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Oil and Gas Industry Leaders' Strategies for the Development of Local Suppliers

Henry Onyekenibe Mogbolu
Walden University

Walden University

College of Management and Technology

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Henry Onyekenibe Mogbolu

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Dr. Betsy Macht, Committee Member, Doctor of Business Administration Faculty

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

Walden University
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Abstract

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Henry Onyekenibe Mogbolu

MBA, University of Leicester, United Kingdom, 2002

Bachelor of Engineering (Mechanical), University of Benin, Benin City, 1986

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

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Abstract

The preference for international oil and gas companies in most developing countries is to use global suppliers instead of local suppliers with inadequate capacity. Leaders in oil and gas companies who lack strategies for local supplier development contribute to the ecological and social problems in oil-rich, developing countries. Grounded in the sustainable supply chain management theory, the purpose of this multiple case study was to explore the strategies leaders in the oil and gas industry use for the sustainable development of local suppliers. The participants comprised five leaders in oil and gas companies in the Niger Delta region of Nigeria. Data were collected using semistructured interviews and a review of company documents. Yin's five-step model guided the data analysis of the study, resulting in six emergent themes: creating business opportunities, leveraging the institutional framework, effective financial management, development of leadership and technical skills, collaborating with stakeholders, and effective performance management. A key recommendation is for leaders in the oil and gas industry to provide mentorship programs to build local suppliers' financial, managerial, and technical capabilities. The implications for positive social change include the potential for leaders in the oil and gas industry to stimulate an entrepreneurial culture in their host countries and ensure the sustainability of the businesses of local suppliers to reduce unemployment.

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Dedication

I dedicate this study to God Almighty and to my late brother in-law, Kenneth Chukwuyem Modeme, who was murdered on a night I travelled out of Nigeria to attend my second residency.

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My profound gratitude goes to Dr. Ronald Jones, my first chair, whose personal touch on my doctoral study helped me to make good progress. I appreciate Dr. Tim Truitt who continued as my chair from where Dr. Ronald Jones stopped and took me through the rigor of accomplishing a doctoral study. I am grateful to Dr. Betsy Macht, the second committee member of my doctoral study, whose reviews of my work at different stages of the program and feedback helped me to improve my scholarly skills. To Dr. Matthew Knight, the university research reviewer, I am eternally grateful for the painstaking time you took to review my work and the valuable comments that helped me to improve the quality of my work. I appreciate my lovely, ever caring, and God-fearing wife, Faith Eziunor Mogbolu, and all my precious children for standing with me and inspiring me to get to the finishing line of this marathon race. I am thankful to all my colleagues in the doctoral study program and friends who encouraged me in different ways towards the achievement of this goal.

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Section 1: Foundation of the Study

Oil and gas will continue to be the major sources of energy for decades to come despite the effort to find renewable sources to replace hydrocarbon products (Ahmad et al., 2017). The negative impact of the oil and gas industry's activities could impede the achievement of the United Nations' (UN) sustainable development goals (SDGs) (George et al., 2016). Stakeholders remain concerned about the unsustainable practices in the supply chain of the oil and gas companies in most developing countries because of local suppliers' incompetency (Busse et al., 2016). Local suppliers are critical to the ensuring the sustainability and economic growth of developing countries (Vermeulen & Oosthuizen, 2019). Improving the local suppliers' capabilities and capacity is a vital strategy to address the unsustainable practices within the oil and gas industry and create sustainable competitive advantage for the oil companies (Wu, 2017). Some leaders in the oil and gas industry have made concerted efforts for the sustainable development of local suppliers, but their efforts have not produced the desired outcome. The findings from this study may contribute to the body of knowledge and might assist leaders and stakeholders to develop and implement effective strategies for the sustainable development of local suppliers in the oil and gas industry.

Background of the Problem

Leaders in the oil and gas industry play a vital role in meeting the daily energy needs of the world (Ahmad et al., 2017). The oil and gas industry's supply chain activities negatively affect the environment and the social well-being of people living in oil-producing communities (Florescu et al., 2019). Many local suppliers do not have prior

experience in the services they render to the oil companies (Adedeji et al., 2016) and, therefore, lack the capabilities to meet the minimum requirements of the oil companies (W. Anderson, 2017). The average shareholder's value of a firm can decrease by approximately 36% because suppliers failed to meet quality standards and delivery targets (Chung et al., 2018). Leaders in the oil and gas industries should respond appropriately to improve supplier capabilities through collaboration among stakeholders.

Research on supplier development in the oil industry is still in its infancy; hence, there is a need for more research on the contribution of oil firms to the development of local suppliers (Williams et al., 2019). The effect of innovation strategies on the sustainable development of suppliers will require further research to help leaders of firms implement appropriate strategies for developing suppliers (Florescu et al., 2019). Further research is needed to fill the existing gap in the literature regarding the collaborative roles of government regulators and leaders of oil and gas companies in the development of suppliers (Calignano & Vaaland, 2017). Professionals in supply chain management (SCM) may benefit from the findings of this study on how some leaders in the oil and gas industry successfully improved suppliers' capabilities. The study might result in the generation of interest regarding research on the sustainable development of suppliers in the oil and gas industry to fill the existing gap in the literature.

Problem Statement

The preference for international oil and gas companies in most developing countries is to use global suppliers instead of local suppliers with inadequate capacity (Calignano & Vaaland, 2018). Inadequate local capacity in Africa is a key factor

responsible for a high cost overrun of 35% for oil and gas projects compared to the average cost overrun of 18% in global oil and gas projects (Rui et al., 2017). The general business problem was that underdeveloped local suppliers cause lower profitability, environmental damage, and undesirable social outcomes in the oil and gas industry. The specific business problem was some leaders in the oil and gas industry lack strategies for the sustainable development of local suppliers.

Purpose Statement

The purpose of this qualitative, multiple case study was to explore the strategies leaders in the oil and gas industry use for the sustainable development of local suppliers. The targeted population was five leaders of three oil and gas companies in Nigeria who have implemented successful strategies for the sustainable development of local suppliers. The implications for positive social change include the potential for leaders in the oil and gas industry to improve suppliers' capabilities, leading to greater local economic stability, lower local unemployment, and a reduced impact on the local environment.

Nature of the Study

The three research methods are qualitative, quantitative, and mixed method (Ishtiaq, 2019). Researchers use the qualitative research method to explore phenomena in their natural settings and understand phenomena in terms of meanings people bring to them (Aspers & Corte, 2019). I chose the qualitative method to make a real-life inquiry into a business problem and understand the meaning the leaders in the oil and gas industry ascribe to the development of local suppliers. Quantitative researchers employ

strategies of inquiry, such as experiments and surveys, and collect data using predetermined instruments that yield statistical data for testing hypotheses among variables (Queirós et al., 2017). I did not find the quantitative method suitable for this study because I did not test hypotheses among variables. Researchers using the mixed method approach combine quantitative and qualitative research methods in the same research inquiry (Tunarosa & Glynn, 2017). The mixed method was not appropriate because I did not combine qualitative and quantitative data for my analysis.

I considered three qualitative research designs: case study, phenomenology, and ethnography. Case study researchers explore programs, activities, processes, systems, structures, or individuals within a bounded, contextual setting (Yin, 2018). The case study design was appropriate for this study because I interacted closely with leaders in the oil and gas industry and reviewed organizational documents to collect data. To enhance the credibility of the study, researchers use the multiple case study design to obtain more diverse data from different sources (Yin, 2018). I used a multiple case study design to collect diverse data and engage in cross-case analysis. The phenomenological inquiry aims to understand the nature of human experience by exploring the meanings and explanations that individuals ascribe to their experiences (Larkin et al., 2019). The phenomenological design was not suitable for this study because the sole focus of this inquiry was not on the meaning of lived experiences of leaders in the oil and gas industry. Researchers use the ethnographic design to uncover the shared meanings that develop among a stable cultural group of people in a natural setting over a prolonged period

(Buckingham, 2019). Because I did not focus on the culture of people in the oil and gas industry, the ethnography design was not suitable for this study.

Research Question

What strategies do leaders in the oil and gas industry use for the sustainable development of local suppliers?

Interview Questions

1. What strategies did you use to carry out the sustainable development of your local suppliers?

2. How did you develop the strategies for the sustainable development of your local suppliers?

3. How did you implement the strategies for the sustainable development of your local suppliers?

4. How did you involve key stakeholders, such as government agencies, nongovernment organizations (NGOs), host communities, and other oil companies, in developing and implementing strategies for the sustainable development of your local suppliers?

5. How did leaders in the suppliers' organization respond to the strategies you implemented for the sustainable development of their organizations?

6. What were the key challenges in implementing the strategies for the sustainable development of your local suppliers?

7. How did you overcome these key challenges of implementing the strategies for the sustainable development of your local suppliers?

8. What were the key outcomes of the implementation of the strategies for the sustainable development of your local suppliers?

9. How did you measure the progress of the sustainable development of your local suppliers based on your implementation strategy?

10. What additional information can you provide on the strategies you use for the sustainable development of your local suppliers?

Conceptual Framework

The theory of sustainable supply chain management (SSCM), developed by Pagell and Wu (2009), was the conceptual framework for this study. The key propositions of the theory are innovation capability, positive management orientation toward sustainability, collaboration among stakeholders, and supplier continuity (Pagell & Wu, 2009). In the discourse of sustainable supplier development as a key element of SSCM, L. Liu et al. (2018) built on the stakeholder's proposition of Pagell and Wu to establish a relationship between stakeholders, buying firms, and suppliers for effective management of the supply chain. The main aim of supplier development is to ensure supplier continuity and the buying firm's economic competitiveness as well as improve their ecological and social performance (Craig & Dale, 2008).

The theory of SSCM is one of the few emerging theories for management practices and research in the field of SSCM (Touboulic & Walker, 2015). Of the existing SSCM theories, Pagell and Wu (2009) included an SSCM model that covered economic, environment, and social issues. Leaders in the oil and gas industry must embrace innovation, sustainability, collaboration among stakeholders, and supplier continuity to

remain viable (Adedeji et al., 2016). I adopted Pagell and Wu's theory of SSCM as the lens for the current study because for any strategy for local supplier development to be effective, it should cover economic, environment, and social aspects of sustainability.

Operational Definitions

The definitions of terms used in this study are important to avoid misunderstanding. The operational definitions of the common terms used in this study are:

Buying firm: A company or firm that engages or buys goods and services from a supplier (Ahmad, de Brito, et al., 2016).

Host communities: People living in locations oil companies explore and produce oil and gas in commercial quantities (Adedeji et al., 2016).

Local content: The increase in local participation in the value chain of human resources, equipment, and services compared to the use of foreign labor, goods, and services that support the petroleum sector in an oil and gas producing nation (Acheampong et al., 2016).

Local suppliers: Small- and medium-sized enterprises with indigenous owners that supply goods and services to buyers' companies, such as multinational organizations operating in the oil and gas industry in the same countries (W. Anderson, 2017).

Small- and medium-sized enterprises in developing countries: Companies with total assets at or above $50,000 but not exceeding $50,000,000, with a total workforce of above 10 but not exceeding 250 employees (Kot, 2018; White, 2017).

Sustainable development of suppliers: Developing suppliers for sustainability to meet the environmental, social, and economic performance goals of the focal buying firm, the supply chain members, and stakeholders (Busse et al., 2016)

Unsustainable practices: When companies or organizations in oil and gas companies carry out operations that negatively impact the environment and social well-being of the community without putting in measures to mitigate the impacts. (Agbaeze & Ukoha, 2018).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are realistic expectations that researchers may consider truth but are not within their control to validate (Leedy & Ormrod, 2016). The first assumption was that the oil companies selected for the research would provide participants who were at the level of senior managers and had cognate experience in SCM. Another assumption was that the leaders would be willing to sacrifice time and, most likely, their comfort for about 45 minutes for the interview and another 30 minutes for member checking. I assumed the leaders would be honest in providing accurate answers to the interview questions and would have comprehensive knowledge of the research topic to answer the questions correctly. I also assumed that the organization leaders would grant me access to their documents to review and that information contained in the documents was accurate.

Limitations

A limitation is a constraint or weakness in a research study that the researcher does not have control over (Theofanidis & Fountouki, 2018). According to Theofanidis

and Fountouki (2018), the limitations of a study may affect the design and results of the study. One limitation of this study was the selection of only five leaders out of many other leaders in the oil and gas industry. Restricting the sample population to two multinational oil and gas companies out of over eight other oil and gas companies in the Niger Delta area of Nigeria was also a limitation. Because of the limited scope of the study, the transferability of the findings may not be possible in other industries.

Delimitations

Delimitations are the boundaries or limits set by the researcher to ensure that the study's aim and objectives do not become impossible to achieve (Theofanidis & Fountouki, 2018). The geographic region of the Niger Delta was a delimitation. The sample population limit of five leaders in the oil and gas industry was another delimitation. A further delimitation of the study was the inclusion of only oil and gas industry leaders who had successfully implemented strategies for the sustainable development of suppliers was eligible to participate in the study. Another delimitation was answering the research question requires focusing on strategies leaders used for the sustainable development of suppliers in the oil and gas industry; therefore, I did not address other organizational issues that might affect leaders in the oil and gas industry.

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Significance of the Study

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Ahmad et al. (2017) noted that solving the sustainability problems facing the oil and gas industry through SSCM would eliminate many of the sustainability challenges global industry leaders experience. Understanding and deploying appropriate strategies required for the sustainable development of local suppliers might be of value to business

leaders in the oil and gas industry to make informed decisions and develop policies for

managing key business processes and activities along the supply chain. The findings of

this study may be valuable to business leaders in the oil and gas industry and

policymakers to contribute to the sustainable development agendas of their countries.

Another goal of this study was to generate interest for further research in the field of

SSCM.

Contribution to Business Practice

The results of this study may contribute to effective business practices regarding

the development and implementation of appropriate strategies to improve the technical

capabilities of local suppliers in the oil and gas industry. The use of local suppliers might

mitigate the negative effects of supply chain disruptions because of natural disasters and

international conflicts that affect the supply of goods and services from foreign countries

(Chung et al., 2018). The sustainable development of local suppliers enhances the

operational performance of oil and gas companies and improves the long-term

sustainability of both their businesses and the suppliers' businesses (White, 2107). The

development of local suppliers in oil and gas producing countries can become a driver to

promote the natural resource-based industrialization of these countries (D. Adams et al.,

2019). Leaders in the oil and gas industry may use the findings of the study to build the

capabilities of local suppliers, leading to enhanced operational performance, increased

sustainability, and improved profitability.

Implications for Social Change

The implications for positive social change include the potential for leaders in the oil and gas industry to improve suppliers' capabilities. Adequate supplier capacity will lead to greater local economic stability, lower local unemployment, and a reduced impact on the local environment. Venables (2016) stated that the exploration and production of oil in some developing countries has not resulted in economic growth in local communities. Many people in oil-rich, developing countries live below the poverty line (Agbaeze & Ukoha, 2018). Leaders in the oil and gas industries might use the findings of this study to reduce local unemployment, improve revenue generation for their governments, and enhance the provision of social amenities. The sustainable development of the local suppliers may also result in a higher commitment from oil and gas leaders and other stakeholders to reduce environmental degradation and the neglect of host communities' social needs.

A Review of the Professional and Academic Literature

The purpose of this qualitative, multiple case study was to explore the strategies leaders in the oil and gas industry use for the sustainable development of local suppliers. My objective in this subsection was to synthesize the extant literature on SSCM. In the literature review, I compare the core practices of sustainable supplier development and associated practices reported in peer-reviewed journal articles, seminal works, government publications, and conference proceedings. I explore and discuss the depth of knowledge from the extant literature related to the context of the current study. In my search for materials on SSCM, I concentrated on the following databases accessible

through the Walden University Library: (a) ABI/INFORM Complete, (b) Academic

Search Complete, (c) SAGE Journals, (d) Business Source Complete, (e) Multi-Database

Search, (f) CIINAHL & MEDLINE Combined Search, (g) ProQuest, and (h)

ScienceDirect. I also searched the Google Scholar and ResearchGate repositories.

Organization of the Review

I have organized the literature review to align with the conceptual framework and

associated complementary and alternative theories for the study. The conceptual

framework for the study was the theory of SSCM by Pagell and Wu (2009). The

complementary theories are stakeholder theory and dynamic capability theory. The

alternative theories are the institutional theory and contingency theory. I condensed the

literature review into the following key themes: SSCM and the oil and gas industry, the

oil and gas industry and developing countries, and sustainable development and local

supplier development. The other key themes are sustainable development of local

suppliers, local supplier development, and local content policy in developing countries.

Research Strategy

The focus of this study was the strategies oil and gas industry leaders use for the

sustainable development of local suppliers. I searched the literature using the following

keyword terms and phrases: *supply chain management theory, supplier development*

theory, stakeholder theory, dynamic capability theory, institutional theory, and

contingency theory. The other key search terms were *supply chain management,*

sustainable supply chain management, supplier development, stakeholder management,

local content policy, and *the oil and gas industry.* The study included 347 reference

sources. Of the 347, 297 references are articles published between 2017 and 2021,
representing 86% of articles being published within 5 years of my anticipated graduation
date. The peer-reviewed references comprise 336 of the 347, representing 97% of
reference sources.

Theory of SSCM

The conceptual framework for this study was the theory of SSCM developed by
Pagell and Wu (2009). SSCM is an evolving discipline with limited theoretical
frameworks in the existing literature that specifically address core practices (Touboulic &
Walker, 2015). Pagell and Wu used multiple case studies of 10 exemplar companies
cutting across industries to build a coherent and testable model of the management
strategies and practices that supply chain leaders can use to create a sustainable supply
chain.

While reviewing the theories related to supply chain, Dubey et al. (2016) noted
that Pagell and Wu's (2009) theory is one of the few existing theories of SSCM
developed from case studies. Dubey et al. argued that the use of qualitative case studies
to build theories attracts criticism from scholars not acquainted with the qualitative
method. However, Pagell and Shevchenko (2014) reported that because of the statistical
nature of quantitative studies, researchers omit major innovative practices, including
supplier development strategies. Comparing the views of both the advocates of
qualitative and quantitative models of SSCM, I. J. Chen and Kitsis (2017) posited that
SSCM is an evolving field and practitioners need both quantitative and qualitative study
outcomes to develop models that SSCM practitioners can rely on. Rebs et al. (2018)

concluded that SSCM theories developed from multiple research design methods are more encompassing than theories from a single design. L. Liu et al. (2018) acknowledged the prescriptive model of Pagell and Wu and relied on the theory to establish a conceptual model for the formation and implementation of practices for sustainable development of suppliers. Leaders of organizations are in dire need of integrative SSCM models that they can use to develop strategies that will improve the sustainability performance of the supply chain to become more competitive.

