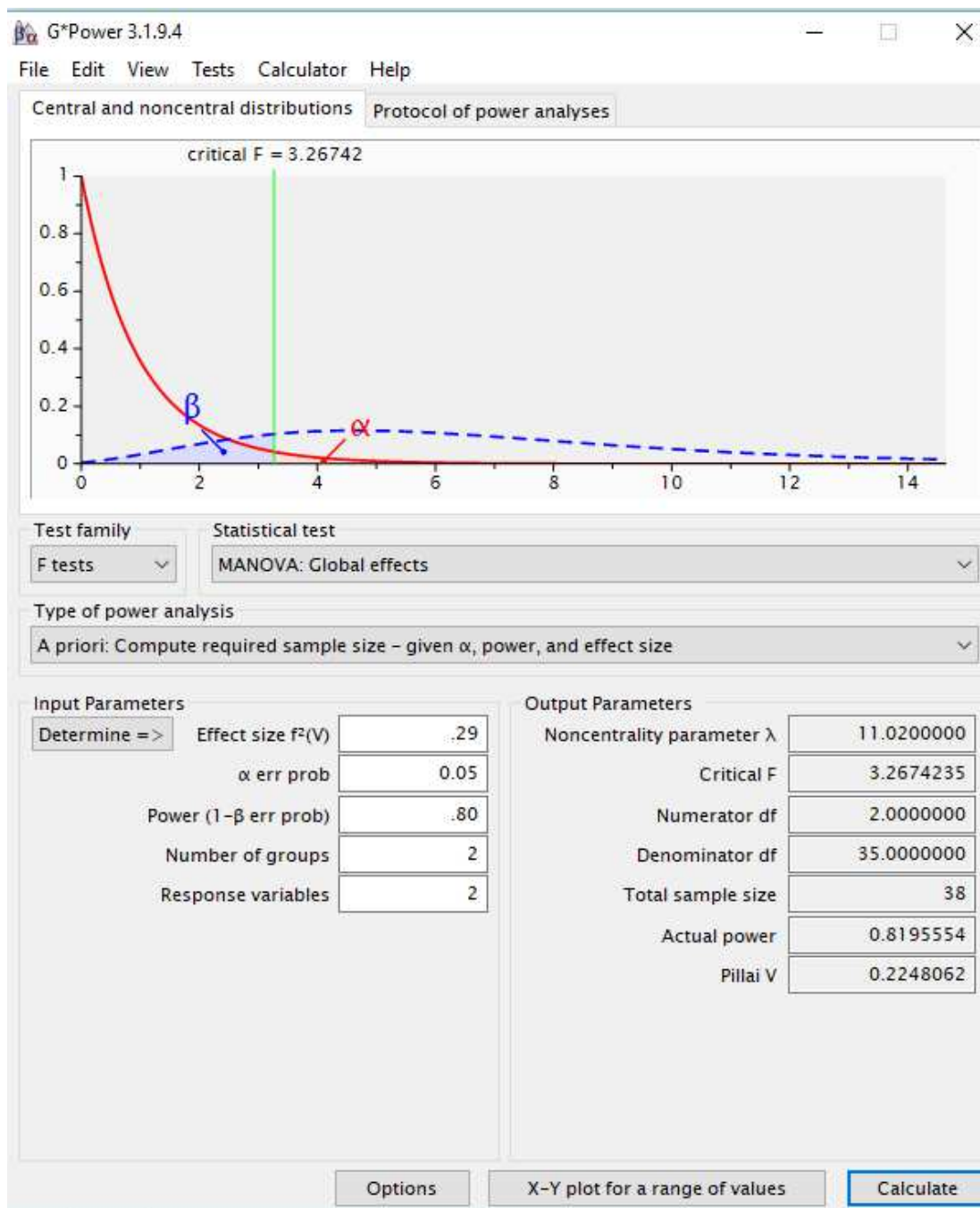
- Dappa, K., Bhatti, F., & Aljarah, A. (2019). A study on the effect of transformational leadership on job satisfaction: The role of gender, perceived organizational politics and perceived organizational commitment. *Management Science Letters*, 9(6), 823-834.
- Eagly, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta-analysis. *Psychological bulletin*, 108(2), 233.
- Sauermann, J. (2016). Performance measures and worker productivity. *IZA World of Labor*. doi: 10.15185/izawol.260
- Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., Lerner, D., de Vet, H. C., & van der Beek, A. J. (2016). Cross-cultural adaptation of the individual work performance questionnaire. *Work*, 53(3), 609-619.
- Dåderman, A. M., Ingelgård, A., & Koopmans, L. (2018). Cross-cultural adaptation, from dutch to swedish language, of the individual work performance questionnaire. *Work*, (Preprint), 1-13.
- Koopmans, L., Bernaards, C., Hildebrandt, V., van Buuren, S., van der Beek, A. J., & de Vet, H. C. (2013). Development of an individual work performance questionnaire. *International journal of productivity and performance management*, 62(1), 6-28  
<http://dx.doi.org/10.1108/17410401311285273>
- Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., Schaufeli, W. B., de Vet Henrica, C. W., & van der Beek, A. J. (2011). Conceptual frameworks of individual work performance: a systematic review. *Journal of occupational and environmental*



*medicine*, 53(8), 856-866.