The complex nature of the supply chain systems signifies the challenge for researchers to create an ideal prescriptive business model of SSCM. Evans et al. (2017) and Ritala et al. (2018) claimed that there is a lack of sustainable business models for firms to adopt to manage business activities, including supplier development practices. Pagell and Wu (2009) noted that the difficulty of creating the SSCM business model for practitioners is because of the narrow focus of researchers on fragmented business activities rather than across the supply chain. Markman and Krause (2016) agreed with Pagell and Wu and proposed a more flexible, interdisciplinary framework that can respond to supply chain variability. The complexity of the supply chain and the unpredictable challenges in the external environment should drive the creation of SSCM models that enhances sustainability.

Leaders of buying firms are responsible for ensuring that supply chain members embrace and engage in activities that will create sustainability. Pagell and Wu's (2009) SSCM theory is a process that integrates leadership commitment, innovation capability, and collaboration with stakeholders to improve performance. Building on Pagell and

Wu's model of SSCM, Ahmad et al. (2017) explained that SSCM is a managerial

decision and a set of behaviors required to ensure that the supply chain performs well in

the economic, environmental, and social dimensions of sustainability. The economic,

environment, and social value of investment referred to as the concept of triple bottom

line must be present in SCM practices to ensure sustainability (Hammer & Pivo, 2017).

According to Pagell and Wu (2009), the practices that support supplier

sustainability and lead to a sustainable supply chain include supplier development and a

reduction of supplier's risk. Formentini and Taticchi (2016) aligned with Pagell and Wu's

findings but added that there are other supply chain management practices, including

suppliers' selections and performance management. L. Liu et al. (2018) noted that the

practice of supplier development is core among common SSCM actions and enhances the

sustainability of the supply chain. Therefore, leaders must show commitment towards

supplier development programs to enhance the performance of the supply chain.

Conflicts exist between economic factors and noneconomic factors in SCM.

Supply chain managers are unable to create a balance between the elements of the triple

bottom line because of the complex nature of sustainability practices (L. Liu et al., 2019).

Building on the SSCM theory, Pagell and Shevchenko (2014) developed propositions on

how to create a sustainable supply chain and establish a balance between the elements of

the triple bottom line. However, Matthews et al. (2016) challenged the assumption of

achieving economic, environment, and social value simultaneously and posited that

sustainability requires trade-offs between the elements of sustainability. Markman and

Krause (2016) agreed with the argument for trade-offs between economics and

noneconomic performance but noted that environmental elements should receive higher attention than the economic and social elements. Contrasting the views of Markman and Krause, Fallahpour et al. (2018) argued that in selecting sustainable suppliers, buying firms usually base their criteria on the economic element as the most essential aspect before considering the environment factor. Both the economic and noneconomic factors are important to achieve sustainability.

Social performance is yet to receive the required attention from most organizations; still, in the debate in favor of trade-offs, some researchers on corporate social responsibilities and SSCM practices have argued that most of the sustainability studies focus on economic and environmental issues with less attention on the social value of investment (Bals & Tate, 2018; Ha-Brookshire, 2017; Yawar & Seuring, 2018; M. Zhang et al., 2017). However, Wu (2017) and Joseph et al. (2019) posited that to meet the varying need of stakeholders, an organization pursuing SDGs should focus on the three elements of sustainability. Hahn et al. (2015) and Le Roux and Pretorius (2016) supported the view of integrating the three elements in all SSCM practices and suggested that leaders should leverage the tension between the integrative and trade-off views to develop strategies for supplier development. Local suppliers need skills to manage all aspects of sustainability.

Focal buying firms are responsible for ensuring a balance between economic, environmental, and social outcomes in supply chains. Montabon et al. (2016) posited that depending on the priorities of leaders, trade-offs could favor either economic or ecological outcomes. Rogers et al. (2019) contended that when confronted with trade-offs

in sustainable supplier development programs, organizational leaders prefer programs that focus on economic profitability. However, from the standpoint of sustainability, all the views concerning trade-offs and integration remain relevant to leaders in developing the strategies for the sustainable development of suppliers (Derakhshan et al., 2019). According to L. Liu et al. (2018), the developmental need of suppliers varies and can be all or any of the ecological, financial, or social issues. Sustainability, therefore, requires the integration of environmental, social, and economic aspects into all activities within the supply chain, including supplier development.

The challenging supply chain environment and frequent disruption in local, regional, and global supply chains require that supply chain leaders continually enhance their innovative capability. According to Yawar and Kauppi (2018) and L. Chen et al. (2018), most buying firms in developing countries need to support their suppliers to build innovation capability through the process of supplier development. Similarly, Ahmad, de Brito et al. (2016) identified supplier development as one of the critical functions of SSCM in the oil and gas industry. Building on Pagell and Wu's (2009) model of SSCM practices, Yawar and Kauppi postulated that supplier development is critical to building buyer–supplier relationship towards the firms' achievement of their sustainable goals.

Organizations are desirous of achieving sustainable goals but face the challenges of identifying truly sustainable organizations from where to learn best practices. Pagell and Wu (2009), supported by Markman and Krause (2016), asserted that a truly sustainable organization does not exist, though some organizations are better than others in sustainability performance (L. Liu et al., 2019). Pagell and Shevchenko (2014) argued

that researchers should focus their case studies on organizations that have successfully

implemented SSCM programs. According to Markman and Krause, 8 of the 100 most

sustainable global companies are in the oil and gas industry, notwithstanding that the

activities of the oil and gas companies have negatively affected ecological and social

lives.

Pagell and Shevchenko (2014); therefore, suggested that researchers should focus

their studies on the small number of understudied organizations that are innovative and

more adaptive to changes. Contrasting with the view of Pagell and Shevchenko, Ahmad,

de Brito et al. (2016) argued that leaders in the oil and gas industry are more committed

to sustainability than leaders in other industries. In the oil and gas industry, suppliers

carry out most of the activities and contribute to most of the ecological and social

problems (Ağan et al., 2016; I. J. Chen & Kitsis, 2017; Paulraj et al., 2017; Wu, 2017).

According to M. Zhang et al. (2017), the success or failure of the oil and gas supply chain

depends largely on the performance of the local suppliers. My choice of industry to study

was the oil and gas industry, and this study location was Nigeria, a developing country

with underdeveloped local suppliers.

The key propositions of Pagell and Wu's (2009) theory of SSCM are innovation

capability, positive management orientation toward sustainability, collaboration among

stakeholders, and supplier continuity. The main thrust of the propositions of the theory is

that leaders must continue to innovate and collaborate with stakeholders to achieve

competitive advantages. The propositions of the theory aligned with the purpose of this

case study, which was exploring the strategies oil and gas industry leaders use for the

sustainable development of local suppliers. Through the development of local suppliers, leaders will achieve the sustainable goals of the oil firms, which are economic profitability, not harming people and the environment, and promoting the social well-being of the society.

The need for innovation capability exists across any supply chain for the long-term survival and sustainable competitiveness of the focal firm. In their model of SSCM, Pagell and Wu (2009) asserted that to create a sustainable supply chain, innovation capability is a critical requirement. Iddris (2016) and Wang and Dass (2017) defined innovation capability as a firm's ability to identify or generate new ideas through continuous learning, knowledge transformation, and creativity. Wang and Dass added that exploration and exploitation of internal and external resources available to the firm and their transformation into new and improved products and services fall under the definition of innovation capability.

Leaders and leadership styles affect innovation capability, and for firms to promote innovation capability, leaders must have positive behavior towards innovation. Wang and Dass (2017) argued that though many leaders acknowledge the importance of innovation capability, only few leaders are committed to developing and implementing innovation strategies. Le and Lei (2019) found that among the determinants of innovation capability, transformational leadership enhances firms' innovation capabilities. Wang et al. (2017) and Yang et al. (2018) identified collaborative culture, knowledge sharing, organizational culture, and organizational learning as key constructs that enhance the building of innovative capability. In their model of SSCM, Pagell and Wu (2009)

identified that a positive leadership orientation combined with innovation capability creates competitive advantage. Therefore, the requirement for positive leadership behavior exists to integrate and drive the key constructs of innovation capability through supplier development.

Complementary Theories

Stakeholder Theory

Before the 1980s, the only known party identified by researchers to wield serious influence on managerial decisions outside the firm's immediate leadership was shareholders; however, the attention in today's business environment has shifted to stakeholders (Barney & Harrison, 2020). Stakeholder theory has its bearing on the work of Freeman (1984). Building on Freeman's concept of stakeholders, Laplume et al. (2008) identified stakeholders as group or individuals that can impact a firm's performance and can also benefit or suffer from the impact of the firm's activities. Barney and Harrison (2020) posited that the key elements of the stakeholder theory are: (a) describing groups or individuals in organizations and in the society who collaborate in value creation; (b) aligning values, norms, and ethics as mechanisms to improve organizational performance; and (c) creating the consciousness among business leaders about how their business decisions can impact the society in the short and long term.

Balancing the needs of all stakeholders is difficult goal to achieve. Kline and McDermott (2019) posited that the key theme of stakeholder theory is an appeal to managers of firms to consider the interest of all stakeholders. Lehr (2019) claimed that stakeholder theory is a promising tool to solve sustainability challenges in today's

environment. Corporate responsibility principles stem from stakeholder theory and

achieving sustainability of the supply chain depends on how well leaders in the supply

chain manage their stakeholders.

Stakeholder theory has become one of the theories used by both practitioners and

researchers for stakeholder management in SSCM. Concerning the SSCM business

model, Pagell and Wu (2009) argued that collaboration with multiple stakeholders creates

an opportunity to attain sustainable goals. Fougère and Solitander (2020) contended that

it is always difficult to get stakeholders with conflicting needs to reach consensus

decisions. However, L. Liu et al. (2018) found that the involvement of stakeholders in

supplier development has led to improved relationships with stakeholders and improved

economic and noneconomic performance of the supply chain. Barney and Harrison

(2020) argued that while stakeholder theory is a useful guide to managers in decision-

making, opponents of the theory argued that the theory has limitations on stakeholders'

management. Fougère and Solitander pointed out that unequal power dynamic that

characterize stakeholder engagement can lead to neglect on the needs of some

stakeholders. Montabon et al. (2016) claimed that the primary responsibilities of

managers are to protect the interest of the firm and make a profit for the shareholders.

However, van der Linden and Freeman (2017) noted that stakeholder theory is about

ensuring that leaders involve different stakeholders in decision-making about issues that

affect them. Therefore, managers of firms should demonstrate positive orientation in the

application of stakeholder theory in designing business models and strategies for

sustainable development of suppliers.

Creating a business case for supply chain sustainability requires stakeholder's involvement. Ahmad, de Brito et al. (2016) identified stakeholder pressure and economic stability as the most influential factors that can affect the sustainability goals of the oil and gas companies. In the development of business goals, Schaltegger et al. (2019) posited that business leaders should involve multiple stakeholders in co-creating business cases. However, Ahmad et al. (2017) found that managers of firms, especially in the oil and gas companies, rarely involve stakeholders in the development of business programs that affect the stakeholders. L. Liu et al. (2018) and Galvão et al. (2020) posited stakeholders play the role of drivers, facilitators, and inspectors in the sustainable development of suppliers. Therefore, stakeholder theory complements the theory of SSCM concerning the sustainable development of suppliers.

Dynamic Capability Theory

Dynamic capability theory originated from the work of Teece et al. (1997). Dynamic capability is the ability of a focal buying firm to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Teece et al., 1997). Elaborating on the concept of dynamic capability, Teece (2007) posited dynamic capabilities are exceptional capabilities for sensing opportunities and threats in the external environment. Teece also noted that dynamic capabilities are important to seize opportunities as they arise and harness strengths in the organization to reconfigure and transform tangible and intangible assets to meet the challenges in the market environment.

Building on Teece's (2007) constructs of dynamic capability, Sabahi and Parast (2020) added that organizations must have the capabilities to mitigate the threats identified in the process of sensing. Sabahi and Paras concluded that organizations that possess dynamic capability exploit the internal strength to mitigate internal weaknesses, and similarly explores the external opportunities to mitigate the external threats. While Pagell and Wu (2009) did not specifically refer to dynamic capability in their model of SSCM, the practices such as enhancement of supplier skills align with development of dynamic capability to reconfigure existing assets for meeting the need of a wider market. Fukuzawa (2015) contended that dynamic capability is an element of a resource-based view, and there is nothing new in the theory other than the description of the static state of resources and changes and reconfiguration of existing assets.

Organizations need to develop capabilities that are easily adaptable to changes to remain competitive. Researchers (Brusset & Teller, 2017; Kumar et al., 2018; Sabahi & Parast, 2020) continue to support the view that there is a relationship between dynamic capability, innovation capability, and organizational resilience, all of which contribute to sustainability performance. In SCM, three aspects of dynamic capability, namely market sensing, agility, and adaptability exist (Aslam et al., 2018). The concepts of agility and adaptability are akin to supply chain leaders' ability to respond to short-term needs and explore new market opportunities based on the outcome of market sensing (Aslam et al., 2018). Eckstein et al. (2015) and Aslam et al. (2018) posited that dynamic capability is the simultaneous exploitation of existing competencies with an exploration of new ideas to meet the ever rapidly changing and challenging business environment. Building

appropriate strategies for developing dynamic capabilities of suppliers will ensure business continuity of the supply chain.

Hong et al. (2018) posited that there is a relationship between SSCM practices and dynamic capability theory. Dynamic capability only improves economic performance with a long response time of improvement on environment and social performance. However, Pagell and Wu (2009) asserted that firms performing well on the three aspects of the triple bottom line would gain more sustainable profit over time even though the gains may not be visible in the short term. While Teece and Leih (2016) referred to dynamic capability as incremental innovation, Pagell and Wu argued that SSCM theory is about radical, rather than incremental innovative approach. Dynamic capability theory focuses more on macro-organizations and economic performance (Touboulic & Walker, 2015), but Pagell and Wu's theory cuts across the supply chain, including small- and medium-sized enterprises (SMEs). Drawing an inference from the findings of Hong et al., a combination of SSCM theory and dynamic capability theory would enhance the sustainable performance of the supply chain especially in developing countries.

Alternative Theories

Institutional Theory

The institutional context of organizations has been in discourse before the 1970s and 1980s. Still, the known institutional theory that is common in organizational practices and research has its bearing from the work of Meyer and Rowan in 1977 and DiMaggio and Powell in 1983 (Glover et al., 2014; Lewis et al., 2019; Mohamed, 2017). Zhao et al. (2017) noted that organization gains legitimacy by conforming to regulations, laws,

societal pressures, beliefs, and norms of the environment. Explaining Meyer and Rowan's perspective of institutional theory, Lewis et al. (2019) posited that conformity to regulations, societal pressures, and environmental norms enables the organization to gain legitimacy. Lewis et al. explained the concept of isomorphism and attributed isomorphism to coercive, mimetic, or normative pressure. Glover et al. (2014) and Lewis et al. argued that coercive pressure occurs because of regulatory actions, mimetic pressure occurs when organizations imitate competitors, and normative pressures occur as organizations conform to the norm within the environment to become like other organizations. Eijdenberg et al. (2019) argued that economic and political institutions play significant roles in enabling and constraining organizational activities.

Different researchers have different views on how institutional theory affects organizational decision-making towards sustainability. Organizations operating within the tenets of institutional theory are compliance-driven (Zhao et al., 2017). Eijdenberg et al. (2019) contended that institutional theory tends to stiffen creativity and innovation, as the institutional contexts do not intersect with strategic management theories. However, Yawar and Kauppi (2018) contended that organizations such as buying firms adopt socially responsible practices such as supplier development because of legal regulations, stakeholder pressures, and market dynamics. Yawar and Kauppi concluded that institutional theory shapes firm's positive action towards sustainability. In contrast, Pagell and Wu (2009) postulated that collaboration among stakeholders, rather than legal regulations and societal pressure enhances SSCM practices, such as supplier development.

The institutional context may be more relevant than the strategic management concept of collaboration. Dubey et al. (2019) reasoned that under institutional pressure, buying firms could collaborate with other stakeholders to improve the supply chain performance. Organizations could benefit from external pressures by aligning organizational policies with such pressures. However, Glover et al. (2014) argued that in the face of regulatory, societal, and normative pressures, consensus decision through collaboration and cooperation is difficult to achieve. Institutional theory can serve as an instrument for fostering relationship in a supply chain.

An institutional framework can create power distance between stakeholders. According to Fougère and Solitander, (2020), institutional theory is a means to create power distance between the stakeholders and exert pressures on the less powerful organizations. However, George et al. (2016) found that coercive, mimetic, and normative pressures are important in the integration of sustainability elements within corporate strategy. Although institutional theorists could discourage initiative drives in organizations towards sustainability; however, organization leaders could leverage on regulatory frameworks to collaborate with stakeholders.

Contingency Theory

The work on contingency theory of organization started in the late 1960s by Fred Fiedler (Landis et al., 2014). The contingency theory has continued to generate interest among several organizational researchers in exploring how environmental changes affect organizational behavior (Van de Ven et al., 2013). The key theme of the contingency theory is that there is no one best way to lead an organization and that the structure of the

organization and leadership style are contingent upon the environment in which the business operates (Williams et al., 2017). Kros et al. (2019) building on the concept of contingency theory argued that a rigid organizational structure will not fit into a dynamic environment and posited that the structure of organizations must be flexible to manage external contingencies. Contingency theorists oppose one fit structure and leadership style for all business situations because of the dynamic environments in which organizations operate.

Development of internal resources and competencies are important for managing unexpected events in organizations. Kros et al. (2019) argued that because of the incessant disruption in the supply chain, firms should focus on internal resources and competencies to develop a strategic contingent response to rapidly changing environmental variables. Similarly, Lin et al. (2020) and Flynn et al. (2016) stated that uncertainties are a common phenomenon in the supply chain hence contingency theory becomes relevant in unstable and unpredictable situations. Durach et al. (2017) posited that because of globalization, the risks of supply chain disruption will continue to increase and suggested that supplier development is a key measure for mitigating such risks. Flynn et al. built on contingency theory and concluded that supply chain integration is a response to uncertainty.

Pagell and Wu (2009), in their SSCM theory and their propositions, presupposed an ideal business model for SSCM. However, proponents of contingency theory argued that ideal situations are difficult to achieve hence the best model for organizations and partners must be contingent on the situation they face (Durach et al., 2017; Lin et al.,

2020). Ong et al. (2019) discussed contingency theory and asserted that there is no one

best way of measuring sustainable performance that is common to all companies under

the same situation. External factors such as globalization and stakeholder's pressure are

contingency variables that influence an organization to develop sustainable performance

measurement. Although Pagell and Wu were not explicit on how their model is

contingent on the environment; however, the organizations used for the study cut across

industries and operate in different and unstable environments. The exemplary

organizations Pagell and Wu explored are of different sizes and face both stakeholders

and regulatory pressures. Therefore, SSCM theory covered the aspects of organizational

issues addressed in contingency theory.

Positive Management Orientation Toward Sustainability

Positive management orientation is central to the successful implementation of

SSCM business model in an organization. In their business model of SSCM, Pagell and

Wu (2009) identified positive management orientation as key to building shared visions

in the organization and across the supply chain. Top management's flair for integration of

sustainability into the supply chain depends on the importance the leaders in the

organization attached to non-economic issues (Rego et al., 2017). Rego et al. (2017)

further argued that positive management orientation and behavior remain strategic in

driving innovative capability. Leaders should consider economic, environmental, and

social issues together in designing innovative programs.

Leaders of oil and gas firms need to share their visions of supplier development

among key stakeholders. Rego et al. (2017) found that some organizational leaders did

not consider suppliers among stakeholders that are relevant to the achievement of sustainability goals. However, Amin et al. (2019) posited organizational leaders that depend more on their suppliers show more commitment to sustainability than leaders that do not consider their suppliers. Gosling et al. (2016) posited that focal buying firms' leaders should assume leadership responsibility of driving innovative culture through supplier development across the supply chain. Montabon et al. (2016) argued that SSCM research should focus on all stakeholders including suppliers and not just investigate sustainability performance from the perspective of focal buying firms alone. Leadership orientation and style, affect the sustainability performance of the supply chain and therefore necessary to improve sustainability performance.

Top management orientation towards sustainability depends on the perspectives of leaders on the triple bottom line. According to Montabon et al. (2016), managerial orientations can either tend toward tradeoffs between economic, environmental, and social aspects or towards an integrative view of the triple bottom line. Joseph et al. (2019) aligned with the integrative view where social and economic considerations are of equal importance with economic outcomes. Affirming Pagell and Wu's (2009) theory, Joseph et al. agreed that to create sustainable supply chain, managerial orientations should be towards integrating sustainability goals. For the supply chains to advance towards more sustainability, leaders need to explore the interconnection between economic, environmental, and social goals to develop strategies for improving suppliers' skills.

Collaboration Among Stakeholders

The input of both internal and external stakeholders of the supply chain can positively influence the sustainability performance outcome of the focal buying firm and the suppliers. L. Liu et al. (2018) posited that the need for collaboration of multistakeholder exists in SSCM practices, such as sustainable development of suppliers, supplier's selection, and supplier's risk management. Collaboration among stakeholders for sustainability entails that all stakeholders' interests toward, environmental, economic, and social performance align (Williams et al., 2019). Freeman et al. (2020) claimed that where stakeholders' interests remain misaligned, each stakeholder will want to be a taker from the system, and this certainly weakens the supply chain. Leaders of the oil and gas industry are responsible for ensuring the convergent of the individual objectives of stakeholders to achieve a common goal.

The need for positive management orientation exists to integrate external stakeholders such as NGOs, community members, and even competitors into the supply chain. However, H. Y. Chen et al. (2018) noted that competitors, NGOs, and communities in the environment where the supply chains operate, receive less attention from managers of oil firms. The actions of external stakeholders can impact positively or negatively on supply chain continuity; therefore, the stakeholders must be involved early in the decisions of the focal buying firms.

Stakeholders' needs, vary and sometimes drive the behavior and actions of different categories of stakeholders. The buying firms must identify the key stakeholders and their interests (León-Bravo et al., 2017). While external stakeholders such as the

government and the communities' interests may be on environmental and social

performance, the interest of shareholders, top management, and employees may be on

financial profitability (Kumar & Routroy, 2018; Yawar & Seuring, 2018). According to

Busse et al. (2016), some stakeholders can disrupt supply chain activities or continuity of

supply when their needs conflict with organizational goals. The oil and gas companies

must continuously review the need of various stakeholders and involve them in decision-

making.

      The oil and gas industry in developing nations such as Nigeria, suffers incessant

disruption to their activities by their host communities. Host communities and other

stakeholders in oil producing countries complain of environmental degradation and the

oil company's neglect to the social needs of the society (Agbaeze & Ukoha, 2018).

According to some researchers, collaboration is one of the best strategies for resolving

sustainability issues and improving competitive advantage (Goodman et al., 2017;

Josserand et al., 2018; Pooe & Munyanyi, 2019; Ruiz-Torres et al., 2018; Williams et al.,

2019). Supplier development, according to Pagell and Wu (2009) and L. Liu et al. (2018),

is one of the few specific SSCM practices that create the opportunity for collaboration

among stakeholders. However, Calignano and Vaaland (2017) found that collaboration

among stakeholders in developing countries is weak, resulting in missed opportunities for

creating sustainability of the supply chain.

      For the integration of local suppliers into the oil and gas industry in developing

nations, Owusu and Vaaland (2016) identified five main actors: (a) public regulators

representing the government, (b) international oil companies and foreign suppliers, (c)

financial institutions, (d) learning institutions such as universities and research institutions, and (e) local suppliers. To establish the relationship and resources among key actors, the focal buying firms should strengthen stakeholder collaborations in developing countries (Calignano & Vaaland, 2017; Owusu & Vaaland, 2016). Leaders of organizations should identify stakeholders' needs and collaborate with them to design and implement strategies for supplier development.

Supplier Continuity

The key importance of sustainable development of suppliers is supplier continuity to ensure the business continuity of the focal buying firms and guaranteed social well-being of the society. Pagell and Wu (2009) argued that suppliers' businesses are prone to failure if the buying firms do not respond appropriately to ensure the continued existence of the suppliers. Supplier development is significant to ensuring supplier continuity. According to Adebisi and Bakare (2019), several suppliers in developing countries are within the SMEs category with limited knowledge, innovation capabilities, and resources to sustain their businesses. Local suppliers with strong capabilities can build their resilience to withstand adverse business condition.

Several suppliers, especially those within the category of SMEs are unable to face global supply chain disruptions and therefore face the challenges of business discontinuity. H. Y. Chen et al. (2019) argued that most supply chain managers remain ill-equipped to manage disruption and other crisis when they occur. Ivanov (2018) noted that disruption on a supplier organization has a ripple effect on the supply chain and supply continuity. The impact of the failure of suppliers may have negative effect on the

buying firm's performance. Several local suppliers, especially in the oil and gas industry, are not able to compete favorably with foreign suppliers and the tendency is for the companies to go out of business (Calignano & Vaaland, 2017). To ensure local supplier continuity in the oil industry in developing countries, Owusu and Vaaland (2016) posited that actors such as regulators, international oil companies, learning institutions, and financial institutions, need to collaborate to develop local suppliers. Therefore, focal firms need to provide the enabling environment for collaboration with other key stakeholders to build local suppliers' resilience to withstand adverse business conditions.

SSCM and the Oil and Gas Industry

The main sources of energy for industries and domestic use are oil and gas. Ahmad et al. (2017) argued that the oil and gas industry plays important role in sustaining the world's economy, but also responsible for most of the sustainability problems emanating from the supply chain. However, Raut et al. (2017) contended that the leaders of the oil industry are leading the campaign and initiatives across industries to ensure the transformation of supply chains. Mani et al. (2016) and Yawar and Seuring (2018) claimed that the attention of the leaders in the oil and gas companies is more on financial gains than on the environment and social performance. Rentizelas et al. (2020) held a similar view with Mani et al., and Yawar and Seuring found that most oil companies pay less attention to activities that will improve the capability of local suppliers, especially in resource-rich developing countries. Narimissa et al. (2020) found that there are clear economic and environmental indicators for sustainability measures but no standard performance indicators for social development. However, Ahmad, de Brito et al. (2016)

and Florescu et al. (2019) posited that SSCM is at its infancy in the oil and gas industry and needs time for the supply chain to develop. Although leaders in the oil and gas industry have recognized the negative impact of oil and gas exploration and production on sustainability, some of the leaders are not accepting responsibilities for environmental and social issues related to suppliers' activities.

One of the main reasons for the outsourcing of operations by buying firms is to transfer operational risks to suppliers. Kaur et al. (2019) posited that companies outsource most of their operations to suppliers to reduce cost and take advantage of expertise from suppliers, where the capabilities to manage operational risks are lacking in the company. According to Koberg and Longoni (2019), leaders of focal buying firms are accountable to operational risks within the supply chain and hence cannot transfer such risks to suppliers. Similarly, Rentizelas et al. (2020) argued that if the origin of a problem emanates from suppliers, focal firms must bear the consequences of the action of the suppliers. Koberg and Longoni further asserted that the activities of most of the members of the supply chain are not visible to managers of the focal firms who are unable to monitor the suppliers to ensure conformance to sustainability practices. Ahmad et al. (2017) contended that the complex network of the companies involved in oil and gas activities limit the abilities of managers of oil companies to have an oversight on the supply chain. However, Wu (2017) posited that supplier development is one of the strategic management techniques that buying firms can apply to improve oversight of the activities of suppliers and as well, as influence actions of suppliers to mitigate operational

risks. While there may be difficulty in managing the complex supply chain of the oil and gas industry, developing local suppliers will be one key measure to mitigate the risk.

The Oil and Gas Industry and Developing Countries

The oil companies explored in this study are involved in the upstream activities of exploration and production of hydrocarbon. Emphasizing the role of the oil and gas industry, Yang and You (2019) argued that oil and gas will continue to contribute to world energy requirements even into the far future. Heshmati and Auzer (2018) contended that oil and gas resources created more damages to the environment, challenge to livelihood, and increased poverty level in some developing nations. The oil and gas industry are at the center of sustainability issues because of the negative impact of their activities on the environment and social lives.

The local companies in oil and gas resource developing countries cannot compete with foreign companies because of limited capabilities. International oil companies and foreign suppliers dominate the upstream value chain activities in the oil and gas industry in developing countries (Calignano & Vaaland, 2017). The activities of the oil and gas companies require advanced technology and resources that are not readily available in the local market and are expensive to acquire (Owusu & Vaaland, 2016). Local suppliers in developing countries are not able to provide such services or products to carry out technically challenging activities (Wu, 2017). Zabbey et al. (2017) claimed that in addition to the incompetency of local suppliers and poor governance structure, conflicting stakeholder needs, and funding, limit the participation of local companies in the oil and gas industry. Heshmati and Auzer (2018) and Y. Liu and Ma (2016) also identified oil

price volatility, lack of economic diversification, low-quality institutions, and widespread corruption as some of the issues that militate against local indigenous company participation in the oil and gas business in developing countries. Even with the corporate social responsibility programs of the oil and gas companies and legal frameworks such as local content policies, the barriers to the development of local capabilities in developing nations still exist.

Nigeria oil and gas industry needs to accelerate the process of developing local capacity in Nigeria. Although Nigeria is one of the largest oil and gas producing nations, however, the country's industrial base is still underdeveloped (Ablo, 2020). Multinational companies dominate the exploration and production of oil and gas with few indigenous oil and gas companies taking over the operation of the marginal fields and divested assets by multinational oil companies (Abu et al., 2019). Oil and gas are the mainstay of Nigerian economy and involvement of local companies in the oil and gas business will improve local capacity (Owusu & Vaaland, 2016). The divestment of some oil-mining license in Nigeria and handing over the assets to capable indigenous company to operate will create business opportunities for indigenous companies.

The main aim of the local content policy is to develop local suppliers. Abu et al. (2019) argued that the Nigerian government effort to develop the technical capability of indigenous companies and suppliers through technological transfer by multinational oil companies is yet to yield success. As part of ensuring participation of local companies in the oil and gas business, the government has explored the use of various regulatory frameworks (Onyi-Ogelle, 2016). The existing framework in use is the local content

policy of 2010 referred to as the Nigeria oil and gas content development law (Ayoola, 2017). While a few local companies experienced success concerning the implementation of local content policy (Ayoola, 2017), several local suppliers remain underdeveloped (Onyi-Ogelle, 2016). After several years of oil and gas production in Nigeria, foreign suppliers still provide key oil and gas equipment and highly technical services to the oil companies in Nigeria. The multinational oil companies and the Nigerian government can use the instrument of institutional framework to support supplier development.

SDGs and Local Supplier Development

Supplier development can be a route to achieving the UN's SDGs in some developing countries. The UN's SDGs and sustainable development of local suppliers have the common objective of improving the quality of life of the society in developing nations (Williams et al., 2019). Wong et al. (2018) explained that sustainable development means engaging in economic activities that avoid depletion of natural resources. However, the activities of most companies within the supply chain contribute largely to the sustainability issues plaguing the world (Zimon et al., 2019). In response to the challenges of sustainable issues, the UN developed SDGs through the collaborative effort of various industries and UN member states (Williams et al., 2019). Pedersen (2018) argued that in addition to meeting societal needs, achieving the SDGs guarantees the companies the long-term license to operate.

Integration of SDGs and local supplier development goals in the oil and gas companies will accelerate economic and social development in oil-rich, developing companies. Recognizing the importance of corporate business organization in sustainable

development the oil and gas companies' executives agreed to integrate SDGs into their

corporate goals (Thorlakson et al., 2018; Williams et al., 2019). Zimon et al. (2019) said

that SDGs are complex goals; however, integrating them into SSCM will facilitate the

alignment of the goals with organizational business models. Yawar and Seuring (2018)

and Yawar and Kauppi (2018) identified local supplier development as the most

proactive actions buying firm leaders can take to address the achievement of SDGs.

Sustainable Development of Local Suppliers

The improvement of the competency of the local suppliers will mitigate the risk

of ecological and social issues in places where oil and gas industry exists. Suppliers in the

oil and gas industry are the key contributors to most sustainability issues (Rogers et al.,

2019; Wong et al., 2018). Owusu and Vaaland (2016) found that most local suppliers in

developing nations lack the technical and managerial competencies to meet the minimum

requirement of the upstream oil and gas companies. Rogers et al. (2019) posited that in a

bid to mitigate poor performance by suppliers in several industries, some leaders of

buying firms embarked on sustainable development of local suppliers. Bai and Satir

(2020) and L. Liu et al. (2018) explained that supplier development involves developing

the technical, managerial, and financial capacity of local suppliers.

Apart from training, Ağan et al. (2016) posited that the achievement of

sustainable supplier development occurs through knowledge sharing and transfer,

creating opportunities for suppliers to get contracts and expand capacity, and access to

funding from financial institutions. However, Silvestre et al. (2017) stated that oil and gas

industry leaders focus on supplier development programs such as health, safety, and

environment management systems, but pay less attention to technical and managerial skills. Oil and gas companies are recognizing the need to develop local suppliers and have made some progress but most of the local suppliers still lack technical and managerial capabilities to meet the industry's requirements.

Collaboration among stakeholders is necessary for the success of sustainable supplier development. Yawar and Kauppi (2018) found that collaboration between institutions, buying firms, suppliers, and stakeholders motivate buying firms to adopt and imitate sustainable supplier development best practices. Sancha et al. (2015) argued that external pressure usually compels buying firms to adopt sustainable supplier development practices. However, Mirimoghadam and Ghazinoory (2017) contended that stakeholders in some developing countries disrupt supplier development programs because of corruption and rent-seeking behaviors. L. Liu et al. (2018) posited that buying firms do not possess all the necessary tools and skills required to develop their suppliers for sustainability and often turn to external sources to seek support. As posited by Pedersen (2018), businesses are under pressure to collaborate towards sustainable supplier development to maintain their licenses to operate. The multidisciplinary nature of supplier development programs demand harnessing internal and external skills and resources to execute the plans.

Local supplier development has been successful in countries where government institutions are committed to building local capabilities through the implementation of regulatory frameworks. W. Anderson (2017) argued that the extent of local suppliers' participation in supplier development programs depends on the commitment of

government institutions in the oil-producing, nations. On the role government institutions play in local supplier development, Acheampong et al. (2016) found that local supplier development programs and projects recorded great success in countries such as Norway, Malaysia, and Brazil, especially within the oil and gas industry's supply chain. Busse et al. (2016) posited that supplier development in most oil and gas resource-rich, developing countries has not been successful because of socio-economic differences. Bai and Satir (2020) identified poor government regulations, lack of buying firm's top management commitment, lack of local supplier willingness to collaborate and poor access to finance, as the main barriers to the development of local suppliers. The government of oil and gas-rich, developing nations should collaborate with oil and gas companies to develop and implement effective strategies to mitigate the barriers against local supplier development.

Supplier development has a long-term positive impact on sustainability, but this may not be visible to the buying firm in the short term. Ahmad et al. (2017) argued that while some firms embarked on supplier development to improve supplier's performance others carried out supplier development to comply with institutional regulatory requirements. Debating about buying firm's commitment to supplier development, Kot (2018) noted that the process of disseminating knowledge must be deliberate by leaders of the buying firms. Acheampong et al. (2016) held a similar view and argued that the leaders of several oil and gas companies in resource-rich, developing nations have not been deliberate about their commitment to supplier development. While some buying firms have embraced supplier development, some other companies consider supplier development as non-value-adding activity.

The activities involved in supplier development can be direct or indirect depending on the program and method of administration (M. Zhang et al., 2017). M. Zhang et al. (2017) posited that some activities classified as direct supplier development are provision of financial capital, technological and managerial capability building and co-locating buying firm's staff to supplier's organization and vice-versa. Indirect supplier development activities exist such as supplier performance monitoring, supplier assessment, incentive schemes, performance measurement, and periodic reviews (M. Zhang et al., 2017). L. Liu et al. (2018) noted that supplier development is most effective when buying firm explores collaborative efforts of key stakeholders, such as regulatory bodies, NGOs, learning institutions and suppliers. Classified stakeholders involved in supplier development include drivers, facilitators, and inspectors. As further explained by L. Liu et al., as the drivers exert pressure and initiate sustainable development practices, the facilitators provide knowledge and resources, and inspectors monitor and assess supplier performance. Delineation of roles among stakeholders ensures there are no overlaps of roles among stakeholders in the process of supplier development.