Widyastuti, T., & Hidayat, R. (2018). Adaptation of Individual Work Performance Questionnaire (IWPQ) into Bahasa Indonesia. *International Journal of Research Studies in Psychology*, 7(2), 101-112.

## Appendix A: G\*Power Analysis



## Appendix B: Participants Informed Consent Form

**CONSENT FORM**

You are invited to take part in a research study to *establish the effect of female leaders on organizational effectiveness in the Nigeria oil and gas sector*. The researcher is inviting you as an employee in the Nigeria oil and gas sector to participate in the study. I obtained your contact information from the HR Department of your organization. This form is part of a process called “informed consent” to allow you to understand this study before deciding whether to take part. Please, note that I will need at least 50 completed responses for this study. This study is being conducted by a researcher named Kadilo Badom, who is a Ph.D. student at Walden University, U.S.A.

**Background Information:**

The purpose of this study is to examine whether female and male leaders differ in terms of subordinate job satisfaction and performance in the Nigerian oil and gas sector.

**Procedures:**

If you agree to be in this study, you will be asked to:

- Respond to a questionnaire on your job satisfaction level and performance/productivity.
- Respond to basic demographic questions about yourself.

The survey will take about fifteen (15) minutes to complete. See sample questions at the end of this form before proceeding with the survey.

**Voluntary Nature of the Study:**

This study is voluntary. You are free to accept or turn down the invitation. No one in your organization including your supervisor(s) will treat you differently if you decide not to be in the study. If you decide to be in the study now, you can still change your mind later. You may stop at any time.

**Risks and Benefits of Being in the Study:**

Being in this type of study involves some risk of the minor discomforts that you encounter in daily life, such as fatigue, stress or becoming upset. Being in this study would not pose a risk to your safety, wellbeing, or job security.

This study asks personal questions concerning your opinion of your supervisor and workplace, your job satisfaction and your opinion of your own performance. For this reason, please take the survey in a private location away from your workplace on a device owned and maintained only by you. Please note that this survey is completely anonymous meaning nobody – not even the researcher – will be able to know who participated or connect any survey responses to any specific individual. Please feel free to skip any questions you do not want to answer.

There are no direct benefits to participants in this study. However, the ability to gauge employee job satisfaction and performance under male and female supervision will help the Nigerian oil and gas industry understand if there are significant employee differences based on leadership gender in the industry hierarchy.

**Payment:**

There are no costs for being in this study. You will not receive any compensation for taking part in this study.

### Privacy:

The study is completely anonymous; therefore, you are not required to provide any information in the questionnaire that will reveal your identity. The results of this study will not share any information that will reveal an individual participant. Details that might identify participants, such as the participating organizations, also will not be shared. The researcher will not use your personal information (which is not required in the responses) for any purpose outside of this research project. Data will be kept secure by the researcher in a well-protected computer system away from unauthorized access. Data will be kept for at least five years, as required by the university.

### Dissemination:

Please, note that the researcher will provide a 1-2-page summary of the study findings through the Nigerian women in business website (<https://wimbiz.org/>) and will also share the summary with the HR department of the your organization for further dissemination to all employees.

### Contacts and Questions:

If you have any questions regarding this study you may contact the researcher via phone on 0803 960 3067 or email: [kadilo.badom@waldenu.edu](mailto:kadilo.badom@waldenu.edu) If you want to talk privately about your rights as a participant, you can call the Research Participant Advocate at my university at +1 612-312-1210. Walden University's approval number for this study is 03-22-21-0271707 and it expires on March 21, 2022.

You might wish to retain this consent form for your records. You may ask the researcher or Walden University for a copy at any time using the contact information above.

### Obtaining Your Consent

If the study purpose and requirements are clear, please complete the survey by clicking the Next button.

### Sample questions:

- a. What is your gender?  Male  Female
- b. What is your highest educational level?  
 Primary  Secondary  Bachelor's degree  Master's degree  Doctorate

	Task performance: <i>In the past 3 months...</i>	Seldom	Sometimes	Quite often	Often	Always
1.	I was able to plan my work so that I finished it on time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	I kept in mind the work result I needed to achieve.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	I was able to set priorities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Appendix C: Study Questionnaire

**Employee Job Satisfaction and Performance in the Nigerian Oil & Gas Sector in 2020****Study Questionnaire****Instructions**

The following questions relate to how you carried out your work during the past 3 months. In order to get an accurate picture of your conduct at work, it is important that you complete the questionnaire as carefully and honestly as possible. If you are uncertain about how to answer a particular question, please give the best possible answer. The questionnaire will take about 10 minutes to complete. The questionnaire is completely anonymous; your response will not be seen by your supervisor(s) or colleagues. Thank you.