Supplier development is a tool that enhances strategic relationship management of suppliers by buying firms. Ağan et al. (2016) added that supplier development is the core of SSCM because the process opens opportunities for strategic relationship development and collaboration with key stakeholders in achieving sustainable goals. Wong et al. (2018) found that through supplier development, buying firms and the supply chain could achieve profitability, improve cost leadership, adopt more environmentally friendly practices, and improve the social wellbeing of the society in which they operate.

Emphasizing the importance of sustainable supplier development, Gosling et al. (2016) posited that supplier development could lead to the creation of new industry standards that can improve the economy, environment, and society. Supplier development in the oil and gas industry will not only improve the capabilities of local suppliers to meet the need of oil companies but will lead to the creation of SSCM standard practices.

Local Supplier development and Local Content Policy

The level of local supplier participation in the oil and gas industry business is still low. The governments of many oil-rich, developing countries have developed local content policy to create opportunities for local suppliers to participate in the supply of goods and services (Nwapi, 2016). The local content policy has become a legal framework for most oil and gas resource-rich, developing countries (Semykina, 2017). Acheampong et al. (2016) posited that local content policy's main aim is to domesticate the knowledge base for oil and gas related technical and managerial competencies through capacity building. The underlying reasons for the implementation of the local content policy in the oil and gas-rich, countries are to build local capability and increase the industrial base.

Local content is necessary tool that drives improvement of local suppliers' capability. Because of the limited technical and managerial competency of local suppliers, the local content policy serves as a potent tool to improve the competencies of local suppliers (Nwapi, 2016). Reviewing the prospect of local content policy in sub-Saharan Africa, Ovadia (2014) and Owusu and Vaaland (2016) argued that beyond nurturing local suppliers for participation, local content is an instrument for higher

economic level of industrial development. However, Ablo (2020) posited that local content policy could be counterproductive as the framework is not compatible with international trade agreement and can affect foreign direct investment in most of the developing nations. Supporting the claim of Ablo, Nwapi (2016), argued that local content could lead to additional cost of goods and services for the oil companies because of avoidable cost of poor-quality products and service delivery. Pedersen (2018) stated that local content policies will drive programs that will lead to achievement of SDGs. Local content policies in oil and gas-producing, countries may become a strategy for meeting UN SDGs.

Some nations have effectively implemented local content policies. Semykina (2017) reasoned that local content policy has worked in developed nations such as Norway and Brazil and improved the industrial base of these two countries. Similarly, Kolstad and Kinyondob (2017) and Acheampong et al. (2016) indicated that in Norway, Malaysia, and Brazil where local content was effective in building local capacity, local suppliers compete favorably with their foreign counterparts. However, Owusu and Vaaland (2016) and Ablo (2020) argued that in most developing nations, particularly in Africa, local content development implementation is weak. In contrast, Ayoola (2017) claimed at over 70% of expenditure on goods and services in the oil and gas companies in Nigeria were for goods and services procured locally. Contesting Ayoola's claim, Owusu and Vaaland (2016) stated that several local suppliers' companies in Africa have as much as 70% foreign ownership hence, a large part of the expenditure for goods and services

end up in foreign nations. The leaders in the oil companies need to embrace local content policy to serve as an effective framework for local supplier development.

Ablo (2020) argued that the Ghanaian government attempted to imitate what happened in Norway and Brazil but failed because the oil and gas companies were not involved in the design of the project and only saw their financial contributions as a fulfillment of part of an ad-hoc corporate social responsibility. As Owusu and Vaaland (2016) posited, most of the suppliers in the developing nations lack technical competence and capital to provide the mainstream technical services such as drilling services, well intervention services, and main engineering constructions services to the oil and gas industry. The governments of the oil and gas resource-producing, nations have good intention towards local content policies, as a tool to drive local supplier development; however, the lack of explicit strategies and involvement of key stakeholders, in the development of the framework is a contributory factor to the difficulties in their implementation.

Transition

In Section 1 of the qualitative, multiple case study, I provided a brief explanation of the foundation of the study and background to the problem on sustainable supplier development. I presented the problem statement, the significance of the study, and emphasized the contributions of the study to business practices and implications to social change. I developed the interview questions to align with the central research questions to ensure collection of quality data from research participants.

The conceptual framework I used as the lens for the study was the theory of SSCM by Pagell and Wu (2009). I expounded the theory of SSCM in the review of professional and academic literature. Using seminal books and scholarly articles from mainly peer-reviewed journals, I reviewed the propositions of the SSCM theory. I also reviewed stakeholder theory and dynamic capability theory as complementary theory to SSCM theory and contingency and institutional theory as alternative theories to the SSCM theory. From professional and academic literature, I reviewed topics related to the central research questions, which included SSCM and oil and gas companies, SDGs and local supplier development, and local supplier development and local content policies.

In Section 2, I will describe the role of the researcher, strategies to recruit research participants, and justify the selected research method and design. I will explain the ethical research standards, informed consent requirements, and ensuring participants' protection. I will conclude Section 2 with a description of the data collection instruments, data collection techniques, data analysis procedures, and the means to help ensure dependability, credibility, and confirmability. In Section 3, I will analyze data, presented the findings and aligned the results of the study to the conceptual framework, existing literature, and business practices. I will conclude Section 3 with a description of the implications for social change, reflections, and conclusion.

Section 2: The Project

Leaders in the oil and gas industry in Nigeria seek to improve the local suppliers'

capability and capacity because most of the suppliers are unable to meet the oil and gas

industry's requirements (Vermeulen & Oosthuizen, 2019). The aim of this qualitative,

multiple case study was to explore the strategies oil and gas industry leaders use for the

sustainable development of local suppliers in the same industry. The local suppliers in the

oil and gas industry are small- and medium-sized enterprises in most oil and gas

resource-based nations (Wu, 2017). The study is important because the oil and gas

resource-based nations rely on the small- and medium-sized enterprises to improve

economic growth, create employment for their citizens, and enhance the social well-being

of the society.

Purpose Statement

The purpose of this qualitative, multiple case study was to explore the strategies

leaders in the oil and gas industry use for sustainable development of local suppliers. The

targeted population consisted of five leaders of three oil and gas companies in Nigeria

who successfully used strategies for the sustainable development of local suppliers. The

implications for positive social change include the potential for leaders in the oil and gas

industry to improve suppliers' capabilities, resulting in greater local economic stability,

lower local unemployment, and a reduced impact on the local environment.

Role of the Researcher

In a qualitative study, the researcher designs the study, collects data, analyzes

data, and presents the findings (Smith & McGannon, 2018). The researcher conducting a

case study serves in the role as the primary instrument for data collection and analysis (Twining et al., 2017). In the role of the researcher in this study, I was the primary data collection instrument. The researcher's role also includes developing and asking relevant questions, listening actively to the participants, possessing a good grasp of the issues under study, and presenting unbiased findings (Yin, 2018).

Karagiozis (2018) pointed out the need for researchers to have good knowledge of the subject to detect and consider misrepresentation that may occur in the data. I served as logistics manager for 7 of my 28 years of experience (i.e., from 1991 to 2019) in SCM practice in the oil and gas industry. L. E. Ross (2017) noted that participants who do not have prior or current personal or professional relationships with the researcher should be recruited for the study to prevent making discussion of key topics risky or uncomfortable. I did not have any personal or professional relationships with the participants recruited for this study. Additionally, I did not have a prior affiliation with the organizations or work for any of the organizations from where I recruited the participants. Prior to commencing the research, the researcher should familiarize themself with the geographic area of focus in the study (Karagiozis, 2018). Since birth, I have lived in the Niger Delta area of Nigeria where several oil and gas companies are situated, and which served as the geographical area of the study.

Researchers are responsible for identifying ethical risks in the research and taking steps to protect the rights of all human subjects following the principles outlined in *The Belmont Report* (Nicolaides, 2016). The key tenets of *The Belmont Report* are: (a) respect for persons, (b) beneficence, and (c) justice regarding the treatment of human subjects

(National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). Respect for persons involves adhering to participants' freedom and that any subject participating does so willingly and with an understanding of the risks and benefits associated with the research. Beneficence is to minimize harm and maximize the possible opportunity for research participants, while justice requires a fair distribution of the benefits or burdens of the research among peoples' groups (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). Respect for persons involves a consent process where the researcher informs the participants of the details of the research before the study so that the participants can make an informed decision whether to participate (López-Alvarado, 2017). I obtained inform consent from all participants prior to collection of data and followed *The Belmont Report* requirements in the interpretation of data.

Fusch et al. (2018) noted that in qualitative research, researchers have the challenge of remaining unbiased throughout the data collection process. My experience as a SCM professional in the oil and gas industry could have made it difficult to remain unbiased through the data collection and analysis process. To mitigate my personal bias, I used member checking to validate the data collected and the results of the research to ensure that the outcome of the findings reflected the participants' experiences. Member checking is a technique for enhancing the credibility of the results of qualitative research, and the process of member checking involves returning the data and results to the participants so they can check the accuracy (Birt et al., 2016).

The interview is one of the most important sources of obtaining information from participants in a case study (Yin, 2018). Qualitative researchers should possess effective interviewing skills to obtain accurate data from participants (Geurts et al., 2018). To maintain a consistent process throughout the interviewing of participants, researchers need to use an interview protocol (Castillo-Montoya, 2016). I used an interview protocol during the semistructured interview process to maintain consistency before, during, and after the interviews. I adapted Yin's (2018) interview protocol as shown in Appendix.

Participants

The criteria for selecting the participants must align with the purpose of the study and the research question (DeJonckheere & Vaughn, 2019; Haines, 2017; Yin, 2018). The research participants selected for interviewing should have special and expert knowledge of the phenomenon under study (Moser & Korstjens, 2018). Marks et al. (2017) posited that the researcher should recruit expert participants who are accessible, available, and willing to provide honest and reliable information relevant to the research question. The overarching research question for this study was: What strategies do some leaders in the oil and gas industry use for the sustainable development of local suppliers? The eligibility criteria for participants were: (a) must be a leader in a supply chain or logistics organization in an oil and gas producing company, (b) must have implemented strategies for the sustainable development of local suppliers in an oil and gas company, and (c) must operate in the Niger Delta area of Nigeria. To be included in this study, a supply chain leader in the oil and gas industry must have attained the level of a senior

manager because senior managers possess a greater understanding of their companies'

activities (see Sumbal et al., 2017).

Gaining access to participants is a key prerequisite for conducting a research

study (McGrath et al., 2019). Lancaster (2017) noted that researchers could gain access to

participants through activities that put the researchers in touch with potential participants,

which could include attendance at relevant conferences, meetings, public discussions, and

seminars.

A good relationship between the researcher and the participants is paramount to

the successful achievement of research outcomes (Amundsen et al., 2017; McGrath et al.,

2019; Sivell et al., 2019). Researchers should develop rapport with the research

participants through networking to build trust prior to the interview session to obtain

good data that can help ensure credibility of the results of the research (Alase, 2017;

Lancaster, 2017; McGrath et al., 2019). I used my professional network within the oil and

gas companies selected for the study to establish contact with the participants. I stayed in

contact with the participants through email and phone calls to ensure a good working

relationship throughout the study.

Research Method and Design

In this study, I used the qualitative method with a multiple case study design. This

specific research method and design were chosen because they aligned with the purpose

of the study and the research question. The means to collect data through open dialogue

with participants was also a reason for selecting qualitative design.

Research Method

There are three research methods. The two most frequently used by researchers are qualitative and quantitative, and the third is the mixed method, which is a combination of qualitative and quantitative methods into a single method (Ishtiaq, 2019; Rahman, 2017). A researcher's choice of a research method depends on the type of data required for the study and data collection technique that will meet the objective of the study (Kivunja & Kuyini, 2017; Majid et al., 2017; Yin, 2018). The objective of the current study was to explore the strategies oil and gas industry leaders used for the sustainable development of local suppliers and the data required for the study were qualitative in nature. Qualitative researchers remain with an aspect of unquantifiable reality to investigate real world problems and to explore lived experiences, meaning, and perspective from the standpoint of the participants (Lemon & Hayes, 2020; Moser & Korstjens, 2017; Queirós et al., 2017). In this study, I explored the strategies for the sustainable development of local suppliers in the oil and gas industry through the experiences and the perspective of the leaders in the industry who have developed and implemented successful strategies to do so.

Qualitative researchers consider the natural settings in which individuals or groups function (Hawkins, 2018; Korstjens & Moser, 2017). The research setting was existing oil and gas companies' sites in the Niger Delta area of Nigeria. Using the qualitative research method, researchers obtain rich and in-depth information from participants through semistructured interviews and analysis of texts and documents from the participants' organizations (Ma & Loke, 2019). I collected data through a

semistructured interview process, using open-ended questions to obtain rich, narrative information from the participants in addition to reviewing and analyzing documents and standard operating procedures from their companies.

The quantitative research method is appropriate when the need for numerical data exists to answer research questions and when there is the possibility of collecting quantifiable measures of variables and inferences from samples of a population (Mohajan, 2018; Queirós et al., 2017). The quantitative method would not have resulted in the data needed to answer the research question of this study because the participants provided qualitative information to the interview questions from the knowledge of their lived experiences and not through quantifiable measures of variables and inferences. In a quantitative study, the analysis of numerical data is conducted through statistical procedures and used to test a hypothesis to achieve the research objective (Mohajan, 2018). I did not test hypotheses or use statistical procedures to analyze the qualitative data for the current study.

The mixed method is an approach where a researcher combines data collected through qualitative and quantitative methods, analyzes the data, integrates the findings, and draws conclusions into a single research study (Schoonenboom & Johnson, 2017). The mixed-method approach was not suitable for the current study because I did not collect quantitative data that required integration with the qualitative data. Mixed-method research takes more time and requires more financial resources because of the length of time required to collect, transcribe, code, analyze, and integrate data (Rutberg &

Bouikidis, 2018). I had limited time and resources to complete this study; hence, the use of the mixed method was unsuitable for this study.

Research Design

The three research designs I considered were case study, ethnography, and phenomenology. I chose the case study research design for this study. Researchers use the case study design to understand complex issues and explore modes of operation of institutions and the processes and activities of business entities (Hughes & McDonagh, 2017; Pogreba-Brown et al., 2020). A case study design is relevant to situations when human behavior and social interactions are critical to understanding the topics of interest (Harrison et al., 2017). I explored the complex issues of the sustainable development of local suppliers and the involvement of stakeholders within the oil and gas industry in the process of local supplier development. I sought to understand the practices and strategies of the oil company leaders and the challenges the companies face in the development of local suppliers.

Multiple sources and methods of data collection and analysis are typical of the case study design; however, the foremost data collection method is in-depth interviews with open-ended questions; observations in real-life settings; and the review of texts, archives, and documents (Harrison et al., 2017). I employed a multiple case study design and collected data from five leaders of two oil and gas companies operating in the Niger Delta area of Nigeria. I used open-ended questions to interview the participants and reviewed documents related to their company's activities on supplier development to corroborate and augment evidence from the participants. In a multiple case study, a

researcher triangulates data from multiple sources for the purpose of corroboration and development of converging lines of inquiry to increase the reliability of the study (Ridder, 2017; Smith, 2018; Yin, 2018). I triangulated the data I collected from different participants in different organizations to find a converging line, corroborate the information obtained from the sources, and build justification for the themes that emerged.

An ethnography is a qualitative design used to explore the cultural interactions and meanings in the lives of a group of people, and it involves learning the feelings and beliefs of the people under study (Fusch et al., 2017; Tickle, 2017). The focus of the current study was to investigate a business case of supplier development in industry settings. This study did not bear any relationship with the culture of a certain group of people and the everyday behavior of the participants at work. Data collection in an ethnography is time consuming because researchers immerse themselves in the day-to-day lives of the people and take time to understand the culture of the people to obtain relevant data for the research (Hammersley, 2018; Mohajan, 2018; vom Lehn, 2019). I had limited time to complete this study and the data I needed to answer the research question did not require that I stay with the participants for a prolonged time to observe their activities. Because of the length of time a researcher spends with participants in an ethnographic study, there is the tendency for the researcher to become more of a participant than an observer, compromising the research (Buckingham, 2019; Hammersley, 2018; van Dooremalen, 2017). Because of these reasons, the ethnographic design was not appropriate to achieve the purpose of this study.

Researchers use phenomenology research design to describe the everyday lived experiences of multiple individuals focusing on what everyone has in common as they experience a phenomenon (Larkin et al., 2019; Mekgoe et al., 2019). This study is about processes and actions that leaders in the oil and gas industry took to improve the competencies of suppliers in the oil and gas industry and not multiple individuals' experiences requiring phenomenological research design. Phenomenology research involves studying a small number of subjects through extensive and prolonged engagement to develop patterns and relationships of meaning (Errasti-Ibarrondo et al., 2018; Mohajan, 2018; Tuffor, 2017). The leaders of the oil and gas companies that participated in this study had limited time for the interview sessions and did not subscribe to extensive and prolonged engagement. There are two categories of phenomenology design identified as descriptive and hermeneutic (DeHart, 2020; Ghaffari & Lagzian, 2018; Tuffor, 2017). Distinguishing between the two approaches has led to debates about the appropriate ways to undertake phenomenological research (DeHart, 2020; Ghaffari & Lagzian, 2018; Tuffor, 2017).

I used a multiple case study, instead of a single case study design, because I analyzed data both within each case and across cases to enhance the reliability of the result of the study. Unlike a single case study, evidence created from a multiple case study is stronger and more reliable than evidence from a single case study (Ridder, 2017; Smith, 2018; Yin, 2018). Researchers seek data saturation as criteria to discontinue the process of data collection and analysis, and failure to reach saturation and provide reliable evidence of the data saturation process has an impact on the credibility of the

study (Hennink et al., 2017; Saunders et al., 2018). Researchers using case study research

design continue with the interview and probing questions until the point of data saturation

when successive participants are not providing information different from what other

participants said (V. Anderson, 2017; Nelson, 2017; Saunders et al., 2018). A researcher

reaches data saturation at a point at which observing more data will not lead to the

discovery of more information (Lowe et al., 2018; Moser & Korstjens, 2018; Varpio et

al., 2017). I achieved data saturation when I did not obtain new information from the

participants. While V. Anderson (2017) argued that qualitative researchers need to

explain in sufficient details the evidence of data saturation in their studies, Nelson (2017)

pointed out that researchers achieve data saturation in qualitative research through

methodological triangulation and member checking. I collected data through

semistructured interviews and reviews of relevant company documents and engaged

participants in member checking.

<div align="center">**Population and Sampling**</div>

Sampling Method

Sampling plays a prominent role in qualitative research study and the choice of

appropriate sampling method depends on the research design, the research questions, data

collection methods, sample size, and eligibility of participants (Hennink et al., 2017;

Onwuegbuzie & Collins, 2017). I used purposeful sampling method for this study.

Researchers use purposeful sampling method to identify and select individuals who

possess the knowledge needed to offer rich information regarding the study (Ames et al.,

2019). I used purposeful sampling method to identify leaders in the oil and gas

companies operating in Nigeria that have successfully implemented strategies for the sustainable development of local suppliers.

Researchers use purposeful sampling method when the targeted population exceeds the number of participants required for minimum sample size (Ames et al., 2019; Sharma, 2017; Vasileiou et al., 2018). Hosseininia and Ramezani (2016) used purposeful sampling to select participants among several SMEs in a case study of food industry. Ghaffari and Lagzian (2018) used purposeful sampling to select five primary participants out of a population of over 50 in a qualitative research study exploring experiences of users of information technology system. Patterson (2018) employed the techniques of purposeful sampling to recruit 30 participants among academic staff of universities in Indonesia for a qualitative case study on education reform in Indonesia. I used purposeful sampling to help ensure the participants for this study met strict eligibility requirements and the targeted population exceeded the desired sample size.

Population

A population is a group of individuals having one or more characteristics of interest from which a researcher draws sample for purpose of data collection (Asiamah et al., 2017). Asiamah et al. (2017) noted that a researcher should understand and properly document the study population at the beginning of the study to enhance the credibility of the research. For this study, the targeted population was leaders in three oil and gas companies in Nigeria that have successfully implemented the strategies used for development of local suppliers. The leaders consisted of directors, general managers, and managers in the supply chain organizations of the two oil and gas companies. I adopted

the purposeful sampling method to narrow the targeted population to a sample size of five

participants.

Eligibility Criteria

In purposeful sampling, the researcher determines a set of criteria for inclusion

and exclusion of participants regarding prior knowledge of subject matter to address the

research question (Moser & Korstjens, 2018; van Rijnsoever, 2017). The purpose of the

research is to understanding experts' knowledge and experience of supplier development.

I recruited participants who were knowledgeable and experienced with implementing

strategies for the sustainable development of suppliers. van Rijnsoever (2017) stated that

the characteristics of participants in a qualitative research are: (a) participants must have

the ability to share experiences and ideas of the phenomenon in detail expressively and

reflexively, (b) participants should demonstrate willingness to participate in the research,

and (c) participants agree to attend the interview session. Similarly, Marks et al. (2017)

noted that researchers should recruit participants who are accessible, available, and

willing to provide honest and reliable information relevant to the research question. I

established contact with the participants prior to the commencement of data collection

and confirmed that participants were willing to take part in the research and attend the

interview session at the agreed time and method.

Sample Size

Carballo et al. (2018) interviewed four managers of supply chain organizations in

a case study of the role of collaborative strategies of improving environmentally

sustainable supply chain. Sinkovics et al. (2018) adopted a qualitative, multiple case

study design by using eight participants to explore strategies and routines adopted by

small- and medium-size suppliers to develop capabilities that enable them to engage in

upgrading. Jarvis and Williams (2017) interviewed four participants in a single case study

to explore the strategies retail supermarket managers have used to improve first-line

supervisor problem solving abilities. Carballo et al. stated that because of the limited

scope of qualitative case study research and the aims of developing a depth of

understanding rather than a breadth of perceptive, a sample size of two or more is

enough. Similarly, Habibi et al. (2020) stated that for qualitative research, the number of

participants is not definite; the participants can be two or more. Vasileiou et al. (2018)

recommended that researchers should decide on a sample size that is large enough to

understand the essence of the phenomenon under study but small enough so that the

researcher does not lose the deep case-oriented analysis of qualitative data. I conducted a

case study, and this research is similar in scope to previous case studies in which the

researchers explored strategies of capabilities development of suppliers and supervisors;

hence five participants was an appropriate sample size for this study.

Interview Setting

Researchers should aim at having successful interview and hence should make

adequate conceptual and practical preparations prior to the interview (McGrath et al.,

2019; J. C. Young et al., 2018). As part of the interview plan, I decided on the option of

interview method that suited the situation as I was unable to reach the participants in-

person. Face-to-face interview is an ideal method of data collection in a qualitative

interview setting (McGrath et al., 2019); however, in a situation where face-to-face

interview is not possible, the researcher should consider the use of a video conferencing

tool as the next viable alternative (Archibald et al., 2019; Krouwel et al., 2019). Because

of the coronavirus pandemic that gave rise to lockdowns and social distancing in most

parts of the world including my chosen geographical location, I used Zoom virtual

conferencing tool, instead of face-to-face interviews.

Qualitative research interviews should take place and at a time that is convenient

for the participants, in a comfortable setting, in a secure environment that is free from any

potential disruptions and noise (Gellerstedt et al., 2018; X. Liu, 2017; McGrath et al.,

2019). Since the interview is through video conferencing, I ensured the participants used

locations that were private, free of distraction, and suitable for the virtual meeting.

Researchers should choose interview settings where the participants can feel a sense of

place and validation as an avenue to foster a positive relationship (DeJonckheere &

Vaughn, 2019; Ecker, 2017). I contacted the participants via telephone calls prior to the

interview to build rapport, confirmed the virtual communication tool that we used, and

agreed to the time for the interview. I set up the time and date for the interview and sent

details including the meeting identification number to the participants via email prior to

the interview date. Prior to the interview time, I contacted each participant to test their

system to ensure connectivity of the network systems. Researchers use an interview

protocol to guide the process of the interview and ensure the discussion is within the

scope and context of the research, address the research question and the research

phenomenon, and ensure consistency and transparency (Spencer et al., 2017; Yeong et

al., 2018). I used the interview protocol (see Appendix) to plan and carry out the interviews to ensure a transparent and consistent process of data collection.

Data Saturation

Data saturation is a marker of depth and quality and can contribute to making qualitative research more robust and valid (Constantinou et al., 2017; Costello, 2017; D. S. Young & Casey, 2019). Data saturation is the point when a researcher in a qualitative study stops collecting any new information related to the research question from participants during interviews and when new data that is collected or themes become redundant to previous data or themes (Constantinou et al., 2017; Saunders et al., 2018; Tran et al., 2017). To reach data saturation in a qualitative study, researchers should choose appropriate sampling method and sample size that address the research question (Braun & Clarke, 2019; Hennink et al., 2019; Nelson, 2017). In qualitative research, data collection should continue until no new data emerges from the participants, and no further codes and themes emerge during data analysis (Guest et al., 2017; Hennink et al., 2019; Sim et al., 2018). One method of helping ensure credibility, validity, and reliability of qualitative study is the ability of the researcher to reach data saturation and justify the process of attaining data saturation (Aguinis & Solarino, 2019; Costello, 2017; D. S. Young & Casey, 2019). The use of an interview protocol to help ensure consistency and transparency among all the interviews, member checking to confirm accuracy of data, and triangulation of evidence from multiple sources are how researchers attain data saturation (Kaso et al., 2018; Varpio et al., 2017). I used the interview protocol (see Appendix), member checking, and methodological triangulation to ascertain the point of

data saturation in this study. I collected data using semistructured interviews and reviewed company documents until no new data, themes or patterns emerged.

Ethical Research

Researchers using human subjects as sources of information face ethical challenges in the process of data collection and mitigating these challenges is critical to the success or failure of the research project (Harriss et al., 2017). Researchers use the informed consent process to provide objectives and clear information to the participants about the research, obtain the participants voluntary consent to take part in the research, and to help ensure protection and confidentiality for the participants (Carey & Griffiths, 2017). The voluntary aspect of informed consent is the assurance that consent is a conscious decision by the participants, free of undue influences, and without physical or psychological coercion (Carey & Griffiths, 2017).

In the informed consent process, the researcher is responsible for explaining to individual participants the aim of the research, the scope of the research, the risks, the implications of the research findings, and the consequences of participation to enable the participants make an informed decision regarding participation (Harriss et al., 2017; L. Zhang & Liu, 2018). Participants recruited for research must not only be aware of the information about the research through the informed consent process, but also must be competent and have the capacity to make rational decisions and to withdraw voluntarily at any stage of the research (Biros, 2018; Harriss et al., 2017; L. Zhang & Liu, 2018).

Informed consent does not end once the researcher obtains the consent from the participants but to be ethical requires an open and continuous information process

throughout the research period (Haines, 2017). Harriss et al. (2017) stated that for the

purpose of record-keeping and an audit trail, researchers should document and obtain

signed informed consent form from participants and retain the signed copy for the

duration specified by the Institutional Review Board (IRB). I did not carry out face-to-

face in-person interviews but instead sent the informed consent form via email to the

selected participants because of the restrictions posed by the challenges of the

coronavirus pandemic. I requested that the participants complete the informed consent

form and return to me via email attachment prior to the interview date or reply "I

consent" to the email to provide their informed consent. I contacted the participants

separately by telephone as a follow-up to the email to explain the content of the informed

consent form and provided an opportunity to the participants to seek clarification

concerning the informed consent form and the research objective.

In accordance with the principle of voluntary participation, and where the

researcher is yet to conclude the study, participants have the right to withdraw at any time

from the research and have any data already recorded removed from the analysis (Carey

& Griffiths, 2017). Researchers should continue to remind the participants during the

process of data collection that they can withdraw from the study without necessarily

having to say why, whether the participants show any visible discomfort during interview

or not (Haines, 2017). Participants could withdraw from the research by whatever mode

of communication including in-person, or through email or a telephone call (Wagner et

al., 2018). I explained to the participants during the process of obtaining informed

consent that they had the right to withdraw from the research at any time without stating

why. I also informed the participants that withdrawal from the research does not imply any negative consequence for the participant. Before the interview started, I used the first few minutes to remind the participants that they have the right to withdraw from the research at any time during the research.

The argument over providing monetary incentive or incentive in kind to research participants remains an ethical dilemma for researchers as incentives can introduce an ethical problem of inducement, and conversely, can encourage participation (Surmiak, 2018). Researchers should uphold the principle of voluntary participations in the use of incentives and ensure that the choice of type and value of incentive is within the ethical principles and guidelines of the approving IRB (Wagner et al., 2018). I provided the participants with a summary of the findings and did not offer any monetary or nonmonetary incentives to elicit participation.

I abided by *The Belmont Report* principles to protect the research participants. *The Belmont Report* continues to serve as the guiding ethical document to protect the rights of participants involved in research (Miracle, 2016). National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1979) contains the following three core ethical principles, which continues to be the basis of institutional ethics procedures that govern all research involving human subjects: (a) respect for persons, which is respect for participant's autonomy; (b) beneficence, that is an obligation to do no harm; and (c) justice, which is treating participants fairly. I ensured participant freedom to make decisions that guaranteed their autonomy during the research. I protected participants' confidentiality and privacy by using code names. I will

keep to the agreement in the signed informed consent form. I also used the interview protocol to ensure transparency and consistency in dealing with the participants throughout the interview process (see Appendix).

Researchers are responsible for the protection of the identity of participants and personal data (Ponterotto & Reynolds, 2017). Safeguarding participant's confidentiality and privacy is a fundamental ethical principle in conducting credible qualitative research (Ponterotto & Reynolds, 2017). Dongre and Sankaran (2016) suggested that in keeping with the principle of confidentiality, data collection tools used in qualitative research should not cause any breach in confidentiality. A researcher should take appropriate technical and organizational measures to safeguard participant's personal data and ensure destruction of the hard copies and permanent deletion of the soft copies from storage, when the period of retention elapses (Bracken-Roche et al., 2017; Surmiak, 2018). I ensured that no one else had access to the primary data I collected from participants during the interview.

As specified by Walden University's IRB, I kept all hard copies of documented confidential information, including hard drives containing such information, away from people and secured in a safe in my home office where no one else can access the materials for the retention period of 5 years. I encrypted and password-protected all soft copies of confidential information and save in a secure folder in a password-protected external disk locked away in my safe. The use of video conferencing tools to obtain data from participants introduces additional challenges for managing confidential data as video conferencing tools belong to third parties who may not abide by the ethical

principle of protecting users' confidential information (T. L. Adams & McBrayer, 2020).

I explored encrypted video conferencing tools for interview and recording, where no one

else, including video conferencing facility owners, can access subscriber's data and

confidential information, without subscriber's authorization.

Haines (2017) noted that research boards exist in institutions and some research

organizations to review and approve the measures the researchers plan to take in handling

ethical issues while carrying out research. The IRB has the responsibility to ensure that

researchers take appropriate actions to mitigate identified risks to participants'

confidentiality and ensure that beyond the IRB's approval, that researcher can handle

ethical dilemma that may emerge during the research (Miracle, 2016). I sought advice

and obtained approval from Walden University IRB before engaging the participants to

provide information about the research, the interview, and the informed consent. The

Walden IRB approval number is 03-03-21-0285650.

The research norm for preserving confidentiality of participants is the use of

codes or pseudonyms to identify the participants and organizations for the purpose of

data analysis (T. L. Adams & McBrayer, 2020; Haines, 2017). I used numeric coding to

ensure the confidentiality of the participants. For example, I coded the first participant

interviewed as P01. I coded the second participant as P02, and so on, for the remaining

participants. I maintained confidentiality and privacy of the participants' names and the

companies represented and ensured I am the only person who has access to this list for

the allowable period of data retention, until I destroy the information.

Data Collection Instruments

The choice of data collection instruments depends on the research design, research questions, geographical location of participants, prevailing situations, conceptual framework, and sensitivity of the research (Kross & Giust, 2019; Mirick & Wladkowski, 2019). The researcher is the main instrument for collecting and analyzing data in a qualitative research (Kross & Giust, 2019). The use of other instruments such as semistructured interviews, informal interviews, observations, archival documents, audiovisuals, and focus groups are included in the process of data collection (Clark & Vealé, 2018; Moser & Korstjens, 2018). As a human instrument, the researcher possesses the adaptive and responsive ability to react to emerging situations in the process of data collection and analysis (Adams & McBrayer, 2020; Twining et al., 2017; Wood et al., 2019). I am the primary data collection instrument in this study. I used semistructured interviews and a review of relevant organizational documents as data collection instruments.

In-person, face-to-face interviews is a standard data collection instrument for qualitative researchers, but with improvement in technology and constraints of geographical locations, the use of other mediums, such as video conferencing and telephone to carry out semistructured interview, has become common practice (Dumlao, 2020; Mirick & Wladkowski, 2019). The preference for semistructured interviews over other forms of interviews is the opportunity and flexibility for the researcher to raise probing questions that will elicit robust and open responses from participants (Brown & Danaher, 2019; Rooshenas et al., 2019; Shalhoub et al., 2017). Because of the constraints

of social distancing resulting from the coronavirus pandemic and restrictions of

movement in Nigeria, which is the geographical location of this study, I used video

conferencing facility to conduct semistructured interviews with the participants.

Along with verbal exchange, the researcher should also observe and record

nonverbal cues during interviews (Wood et al., 2019). As such, nonverbal

communications compliment the verbal behaviors of participants and sometimes yield

thicker descriptions and interpretations compared to the sole use of verbal data (Wood et

al., 2019). Researchers use open-ended interview questions to collect data and follow up

with probing questions to obtain richer information from the participants (Mohajan, 2018;

Weller et al., 2018). I used open-ended questions to obtain data from participants. When

the participants' responses to the open-ended questions needed further explanation, I used

probing questions to elicit deeper and richer information from the participants.

The use of an interview protocol in qualitative research is to ensure a common

interview approach with the different participants throughout the process of data

collection (Hamilton et al., 2017; Majid et al., 2017). With an interview protocol, a

researcher maintains consistency and transparency, and because each participant goes

through the same standardized interview process, the researcher can easily decipher the

point of data saturation (Majid et al., 2017; Weller et al., 2018; Yazdani et al., 2018).

Qualitative researchers come into the research with inherent bias because of their

worldview and experiences on the subject area; however, researchers use an interview

protocol as one of the strategies to mitigate bias during data collection and data analysis

(Fusch et al., 2017, 2018; Hamilton et al., 2017). I used an interview protocol to conduct

the interview for all the participants to ensure consistency in approach to building rapport, interviewing, questioning, and to mitigate my personal lens during the data collection process of this study. Researchers use multiple instruments including interviews, review of company documents, observations, and focus groups, to collect data to build on the strength of each type of data collection, minimize the weaknesses of a single approach, and enhance triangulation (Dumlao, 2020; Fusch et al., 2017; Yazdani et al., 2018). In addition to semistructured interview, I reviewed the documents of the participants' companies, including the supply chain operating manuals, sustainability report of the companies, the newsletters, and the annual business performance reports of the companies.

Researchers use member checking to enhance the credibility of the research by allowing the participants an opportunity to review an interpreted summary of the interview transcripts to verify the accuracy of the researcher's interpretation of their interview responses (Hayashi et al., 2019; Widyawan et al., 2020). The use of multiple sources of data enhances triangulation and hence dependability, confirmability, and transferability of the study (Dumlao, 2020; Lemon & Hayes, 2020; Madill & Sullivan, 2018). Researchers employ reflexivity strategy to further mitigate personal biases and ethical issues and hence enhance confirmability of the study (Moser & Korstjens, 2018; Palaganas et al., 2017; Reid et al., 2018). I used member checking to help ensure credibility and dependability of the research study. I used triangulation of multiple sources of data to assure dependability and confirmability of the research. With the

interview protocol and personal reflexivity, I will further enhance the trustworthiness of this study.