**Respondent's Background**

Respondent's gender  Male  Female

Respondent's highest educational level

Primary  Secondary  Bachelor's degree  Master's degree  Doctorate

Respondent's age

less than 30 years  30 – 45 years  46 – 60 years  above 60 years

**Supervisor's Background**

Supervisor's gender  Male  Female

Number of years/months working with supervisor \_\_\_\_\_ years / \_\_\_\_\_ months

**Employee Perception on Job Performance**

	Task performance: In the past 3 months...	Seldom	Sometimes	Quite often	Often	Always
1.	I was able to plan my work so that I finished it on time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	I kept in mind the work result I needed to achieve.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	I was able to set priorities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	I was able to carry out my work efficiently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	I managed my time well.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Contextual performance: In the past 3 months...	Seldom	Sometimes	Quite often	Often	Always
6.	On my own initiative, I started new tasks when my old tasks were completed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7.	I took on challenging tasks when they were available.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	I worked on keeping my job-related knowledge up-to-date.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	I worked on keeping my work skills up-to-date.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	I came up with creative solutions for new problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	I took on extra responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	I continually sought new challenges in my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	I actively participated in meetings and/or consultations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Counterproductive work behavior: In the past 3 months...	Never	Seldom	Sometimes	Quite often	Often
14.	I complained about minor work-related issues at work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	I made problems at work bigger than they were.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	I focused on the negative aspects of situation at work instead of the positive aspects.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	I talked to colleagues about the negative aspects of my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	I talked to people outside the organization about the negative aspects of my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **Employee Perception on Job Satisfaction**

---

	<i>On my present job, this is how I feel about...</i>	Not Satisfied	Somewhat Satisfied	Satisfied	Very Satisfied	Extremely Satisfied
1.	Being able to keep busy all the time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	The chance to work alone on the job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	The chance to do different things from time to time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	The chance to be "somebody" in the community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	The way my boss handles his/her workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<i>On my present job, this is how I feel about...</i>	Not Satisfied	Somewhat Satisfied	Satisfied	Very Satisfied	Extremely Satisfied
6.	The competence of my supervisor in making decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Being able to do things that don't go against my conscience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	The way my job provides for steady employment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	The chance to do things for other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	The chance to tell people what to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	The chance to do something that makes use of my abilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	The way company policies are put into practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	My pay and the amount of work I do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	The chances for advancement on this job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	The freedom to use my own judgment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	The chance to try my own methods of doing the job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	The working conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	The way my co-workers get along with each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	The praise I get for doing a good job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	The feeling of accomplishment I get from the job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Appendix D: Permission to Use IWPQ

**From:** Koopmans, L. (Linda) <[linda.koopmans@tno.nl](mailto:linda.koopmans@tno.nl)>  
**Sent:** Wednesday, 17 March 2021, 14:48  
**To:** Kadilo Badom  
**Subject:** RE: Permission to use IWPQ

Dear Kadilo,

You have my permission to use the IWPQ in your research. Please find the manual of the IWPQ attached!

Kind regards,

Dr. Linda Koopmans

---

**From:** Kadilo Badom <[kadilo.badom@waldenu.edu](mailto:kadilo.badom@waldenu.edu)>  
**Sent:** dinsdag 16 maart 2021 22:03  
**To:** Koopmans, L. (Linda) <[linda.koopmans@tno.nl](mailto:linda.koopmans@tno.nl)>  
**Subject:** Permission to use IWPQ

Dear Linda,

My name is Kadilo Badom a PhD student from Walden University.

Kindly grant me permission to use the IWPQ for my doctoral research for the collection of data from my participants in Nigeria.

Regards,  
Kadilo



## Appendix E: CITI Certificate



Completion Date 07-Jan-2021  
Expiration Date N/A  
Record ID 40235216

This is to certify that:

**KADILO BADOM**

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

**Student's**  
(Curriculum Group)  
**Doctoral Student Researchers**  
(Course Learner Group)  
**1 - Basic Course**  
(Stage)

Under requirements set by:

**Walden University**



Verify at [www.citiprogram.org/verify/?w8c9612a7-e0a8-43cd-ae2f-65c4d0fe7a1a-40235216](http://www.citiprogram.org/verify/?w8c9612a7-e0a8-43cd-ae2f-65c4d0fe7a1a-40235216)