Data Collection Technique

The qualitative data techniques used for collecting data are paper survey, interview, focus groups, observation, site visit, video recording, audio recording, document reviews, email, and other online communication tools (Burmansah et al., 2020; Heath et al., 2018; Kim et al., 2017). At the center of all qualitative data collection techniques is the interview technique with a unique feature that makes it more superior than other forms of data collection method (Barret & Twycross, 2018; Fritz & Vandermause, 2018; Iyamu, 2018). Within the interview technique are the structured, semistructured and unstructured interview methods for collecting data; however, the semistructured interview approach is more prevalent among qualitative researchers (Sepasgozar & Davis, 2018; Widyawan et al., 2020; Wood et al., 2019). I used the semistructured interview through video conferencing to collect data from participants in this study. I used the Zoom video conferencing system to carry out the semistructured interview. To ensure uninterrupted access during the period of the interviews, I kept my Zoom subscription up to date. I took my participants through the process of using Zoom for those who were new to the Zoom system and ensured they had the required hardware, laptop, or smart phone, to join the interview. I followed the interview protocol throughout the interviews to ensure consistency of the interview process (see Appendix).

Case study researchers use multiple sources such as archival records, documents, interviews, observation, and artifacts to collect data (Heath et al., 2018; Houghton et al.,

2017; Ridder, 2017). The use of multiple data collection sources enables the inclusion of different interpretations and meanings in data analysis and enhances the trustworthiness of the research findings (Dumlao, 2020; Fusch et al., 2017; Yazdani et al., 2018). I retrieved documents such as manuals of operations, sustainability reports, procedures, and newsletters from the companies' websites. I reviewed the documents and downloaded information related to strategies for sustainable development of local suppliers to complement information I obtained from participants during the interviews. I compared the data collected from the participants through interviews, and information I downloaded from companies' documents for the purpose of methodological triangulation to enhance dependability, confirmability, and credibility.

One advantage of semistructured interviews over other data collection techniques is the flexible process of data collection where robust interaction and open responses take place (DeJonckheere & Vaughn, 2019; Iyamu, 2018; Schoenborn et al., 2018). I asked open-ended questions to explore participant thoughts and experiences about the case study. Another advantage of semistructured interview is that researchers have opportunity to ask probing questions as much as possible, to gain better understanding of the participants' viewpoint of the case study of interest (DeJonckheere & Vaughn, 2019; Schoenborn et al., 2018; Widyawan et al., 2020). I followed up participants' responses to the open-ended questions, with probing questions to clarify experiences and meanings within the answers the participants provided.

One benefit of conducting semistructured interviews through a video conferencing platform is the reduction in the delay of arranging a convenient place and time for the

interviews, especially for multiple participants that are geographically disperse (Archibald et al., 2019; Krouwel et al., 2019). A video conferencing system is convenient, cost-effective, reduces the safety and security exposures of participants and researchers, and enhances data security (Archibald et al., 2019; Krouwel et al., 2019). To prevent delay of completion of this study because of the restriction of movement and social distancing caused by the coronavirus pandemic, I used the Zoom video conferencing system.

One of the disadvantages of semistructured interview is that some participants are hard to engage in conversation or may be reluctant to share sensitive personal topics, especially through a video conferencing tool (DeJonckheere & Vaughn, 2019; Iyamu, 2018; Schoenborn et al., 2018). Some participants in this study could have exhibited evasive behavior during the interview and could have held back some information about the strategies they use for sustainable development of suppliers. I addressed the anticipated lack of openness of the participants through building rapport before the interview. The disadvantages of using video conferencing for semistructured interview are the technical challenges of interview disruption caused by unstable internet services, hardware and software incompatibility, and time lags on the video call (AlKhateeb, 2018; Archibald et al., 2019; Krouwel et al., 2019). Internet services in Nigeria can be unreliable, disconnections during interviews can occur, and this can cause delay and frustration during the interview process. I obtained a backup internet connection from another service provider and persuaded the participants to also do the same if their connections were unreliable. When a researcher and participant stay in different locations

from each other during the interview, there is the tendency for social interruptions from colleagues or family members, which could compromise data confidentiality (AlKhateeb, 2018; Irani, 2019). While I personally had control over where I was for the interview, I could not guarantee that the participants used places completely free from distraction from colleagues, friends, or family members. However, I encouraged the participants before the interview to use places that were secured enough for the purpose of safety, privacy, and confidentiality as much as possible.

One advantage of document review is that it enriches the quality of data through complimenting the interview data in a case study, as participants may not provide all the details of strategies used to deliver a project, during a 40-45 minute interview (Houghton et al., 2017; Rahman, 2017; Smith, 2018). To answer my research question, I needed information both from participants and from company documents where I could find information related to strategies used for the sustainable development of suppliers in the companies selected for the case study. A disadvantage of using company document as sources of data is the difficulty some researchers go through to access relevant documents because of existing confidentiality agreements between the company and other stakeholders (Dumlao, 2020; Smith, 2018; Yazdani et al., 2018). Because of confidentiality issues that could have made difficult to access documents directly from the oil companies, I used information from the companies' websites related to this study.

A pilot qualitative study is a proof-of-concept study that a researcher conducts prior to a full-scale study purposely to pre-test research instruments, processes, and methods of conducting a larger study (Majid et al., 2017; Williams-McBean, 2019). The

key objectives of a qualitative pilot study are to develop and refine research instruments,

collect preliminary data, prepare how to mitigate possible challenges in data collection

and analysis, and increase researcher's confidence in conducting qualitative research

(Morris & Rosenbloom, 2017; Williams-McBean, 2019). A pilot study is important in

large scale research or in a study with broad scope; and this can take place in phases to

address specific areas or stages of the research and identify areas of weaknesses that

require improvement in the main research (In, 2017; Malmqvist et al., 2019; Yeong et al.,

2018). I did not conduct a pilot study because of the limited scope of this study.

In member checking, qualitative researchers give participants the opportunity to

review the interpretations of their responses to the interview questions (Chase, 2017;

Madill & Sullivan, 2018; Thomas, 2017). Member checking serves the purpose of

correction of errors and eliminates the possibility of misrepresentation and

misinterpretation of data, as well as mitigating researcher bias (Birt et al., 2016; Varpio et

al., 2017). Where member checking reveals a contradiction between participant and

researcher interpretations, the researcher and participant must come to an agreement to

reconstruct the interpretations without losing the original and intended meaning and

perspective of the participants during the interview (Madill & Sullivan, 2018; Varpio et

al., 2017). Member checking can occur face-to-face, through telephone or video

conferencing, or through email communication where the researcher sends soft copies of

the documents for review by participants, and participants make comments and return via

the same medium (Chase, 2017; Iivari, 2018; Irani, 2019). I sent a one to two-page

interpreted summary of the transcript, to the participants to review via email, as it was not

possible to have face-to-face member checking because of the constraints of the coronavirus pandemic. I followed up with Zoom video conferencing of about 30-45 minutes discussions with each participant to review my interpretations of data to obtain comments and feedback, and to ensure that I resolved any contradictions to interpretations of the data with the participants before finalizing the study.

Data Organization Technique

Researchers use variety of techniques, such as a primary and backup digital voice recorders, journal logging, Word documents and Excel spreadsheets, paper files, and computer assisted qualitative data analysis software (CAQDAS), to organize qualitative data (Cypress, 2019). The decision on which techniques a researcher chooses to use for data organization depends on the purpose of the study, the research design, the amount of data planned for collection, the depth and complexity of the intended data analysis, the expertise, preferences, and interests of the researchers (Paulus et al., 2017). The use of CAQDAS enables efficient handling and management of large amount of data including retrieval and storage of relevant data, thus taking away the cumbersome and time-consuming manual process of data organization from the researcher (Cypress, 2019). For this study, my choice of data organization technique was the CAQDAS. I uploaded the auto-transcribed interview from NVivo 12 software into Microsoft (MS) Word and manually corrected the wrongly transcribed information from the recorded audio.

ATLAS.ti, MAXQDA, and NVivo12 are some of the CAQDAS systems in use by qualitative researchers for data management, however, I used NVivo12 for Windows software for organizing and tracking the data, I collected from multiple sources. The

NVivo12 system has the capability to accommodate several different types of data: (a) MS Word documents, (b) images, (c) PDFs, (d) video, (e) spreadsheets, and (f) web pages and social media data (Dollah & Abduh, 2017; Paulus et al., 2017; Sepasgozar & Davis, 2018). In addition, NVivo12 works with data from any language, can be used to organize information using theme and case, and can be used to import articles and data housed in systems such as Refworks, Google Drive, Zotero library, Cloud, and Dropbox (Brandão & Miguez, 2017; Dollah & Abduh, 2017; Sharma & Sarmah, 2019). I imported the participants' data and data from other systems and software applications such as Zoom, interview transcripts in MS Word documents, and organized the data using NVivo12 software. NVivo12 software is a flexible system for data analysis with the capability for auto-transcription, coding, and retrieval of textual data from interviews (Dollah & Abduh, 2017). I coded the participants' names with P01, P02, P03, P04, and P05. I used the NVivo12 system to differentiate and store the participant's data and retrieved the data when necessary. Some users of NVivo12 system are of the view that it takes a lot of time for a novice user to learn the application and claim that the system is expensive for individual user, and not suitable for data interpretation (Dollah & Abduh, 2017; Paulus et al., 2017; Sepasgozar & Davis, 2018). However, NVivo12 is a powerful workspace for qualitative analysis, which enables the tracking of interviews and the ideas contained in the system without losing access to the source data (Dollah & Abduh, 2017; Paulus et al., 2017; Sepasgozar & Davis, 2018). Prior to data collection, I purchased the NVivo12 software and learned how to use the application using the online or hard copy manual as well as some literatures on the use of NVivo12 application.

Researchers employ various methods to store field notes, journal logs, company documents, archival documents, artifacts, observation notes, audio recording and other information related to the study (Bonello & Meehan, 2019; Cypress, 2018; Mansouri et al., 2017). I saved the interview transcripts, other soft copies of data collected, and password-protected the folders in my personal laptop with a backup password-protected hard drive of all the items as well as backup in a cloud environment to avert files getting corrupted. I listed all the file names against each soft copy of documents and other hard copy information on Excel spreadsheets to ensure I had an overview of every item and where they are. I kept away the list and other hard copy items including the backup external hard drive in a fireproof and waterproof safe in my home office with the key also kept away from everyone else, except me. I will retain all the data I collected for the study and stored electronically in my home safe for 5 years in accordance with Walden IRB requirement. I will electronically erase all the soft copies from the laptop and cloud environment and destroy the hardcopies by shredding or burning once the retention period lapses.

Data Analysis

Qualitative data analysis differs from quantitative data analysis in several respects. While quantitative data analysis is about converting words into numbers for statistical computation to make inferences and generate results, qualitative data analysis is about rendering more meaning out of text and image data based on evidence collected from human subjects in a natural setting through interviews, observations, and document review (Clark & Vealé, 2018; Fletcher, 2017; Yin, 2018). Qualitative data analysis is the

core of qualitative research with processes and procedures that enables the researcher to move from the data collection and organization stages into some form of interpretation and categorization of the data (V. Anderson, 2017; Lester et al., 2020). After the collection and organization of data, qualitative researchers follow logical steps of data analysis involving interpreting the transcribed data, becoming familiar with the data and sources, coding the data, producing categories and themes, and making the analysis process transparent for the purpose of credibility (Akinyode & Khan, 2018; Lester et al., 2020). Different methods, processes, and steps are usually employed by researchers in the qualitative data analysis phase, including the use of a triangulation approach, thematic analysis techniques, and CAQDAS, to ensure rigor and trustworthiness of the study (Castleberry & Nolen, 2018; Lemon & Hayes, 2020; Maher et al., 2018).

In a case study design, researchers use triangulation of data from multiple sources to arrive at a complete and wholesome picture of the phenomenon or situation under investigation (Clark & Vealé, 2018; Rooshenas et al., 2019; Yin, 2018). Researchers use any of the following or a combination of the following types of triangulation: (a) data triangulation, (b) investigator triangulation, (c) theory triangulation, and (d) methodological triangulation in the data analysis phase of qualitative research to enhance credibility and dependability of the study (Abdalla et al., 2018; Fusch et al., 2018; Lemon & Hayes, 2020; Wulansar, 2019). Researchers use methodological triangulation in case studies to compare, contrast, confirm, investigate gaps, reconcile, and integrate the multiple sources of data, to identify points of data convergence (Heesen et al., 2019; Nwanna-Nzewunwa et al., 2019). I used methodological triangulation during the data

analysis phase to converge the evidence I collected from semistructured interviews and company documents. I compared the information from participants' interviews and document reviews. I reconciled and integrated the information into a wholesome dataset in preparation for thematic analysis.

I used the thematic analysis technique to analyze the resulting data set from interviews and document reviews. Thematic analysis is a method of identifying, analyzing, and reporting patterns or themes within a given data set (Castleberry & Nolen, 2018; Hastings & Pennington, 2019). Thematic analysis is independent of any theoretical framework, and researchers find the technique simple, flexible, and more accessible to apply to wide variety of research questions and qualitative research topics (Cassol et al., 2018; Castleberry & Nolen, 2018; Lester et al., 2020). To ensure that the thematic analysis is systematic and thorough, researchers follow Yin's (2018) five-step model of qualitative data analysis: compiling, disassembling, reassembling, interpreting, and concluding (Cassol et al., 2018; Castleberry & Nolen, 2018). I used Yin's five-step approach of compiling, disassembling, reassembling, interpreting, and concluding to analyze the data I collected from multiple sources.

Compiling Data

Compiling data requires the researcher to organize the data from multiple sources into a format that is easier to analyze, including transcribing voice from recorded audio or video to textual form, developing a database for ease of accessibility and retrieval of information (Castleberry & Nolen, 2018; Clark & Vealé, 2018; Sutton & Austin, 2015). To accumulate rich data, commence development of themes and patterns in relation to the

research question, and gradually improve the data analysis process, researchers should

commence data analysis after interviewing the first participants rather than wait to

complete all the interviews (Belotto, 2018; Moser & Korstjens, 2018; Yin, 2018).

I commenced data analysis after interviewing the participants by transcribing the

recorded interview verbatim. I assessed the quality of the transcripts against the recorded

audio for correctness. I organized the data by distinctly filing the interview transcripts

from each participant into a folder in MS Word for ease of accessibility and retrieval. I

ensured that the interview transcripts and data from other sources are in applications that

are compatible with NVivo12 for ease of import or export into and out of the system. In

the process of compiling data, the researcher should become familiar with the content of

the interview transcripts by reading through carefully and repeatedly, while searching for

deeper understanding and meaning, and essential patterns in the dataset (Castleberry &

Nolen, 2018; Moser & Korstjens, 2018). I read the entire dataset several times to get

familiar with the content of the data and had a good understanding of key terms and

patterns from the transcripts.

Disassembling Data

Disassembling the data occurs after compiling and organizing the data. The

disassembling phase involves separating the compiled data into fragments and creating

meaningful groupings (Clarke & Braun, 2013; Maher et al., 2018; Wulansar, 2019).

Disassembling of data occurs through converting raw data from interview transcripts and

other sources into usable data through a process referred to as coding which simply

involves identifying similarities and differences in the data (Cassol et al., 2018; Maher et

al., 2018). As a good practice, during coding researchers should refer to the conceptual

framework, central research questions and purpose of the study to guide the coding

decisions (Belotto, 2018; Cassol et al., 2018). Researchers can use prior codes from

literature on similar research or the researcher can develop own codes allowing the codes

to emerge and modify through the coding process (Belotto, 2018; Brandão & Miguez,

2017; Richards & Hemphill, 2018). Researchers can create code manually or through

CAQDAS (Kalpokaite & Radivojevic, 2019; Maher et al., 2018). I used open coding and

not preset codes from literature or similar research topic. I developed and modified the

codes as I worked through the coding process. In NVivo, coding is the process of

gathering related information in the dataset into nodes, and these nodes provide the

storage areas for references to coded text (Brandão & Miguez, 2017; Maher et al., 2018;

Roberts et al., 2019). I used the NVivo12 software, a type of CAQDAS, for coding the

data I collected through interviews, document review, and journal notes. At the

disassembling phase, coding of data should continue until no new themes emerge (Moser

& Korstjens, 2018; Richards & Hemphill, 2018; Wulansar, 2019). I continued coding of

data until no new themes emerged.

Reassembling Data

The reassembling data process commences at the conclusion of the coding of data

and the process involves grouping and categorizing the codes for patterns and common

themes (Clark & Vealé, 2018; Nowell et al., 2017; Roberts et al., 2019). A pattern is a

consistent reoccurring term in a dataset that appear more than twice, and a theme is a

pattern that captures something significant or interesting about the data in relation to the

research question and conceptual framework (Braun & Clarke, 2019; Maguire &

Delahunt, 2017; Paulus et al., 2017). Researchers create themes by comparing the data

segments and using patterns to identify categories that are repetitive in the transcription

from the coded data (Clark & Vealé, 2018; Fletcher, 2017; Maguire & Delahunt, 2017).

Several qualitative researchers commonly use CAQDAS for reassembling data in terms

of clustering and categorizing data to determine links and alignment in the coded data

(Brandão & Miguez, 2017; Maher et al., 2018). On conclusion of the coding of data from

interview transcripts and company documents using the NVivo12 for Windows software,

I commenced categorizing the codes into patterns and at the same time searched for

themes using the same software application. I used NVivo12 for Windows software to

carry out the search for themes in relation to the research questions and conceptual

framework. Prior to commencing interpreting the data, a qualitative researcher should

diligently review the coded data extracts for each subtheme or theme to determine if a

coherent pattern is apparent and if any inadequacies, the researcher should modify as

appropriate (Clarke & Braun, 2013; Maguire & Delahunt, 2017; Nowell et al., 2017). I

carried out a review of the coded data extracts for each theme to ensure there were

coherent patterns and made changes as I found areas requiring modification.

Interpreting Data

The interpretation stage is a process of assigning meanings and making

conclusions from the sequence of codes and themes and this happens at the various stages

of compiling, disassembling, and reassembling data (Castleberry & Nolen, 2018; Nowell

et al., 2017). At the data interpretation stage, the researchers explain the significance of

the patterns and themes, and their broader meanings and implications, often in relation to the literature, the research question, and conceptual framework (Maher et al., 2018; Nowell et al., 2017). I initiated data interpretation at the compiling data stage through to disassembling and the reassembling stage, assigning meaning to codes and themes as they emerged from the data set. Where necessary, researchers usually create a thematic map at the data interpretation phase, to visually display relationships between themes beyond the linear template (Castleberry & Nolen, 2018; Fletcher, 2017; Nowell et al., 2017). I did not create a thematic map as it was not necessary to do so for this study.

Concluding Data

At the data conclusion phase the qualitative researcher synthesizes the various meanings assigned to the key themes, patterns, and groups during the data interpretation and uses the resulting premise to address the research question (Braun & Clarke, 2019; Castleberry & Nolen, 2018). The analysis of data is complete when the researcher can draw a set of conclusions about the interpretations of data that help to answer the research question (Lemon & Hayes, 2020; Moser & Korstjens, 2018; Rooshenas et al., 2019). I explained the significance of the patterns and themes, while assigning meanings and implications in relation to the literature, research question and conceptual framework. At the concluding data stage, the researcher will confirm how literature supports the findings and able to identify gaps in the study (Belotto, 2018; Braun & Clarke, 2019; Roberts et al., 2019). At this phase, the researcher can reflect on the credibility, confirmability, dependability of the study based on the findings from interpretations of the patterns and the themes obtained from the coded data (Clark & Vealé, 2018; Maher et al., 2018;

Nowell et al., 2017). I related the interpretation of the combined themes with the literature, conceptual framework, and research question. I drew meaning from the participant's data, reported the findings of the study, stated the implications of the findings to business practice, and identified gaps in the study for further research study.

Software Plan

The use of CAQDAS enables excellent data management and analysis including coding, development of themes and patterns, and it serves the purpose of data storage and retrieval (Maher et al., 2018). The common CAQDAS in use by qualitative researchers to manage and analyze data are ATLAS.ti, MAXQDA, and NVivo (Cypress, 2018; Sepasgozar & Davis, 2018). The CAQDAS I used to carry out data analysis was NVivo12 software. NVivo software reduces a great number of manual tasks, gives the researcher more time to discover tendencies, recognize themes, and derive conclusions, and thus enhances the speed and quality of data analysis and interpretation (Brandão & Miguez, 2017; Paulus et al., 2017; Sharma & Sarmah, 2019).

Researchers can export or import data from different sources, such as interview transcripts, company documents, and journal notes from MS Windows applications into NVivo12 software and vice versa (Dollah & Abduh, 2017; Paulus et al., 2017; Sepasgozar & Davis, 2018). NVivo12 software has flexible features that researchers can use for editing and revising initial codes, categories, and themes as many times as possible, as well as capability to store and retrieve textual data (Dollah & Abduh, 2017). NVivo is a powerful workspace for qualitative analysis, which enables the tracking of interviews and the ideas contained in the system without losing access to the source data

(Dollah & Abduh, 2017; Paulus et al., 2017; Sepasgozar & Davis, 2018). I purchased

NVivo12 software and received training before I commenced data collection and

analysis. I practiced the use of the software system for coding of data, categorizing,

creating patterns and themes prior to receiving Walden University IRB approval. I used

the NVivo12 software application to categorize the data I collected through

semistructured interview of participants and review of company documents. I used the

NVivo12 software to carry out structural data analysis, retrieved, and compared data for

interpretation. I uploaded the interview transcripts into the NVivo12 software application

and used the software system to perform both disassembling and reassembling of data. I

used the NVivo12 software application to code the data, categorized the data and create

patterns, develop subthemes and themes. I used the NVivo12 software to group the

themes and identified key themes to develop my findings in relation to the research

question.

Key Themes

The essence of data analysis in qualitative study is to identify key themes from

analyzed data in relation to the initial specific business problem of the study, the research

question, the purpose of the study and the conceptual framework (Maguire & Delahunt,

2017; Reefke & Sundaram, 2017; Varpio et al., 2017). I ensured the key themes I

identified had bearing on the specific business problem of this study, the research

question, and the conceptual framework. Qualitative researchers present major findings

as themes developed from reoccurring words, phrases, and ideas drawn from the

interview and other sources of data (Constantinou et al., 2017; Hughes et al., 2019). I

developed major findings from the themes that emerged from reoccurring words, phrases, and ideas drawn from the interviews and document reviews. Researchers use the key themes to address the implication to business practice and implications for social change (Nwanna-Nzewunwa et al., 2019). I used the key themes to draw conclusions on the implications to business practice and social change. Researchers compare how the key themes and findings agree with the findings of current literature related to the area of study (Aguinis & Solarino, 2019; Hughes et al., 2019; Lester et al., 2020). I compared the key themes with the literature, including recent related studies published prior to completing the analysis of my data.

Reliability and Validity

In quantitative research, validity and reliability receive assurance through rigid statistical techniques underpinned by mathematical data (Aguinis et al., 2017; Cypress, 2019; Tracy, 2010). Conversely, qualitative research is an interpretative inquiry and researchers require more flexible criteria to establish the trustworthiness of the research outcome (Pratt et al., 2020; Tracy, 2010). Establishing trustworthiness in qualitative study involves using the criteria of credibility, confirmability, dependability, and transferability (Birt et al., 2016; Cypress, 2018; Thomas, 2017). While quantitative researchers are concerned with the validity of quantitative study as a measure of rigor and integrity, the corresponding interest of the qualitative researcher is the credibility of the research findings (Amin et al., 2020; Cypress, 2019; Korstjens & Moser, 2018). Similarly the concept of reliability in quantitative study corresponds to the concepts of dependability, confirmability, and transferability in a qualitative research findings (Amin

et al., 2020; Cypress, 2018; Korstjens & Moser, 2018). As the quest for application and utilization of findings from qualitative research studies continues to increase in business practice and academics in various disciplines, researchers conducting qualitative studies must continue to demonstrate the trustworthiness of the research outcomes (Aguinis et al., 2017; Johnson et al., 2020; Nowell et al., 2017; Pratt et al., 2020). The qualitative researcher demonstrates rigor through the use of an interview protocol, collection of rich data, methodological triangulation, transparent data analysis, data and theme saturations, and member checking (Smith & McGannon, 2018; Thomas, 2017). In qualitative research, the researcher as an instrument for data collection and at the same time the data analyst, comes with preconceived ideas and biases into the study; therefore mitigating the biases reflexively, enhances the trustworthiness of the research outcome (Birt et al., 2016; Mitchell et al., 2018). I enhanced the credibility, dependability, confirmability, and transferability of this study by using the techniques of member checking and methodological triangulation.

Dependability

Dependability refers to the consistency, transparency, and reliability of the study results and the degree to which the researcher keeps records of the procedures and processes for conducting qualitative research to maintain an audit trail (Haven & Van Grootel, 2019). An audit trail is a transparent description of the research steps that a researcher takes to carry out a study from the beginning of a research project to the development and reporting of findings (Birt et al., 2016; Haven & Van Grootel, 2019). Maintaining an audit trail includes developing and using an interview protocol, using the

same interview questions for all participants, organizing, and storing data in a safe and secured place for ease of retrieval, and retaining data for the period set by the IRB (Pratt & Yezierski, 2018). Establishing dependability in qualitative case study requires that researchers demonstrate transparency and consistency in the data collection process through interviews, including selection of participants (Cypress, 2018; Korstjens & Moser, 2018; Pratt & Yezierski, 2018).

Researchers make use of member checking and an interview protocol to enhance dependability (Haven & Van Grootel, 2019). Member checking involves confirmation of the researcher's interpretations of the participants responses to the interview questions such that the participants can affirm the outcome of the study (Iivari, 2018; Thomas, 2017). I used member checking to ascertain that the participants agree with my interpretation of the interview responses. I used an interview protocol to help ensure the transparency and consistency of the interview process and to help mitigate my personal biases (see Appendix). Researchers use data and theme saturation to establish dependability of qualitative study (Sechelski & Onwuegbuzie, 2019; Tran et al., 2017; van Rijnsoever, 2017). I used data and theme saturation to establish the dependability of this study by stopping the collection and analysis of data when no new data and themes emerged.

Credibility

The concept of credibility in qualitative study is analogous to the concept of internal validity in quantitative study (Amin et al., 2020). Some of the techniques for establishing credibility are prolonged engagement, persistent observation, data and

methodological triangulation, peer debriefing and member checking (Lemon & Hayes, 2020; Nowell et al., 2017; Pratt et al., 2020). Researchers spend extended time to engage with participants to build rapport, have a good understanding of the phenomenon, obtain rich data from interviewing participants, and obtain other related information from document reviews (Korstjens & Moser, 2018). I invested time before the interview to engage all participants to build rapport. I explained the objective and significance of the research using the interview protocol (see Appendix). I also devoted time after the interview with participants to conduct member checking.

In methodological triangulation, researchers consolidate multiple perspectives and sources into a coherent and rich account, which also has the advantage of increasing the confidence in the accuracy of the findings (Johnson et al., 2020; Stewart et al., 2017). I used a case study design to explore the strategies leaders use for development of local suppliers in the oil and gas industry. I used methodological triangulation to achieve convergence of data from interviewing research participants and through reviews of company documents. Among the strategies for establishing credibility, qualitative researchers acclaim that member checking is the most essential strategy (Madill & Sullivan, 2018; Pratt et al., 2020; Thomas, 2017). In member checking, the participants confirm the researcher's interpretations of participants' responses to the interview questions to enhance the quality of the emergent themes (Amin et al., 2020; Smith & McGannon, 2018). I used member checking to affirm that my interpretations of the interview responses were accurate. I sent a one-page interpreted summary of the

transcript as well as analyzed data separately to the participants to review via email and followed up with video conferencing.

Confirmability

Confirmability is a process of establishing the degree to which the result of a qualitative study are a function of the participant's perspective of the study context and not of the biases, preconception, motivations, interests, and perspectives of the researcher (Forero et al., 2018; Maher et al., 2018). Qualitative researchers use audit trails, triangulation, member checking, and reflexivity to establish confirmability of a study (Forero et al., 2018; Haven & Van Grootel, 2019; Xerri, 2018). An audit trail is a clear documentation of the research focus, methods, data collection, analysis, and findings, which allows the reader to draw conclusions about the quality of a research process (Korstjens & Moser, 2018; Moon et al., 2016). In order to maintain audit trail the researcher should provide detailed description of sources and techniques of data collection and analysis, the process of coding and identification of themes, and the process of data interpretations, with the aim of demonstrating truthfulness within the findings (Maher et al., 2018). I followed the Walden University guidelines, including the rubric of the doctoral study, to document the process of data collection, data analysis, data interpretation, and reporting of findings to maintain an audit trail and hence establish confirmability of this study. Researchers use data and methodological triangulation to establish confirmability of a study (Fusch et al., 2018; Soroush et al., 2018). I triangulated the data collected from participants through semistructured interviews and review of company documents for the purpose of confirmability of this study.

Researchers use the technique of reflexivity in qualitative research to mitigate personal biases and establish confirmability of the study (Palaganas et al., 2017; Tuval-Mashiach, 2017; Xerri, 2018). Researchers commonly use a reflexive journal to record the research methodological decisions and the reasons for such decisions, the logistics of the study and reflections on their own experiences, values, and interests (Forero et al., 2018; Tuval-Mashiach, 2017; Xerri, 2018). In reflexivity, the researchers demonstrate transparency about their experiences of the context of the case under study and relationships with participants and organizations selected for the case study (Palaganas et al., 2017; Soroush et al., 2018; Tuval-Mashiach, 2017). The context of this study is the strategies leaders used for sustainable development of local suppliers in an oil and gas industry. Using the technique of reflexivity, I selected participants that I was not familiar with that were working for oil and gas companies that I had no working relationship with. I used member checking to have the participants review my interpretation of their responses to the interview questions to help ensure the study results reflect participants' perspectives and not my preconceived study outcome.

Transferability

Transferability in qualitative research draws parallels with generalizability in quantitative research (Aguinis & Solarino, 2019; Pratt et al., 2020). Qualitative researchers enhance transferability of studies through the process of data collection by ensuring the richness and depth of the data to enable readers of the research report to determine the applicability of the study findings to other contexts, situations, or individuals (Mitchell et al., 2018; Nowell et al., 2017). Researchers employ the strategy

of thick description to enhance transferability of qualitative study (Aguinis et al., 2017;

FitzPatrick, 2019; Forero et al., 2018). Thick description involves the description of a

phenomenon in great detail to enable other researchers or readers of a qualitative study to

evaluate the extent to which the findings are transferable to other contexts (FitzPatrick,

2019; Johnson et al., 2020). Thick description requires the provision of sufficient

information including the location setting, sampling method, criteria for selecting

participants, reactions observed that are not captured on audio recording during

interview, relationships with participants, and position of the researcher (Pratt et al.,

2020; Smith & McGannon, 2018). I reviewed professional literature to provide detailed

information about the focus of the case study including the conceptual framework. I

provided a description of the sampling method and the reason for the choice of the

method.

Using an interview protocol, semistructured interviews, and probing questions

during data collection from participants, and meticulously reviewing company

documents, the researcher can improve depth and richness of the data and enhance the

integrity of the findings for other researchers to transfer to their situations (FitzPatrick,

2019; Heesen et al., 2019; Natow, 2020). To enhance the transferability of this study, I

adhered to the interview protocol for the collection of data from participants in order to

collect in-depth and rich data and mitigate bias (see Appendix). I used semistructured

interviews to obtain data and followed up with probing questions to improve the richness

of the information from the participants. I used thematic data analysis techniques and

employed NVivo 12 software to analyze data and develop themes that could enhance the

level of confidence of the study. I detailed the steps I followed to enhance transferability of the findings of this study to guide future researchers to determine whether the findings are transferable to their context or case.

Data Saturation

Data saturation is one of the strategies that qualitative researchers use to enhance credibility, dependability, and confirmability of a qualitative study (Aguinis & Solarino, 2019; Constantinou et al., 2017; Varpio et al., 2017). Data saturation is the point in data collection when the researcher begins to hear the same information provided by previous participants from new participants during interviews, indicating that no new information related to the research question is emerging from participants (Braun & Clarke, 2019; Constantinou et al., 2017; Costello, 2017). Data saturation also occurs when no new codes or themes emerge during the process of data analysis, at which point the researcher has no need to continue the process of data collection, coding, and development of themes (Fusch et al., 2018; Heesen et al., 2019; Natow, 2020). Reaching data saturation depends on the type of sampling method used, the eligibility criteria of participants, and the sample size (Heesen et al., 2019; Nelson, 2017).

The use of interview protocols, semistructured interviews, and interview questions are strategies that facilitate data saturation (Costello, 2017; Guest et al., 2017; Natow, 2020). I used an interview protocol to ensure consistency of the interview process (see Appendix). I ensured that I asked the participants the same interview questions and probed further to obtain depth and rich data until no new data and themes emerged. Researchers use methodological triangulation in qualitative case study to confirm and

reconcile multiple sources of data (Natow, 2020; Soroush et al., 2018; Thomas, 2017). In methodological triangulation, researchers use data from multiple sources to complement and clarify information from another data source to enhance the credibility of the study (Fusch et al., 2018; Heesen et al., 2019; Natow, 2020). Triangulation is a strategy for confirming data saturation and a technique for establishing the credibility and dependability of qualitative research (Heesen et al., 2019; Kaso et al., 2018; Nwanna-Nzewunwa et al., 2019).

I used methodological triangulation to reconcile data I collected from participants' interviews and document reviews to achieve data saturation. Researchers use member checking to elicit new data and new themes from participants or help confirm the point of data saturation through the participants' confirmation of researcher's interpretation of the responses to the interview questions (Birt et al., 2016; Madill & Sullivan, 2018; Pratt et al., 2020). I used member checking to identify point of data saturation by requesting the participants to confirm my interpretations of the responses to the interview questions. I used the feedback from participants in the process of member checking to identify the point of data saturation and help confirm that the findings are true reflections of participants' perspectives.

Transition and Summary

In Section 2, I presented the purpose of the study, explained the role of the researcher, and the eligibility of participants as well as the strategies for gaining access to the participants. I also presented the research design for the study and factors that influenced my choice of the research method and design. Other key parts of Section 2 are

the strategies I used to adhere to ethical research standards, the process I used to obtain informed consent from research participants, and steps I took in ensuring the confidentiality of the participants and involved companies. I concluded Section 2 by describing data collection instruments, data collection techniques, data organization techniques, data analysis, and reliability and validity of the study. In Section 3, I will include the presentation of the findings, a description of the application to professional practices, implications for social change, recommendations for action, recommendations for further research, reflections, and conclusion.

Section 3: Application to Professional Practice and Implications for Change

The purpose of this qualitative, multiple case study was to explore the strategies oil and gas industry leaders used for the sustainable development of local suppliers. I recruited five eligible SCM leaders who have been involved in the development of local suppliers from three different oil and gas companies in Nigeria to participate in the study. To help ensure the privacy and confidentiality of the participants, I coded them as P01, P02, P03, P04, and P05. The participants were interviewed in a semistructured format using a virtual tool to collect and record data from the participants. I obtained organizational documents from the oil companies' public websites, including annual reports, published sustainability reports, Nigerian Local Content Acts, joint operating agreements, and procurement policies and procedures. I attained data saturation when there was no new information from participants and when their responses to the interview questions became repetitive. I transcribed the interviews using NVivo12 transcription software. To help ensure the accuracy of the transcriptions, I listened to the audio several times and corrected the errors in the auto-transcribed interviews. Following the transcription and review of the documents, I uploaded the transcripts into the most recent NVivo12 software system. Using the NVivo12 software system, I coded the data obtained from the participants and categorized the codes into themes. Member checking was used to confirm if my interpretation of the data properly reflected the responses of the participants in the interviews. I sent to each of the participants a two-page summary of my interpretation of their responses via email and followed up with a video conference

of about 30 minutes with each participant to clarify if my interpretations of their responses were accurate.

In Section 3, I present the findings of the study. Section 3 also includes a description of the application to professional practices, implications for social change, recommendations for action, recommendations for further research, reflections, and a conclusion.

Presentation of the Findings

The conceptual framework of this study was the SSCM theory of Pagell and Wu (2009). The overarching research question for this study was: What strategies do leaders in the oil and gas industry use for the sustainable development of local suppliers? To answer this research question, I conducted semistructured interviews with five participants using a virtual tool because of the coronavirus pandemic not allowing face-to-face interviews to occur. Each interview lasted for about 40 minutes. I recorded all the interviews and transcribed the contents of the interview verbatim. I also obtained organizational documents and triangulated data from both the interviews and review of the organizational documents to ensure the credibility of the study. The following key themes emerged during data analysis: creating business opportunities, leveraging the institutional framework, effective financial management, development of leadership and technical skills, collaboration with external stakeholders, and effective performance management. The themes aligned with the literature and the conceptual framework of this study.

Theme 1: Creating Business Opportunities

Table 1

Creating Business Opportunities

Code	Number of Participants	Percentage
Leadership support	5	100%
Limitations of suppliers	5	100%
Unbundling contracts scopes	4	100%

One of the key themes that emerged during data analysis was creating business opportunities for local suppliers. Most local suppliers in Nigeria are unsuccessful in their attempts to provide goods and services to the oil and gas companies in Nigeria (Nwapi, 2020). All the participants asserted that local suppliers in Nigeria are limited in technical and financial capacity to meet the standards required by oil companies. The participants' assertion of the weaknesses of local suppliers agrees with Kragelund's (2020) position on the inability of local suppliers to compete with their foreign counterparts. P03, P04, and P05 stated that leaders in their companies were concerned about the low rate of success recorded by local suppliers in competitive bids. The three participants explained that they took conscious decisions to create opportunities for local suppliers not only to participate in bids but also to ensure they were successful in competitive tenders. From the participants' views, the standards set by their companies were too high for the local suppliers to meet.

To carry out an objective assessment of why the local suppliers were unsuccessful in contract tenders, the oil companies engaged the services of external bodies. P01, P02,

and P05 stated that they had to work with external consultants, such as NGOs and educational institutions, to investigate the reasons behind the low success rates recorded by local suppliers in competitive tenders. P05 stated, "We invited nongovernmental organizations (NGOs) and some professional institutions to find ways to create opportunities for local suppliers to participate and win bids." According to P05, the consultants they engaged found that the bundling of the contracts by their company made it difficult for the local firms to meet the technical standards and raise enough money to execute the contracts.

Bundling scopes of contracts together limits opportunities for local suppliers to build technical and managerial competencies. According to Calignano and Vaaland (2018), the perception of local suppliers in the oil and gas industry is that regardless of a local firm's efforts to improve, the oil and gas firm preference is to bundle contracts for major and foreign suppliers. Since local suppliers were unable to compete with larger foreign suppliers, the NGOs recommended that some of the contracts' scopes should be unbundled for the local suppliers to execute. Hoekman and Taş (2020) found that unbundling contracts into smaller scopes and lots creates opportunities for the participation of small- and medium-sized suppliers and increases their chances of winning contract tenders. Breaking down the contract scopes into smaller bits creates opportunities for local suppliers and encourages them to build their capacity.

The oil companies classify contracts as major or minor contracts. Major contracts are highly technical with higher safety risks and high financial requirements in execution, while minor contracts are a category of work with very low risk and low financial

requirements. P01 explained that the local suppliers who demonstrate some potential to provide materials and services during the selection process were always encouraged to start from minor contracts. P03 responded, "Local contractors had to start small until some of them were able to handle high-risk contracts." To create minor contracts for local suppliers, focal buying firms may unbundle larger contracts scopes into smaller scopes.

Subcontracting is another method of unbundling contract scopes to enable the participation of local contractors. The oil companies used subcontracting strategies to create opportunities for local suppliers. P01, P03, and P04 noted that the idea behind the subcontracting strategy was to unbundle contracts and provide opportunities for local suppliers to win part of the contract, especially for services where they have the required competencies and have enough funding to execute. Ahmad et al. (2017) stated that to develop local suppliers, the buying firms must make a deliberate effort to take risks on the local suppliers and create opportunities for them to build capacity. Subcontracting has become a process of building local capacity in the oil and gas industry in Nigeria. P02 noted that the subcontracting process is a medium through which the major contractors cede part of the scope of the contract to local suppliers to create opportunities to do business and gain expertise. According to P01, P02, and P04, their companies collaborate with original equipment manufacturers (OEMs) to create opportunities for local suppliers through subcontracting. The participants asserted that most of the foreign suppliers of critical equipment have local representatives in Nigeria because of the arrangement between the oil companies and the OEMs.

Oil and gas companies arrange with OEMs to transfer technology and skills to local suppliers. As claimed by some of the companies in some documents, OEMs are transferring technology to their local representatives by giving them the right to manufacture some of the equipment in Nigeria. Some of the examples provided in the documents are the coating of line pipes and threading of oil country tubular goods. As noted by Amankwah-Amoah et al. (2018), local suppliers in sub-Saharan Africa have welcomed the opportunities created by a transfer of technology as a means of acquiring technical skills and expanding their businesses. P04 stated that OEMs also invest resources to train local suppliers to become responsible and capable representatives. The use of local suppliers by OEMs provides the global suppliers with the license to operate and opportunities to expand their businesses.

The development of local suppliers creates more competitive supply markets for buying organizations. P01 described how their company, through the creation of opportunity for a local supplier, broke a 30-year monopoly in a highly technical, high risk, and high capital-intensive service industry. P01 added, "This local service provider now competes favorably with foreign competitors and had even expanded the business beyond Nigeria to some other West African countries." The decision by the leaders of the company to break the monopoly and use a local supplier was to reduce cost and create competition as well as build local capacity in that service industry. The assertion made by P01 about breaking of monopoly aligned with information in some of the companies' documents I reviewed. In some of the reports, the oil companies shared examples of what

the companies did to grow local capabilities through breaking the monopoly enjoyed by foreign suppliers in the areas of aviation, marine, and construction engineering sectors.

The use of pilot projects to test the capabilities of contractors was a key highlight of the participant interviews. P02 noted, "In some cases, the development of local suppliers happens through pilot projects; where the organization tests the capabilities of the contractors first, identify gaps, take action to close the gaps, before expanding the contract scope to cover more areas." The suppliers that performed well in the pilot projects had opportunities for more jobs of similar scope to build both technical and financial capabilities.

Local suppliers can help to reduce costs and develop innovation capabilities. The participants' claims about the opportunity created by them for local suppliers aligns with reports on some of the documents on the increasing number of local vendors providing services. The increase in local supplier participation, as reported in the documents, aligns with Ayoola's (2017) findings that the amount of money spent annually in Nigeria for local goods and services is increasing. As reported in some of the documents, the low oil price has also contributed to the use of local suppliers to provide services to reduce costs. One specific example stated in a report was the development of indigenous companies to acquire drilling rigs and pipe coating and pipe threading equipment to reduce the cost of importation and manage the exchange rate volatility in Nigeria. Developed local suppliers can create the competitive advantage required for obtaining a license to operate in host countries.

Competent local suppliers can complement foreign suppliers or become alternative suppliers during global supply chain disruptions. P04 referred to how global supply chain disruptions, especially during coronavirus pandemic, compelled the oil companies to support indigenous contractors to provide services that foreign suppliers could not manage because of limitations posed by the pandemic. The deliberate actions taken by leaders of oil firms to create opportunities for local suppliers aligned with the conceptual framework of this study concerning positive management orientations towards the sustainable development of suppliers. According to Joseph et al. (2019), leaders' positive management orientations towards the development of suppliers enable the achievement of sustainable development of the supply chain.

Leaders with positive management orientation can provide an enabling environment to develop local capacity. Joshi et al. (2018) posited that top management involvement and the continuous monitoring of supplier development programs in their organizations have a positive effect on suppliers' capabilities. Local suppliers' financial and technical capabilities improve with every opportunity provided to them to do business with the oil firms, leading to the supplier continuity discussed in the conceptual framework. The creation of business opportunities through the deliberate award of contracts to local suppliers is an indirect way of developing suppliers.

Creating business opportunities is an indirect method of building local capacity. Brix-Asala and Seuring (2019) found that indirect supplier development encourages the acquisition of resources and capabilities by local suppliers in developing economies. Yawar and Seuring (2018) stated that the reason buying firms initiate indirect supplier

development strategies is to ensure supply base continuity, which relates to one of the

key tenets of the conceptual framework of this study. The ceding of some services and

supplies to local suppliers by oil firms is one of the indirect ways of developing suppliers.

Through the execution of some of the contracts created by the leaders in the oil and gas

industry, local suppliers were able to build both technical and financial capability and

capacity.

Theme 2: Leveraging the Institutional Framework

Table 2

Leveraging the Institutional Framework

Code	Number of Participants	Percentage
Local content policy	5	100%
Adoption and joint implementation	5	100%
The usefulness of the institutional framework	4	80%

One of the main themes that emerged from data analysis was leveraging the

institutional framework to develop a strategy for the development of local suppliers. The

main institutional framework that relates to local supplier development in Nigeria is the

Local Content Act of 2010. All the participants asserted that the Local Content Act has

contributed to local capacity building in Nigeria. Stating the importance of local content

policy, Belitski et al. (2017) pointed out that local content policies are tools for industrial

development in developing economies. The policy enables the growth of local capability

through access to foreign technological and managerial expertise.

An institutional framework can serve as an instrument for building relationships amongst key stakeholders. The Nigerian government, under the Local Content Act, established a monitoring board called the Nigerian Content Development Management Board (NCDMB) to monitor compliance of the oil and gas companies (Nwapi, 2020). The participants noted how they adopted the institutional instrument of local content and how the policy has helped the companies to develop strategies for supplier development. According to Obiri et al. (2019), the local content aids the facilitation of interactions between the oil companies and local suppliers to enhance the development of indigenous capability. P04 stated that in leveraging the Local Content Act, their company carried out a gap analysis between their company's process and the provisions of the Local Content Act. Continuing, P04 noted, "To close these gaps, we have to come up with action plans, which we are still implementing to date and that has helped our supplier development journey." Leaders of organizations should develop a positive attitude towards an institutional framework to harness the benefits of content in the document.

Joint implementation of the local content policy by key stakeholders affects local suppliers positively. P05 noted, "Without the Local Content Act, we would not have been where we are on local supplier development." P01 explained that because of the adoption of the Local Content Act by the oil companies and the commitment shown towards meeting the requirements, the Nigerian government appointed one of the staff of the oil companies as the executive secretary of NCDMB to drive the implementation of the Local Content Act. The active involvement of both the government of a host country and the oil companies facilitates the implementation of local content policy in meeting the

objective of local supplier development (Obiri et al., 2019). The local content act in Nigeria is providing a platform for relationship building among stakeholders to the benefit of local suppliers.

Noting how useful the institutional framework has been concerning the development of local suppliers, P04 stated, "We leverage on the Local Content Act and the memorandum of understanding with local communities, and the joint operating agreement, which also specify some incentives for operators within the joint venture to encourage the development of local suppliers." The joint operating agreement serves as a memorandum of understanding between the oil companies and National Petroleum Investment Management Services (NAPIMS). All the participants noted that until the enactment of the Nigerian Local Content Act, their various organizations were not as committed as they are now to the development of local suppliers. P03 stated, "This is a wake-up call for our organization and other big oil companies." White (2017) argued that institutional frameworks could be counter-productive on investment, because of the high cost of implementing some aspects of the policy. However, the participants hold the view that without the institutional framework, some oil companies may not be interested in local supplier development.

Commenting on the Local Content Act, P05 stated, "The regulatory framework forces people to do the necessary things." As P02 observed, "Supplier development is a necessary activity, as it does not only benefit the host communities and the government but the oil companies." Leaders in the oil company in Nigeria use local content policy to create opportunities to develop more suppliers and create competition in the supply

market. Asiago (2019) posited that the aim of the local content laws of petroleum-resource countries is to increase local participation in the petroleum industry. P02 and P04 noted that local content policy is an instrument to achieve SDGs of the UN as some of the provisions in the Nigerian Content Act have some similarities with UN SDGs.

The participants also referred to the Nigerian Cabotage Act, called "The Coastal and Inland Shipping (Cabotage) Act 2003," as another statutory instrument that they have leveraged to create opportunities for local suppliers and enhance their capability. Nigerian Maritime Administration and Safety Agency (NIMASA) is the body charged with the responsibility of ensuring compliance with the Nigerian Cabotage Act. Discussing the role of NIMASA, P01 noted, "We have a body referred to as NIMASA that monitors the implementation of the Cabotage law just to make sure that local contractors are not left out in what the oil and gas companies are doing." Commenting on the Cabotage Act, P01 stated, "Under the Cabotage Act, the oil firms must use marine vessels built in Nigeria, flying the Nigerian flag, owned by Nigerians, and crewed by Nigerian citizens, except when such type of vessels are not available in Nigeria." The NCDMB latched on to the Cabotage Act in defining how oil and gas companies requiring maritime vessel services can go about it. P02 added, "Complying with the Nigerian Cabotage Act has boosted the local maritime industry as several Nigerian companies now own offshore-going vessels, with a few shipyards springing up for building vessels that support offshore activities in the oil and gas industry."

The oil companies highlighted in their sustainability reports and newsletters how they collaborate with NCDMB, NAPIMS, and NIMASA to explore the provisions in the

Nigerian Local Content Act, to build local capabilities. According to Hilson and Ovadia (2020), the establishment of government agencies to liaise with the oil companies to develop, implement, and monitor local content act is important to achieve the objective of supplier development. P04 stated that the NCDMB Act has helped to streamline the fragmented and overlapped guidelines of the various government bodies in Nigeria regarding the implementation of local content. According to Rui et al. (2018), to reduce oil and gas project delay and cost overrun in Nigeria, leaders in the oil and gas industry should understand the local content law, meet the requirements, and leverage the law to build local capacity. The participant's assertion aligns with Olawuyi's (2019) findings that there is an appreciable measure of success in the implementation of the Nigerian Local Content Act.

Leveraging the institutional framework as a strategy for local supplier development relates to collaboration among stakeholders, as identified in the conceptual framework. Yawar and Kauppi's (2018) asserted that institutional theory drives leaders' positive action because of coercive and mimetic pressure from stakeholders. The findings from the participants demonstrate how the oil and gas companies leveraged the institutional framework to collaborate with regulatory bodies and suppliers to build local capabilities. Leveraging the local content policy is not only benefitting the oil companies but has a long-term positive effect on the socioeconomic system of Nigeria. The synergy between the Nigerian government through NCDMB and NIMASA and the oil and gas companies as noted by P05 aligns with the concept of synergy between key stakeholders and the leaders of buying firms in the SSCM theory.

Theme 3: Effective Financial Management

Table 3

Effective Financial Management

Code	Number of Participants	Percentage
Direct funding by oil companies	4	80%
Financial management training	4	80%
Governance and compliance	5	100%

One of the themes from the analysis of the data obtained from the participants is effective financial management. Karadag (2018) posited that education and knowledge, as well as experience in the business, have a positive effect on local suppliers' financial performance. The five participants explained that the factors militating against local suppliers are limited access to funding, low level of financial literacy, and inability to manage cash flow. Commenting on poor financial management among the local suppliers, P03 stated, "One thing that I observed is the unavailability of funding to local suppliers to execute contracts and inability to manage their financial resources." The projects in the oil and gas industry require high capital to execute and good financial literacy to manage costs. Appiah et al. (2019) found that local suppliers with inadequate capital, limited access to credit facilities, and a low level of financial literacy are less likely to participate in the oil and gas sector. According to Bongomin et al. (2017), local suppliers who are financially literate will find it easier to obtain funding from financial institutions and manage financial risks than their counterparts with a low level of financial literacy.

Skill in financial management is necessary for small- and medium-sized companies to be successful in business. P05 and P02 noted that because several local suppliers do not have good knowledge of financial management, they are unable to manage their financial risks. Continuing, P02 stated, "Ability to manage the finances of the organization was the starting point of helping the suppliers to build financial capacity." P05 stated that their company made a concerted effort to mentor the local suppliers on financial management. Some of the suppliers went through financial mentorship programs arranged by the oil company. Four of the participants gave instances when the finance departments of the oil companies arranged training and mentoring programs for the local suppliers on budgeting, financial record keeping, and commercial negotiation skills to improve their financial management skills. Bongomin et al. (2017) found that there is a positive correlation between financial literacy, access to finance, and the growth of local suppliers in developing nations. Similarly, Ye and Kulathunga (2019) found that financial literacy has a positive effect on the sustainability of SMEs, access to finance, and financial risk attitude.

P02 emphasized during the interview how their company supported suppliers in financial management. P04 shared a similar experience and explained how one of the local contractors who won a high-risk contract in their organization received support through recruiting a financial expert to help them to grow their financial base. Emphasizing financial management mentoring, P03 explained that apart from awarding contracts to the suppliers, their company helped the suppliers to develop the financial management plan for the contract. The plan had elements such as the cost of running the

contracts, how to maintain cash flow, and expected profit, and so on. The explanation of P03 correlates with Wadesango et al.'s (2019) finding in their investigation of local firm owners. According to Wadesango et al., only a few business owners who possess the knowledge of cash flow management are profitable and have sufficient funding to ensure the sustainability of their businesses.

Summarizing the aspect of financial management mentoring, P04 stated that apart from the support their company gives to local suppliers to access funding from financial institutions, they also, train and mentor the suppliers on financial risk management. Four of the participants explained that in partnership with the banks, they have at one time or the other organized programs for the local suppliers, on how to access funding from financial institutions including developing business plans that met the bank's requirements for business financing. The participants' comments on financial training courses and mentoring agree with Kirsten's (2018) findings that financial training significantly improves the skill and financial self-efficacy of small business owners. According to Kirsten, local suppliers can make better financial decisions and manage their cash flow effectively if they possess financial management skills.

Lack of funding for local suppliers to execute a contract is a form of barrier to local suppliers to participate in the oil and gas business (das Nair & Landani, 2021). According to Tang et al. (2017), two innovative financing schemes namely purchase order financing and buyer direct financing that enables small suppliers to access funding to execute contracts. Some of the participants provided insight on how they provided funding for local suppliers and built their financial capability through payment terms; an

approach related to buyer direct financing where manufacturers issue both sourcing contracts and loans directly to suppliers. P04 stated, "We know that funding was a challenge for the local suppliers, so it was important we looked at the contracts from the perspective of payment terms." According to P01, P03, and P04, there are three types of payment terms: (a) one was through advanced payment, (b) the second was payment through reduced payment period, and (c) the third was funding for the purchase of equipment and other assets. P02 stated, "My company provided kind of upward funding or part funding for the local suppliers to be able to start up."

P01 highlighted how their company provides funding for local suppliers, and stated, "We give them some form of advanced payment, to buy machines, and some other equipment and lock up the contract for a long term to enable us to get our money back." Such long-term contracts help local suppliers to build a financial base, and technical skills. P03 also stated,

> We give them preferential payment terms instead of XX number of days for well-established suppliers, we reduced it to X days to enable them to receive payment for work-done earlier than the standard waiting period to ensure there is cash flow to run their business and meet up with their financial obligations.

P04 stated, "We know funding is a challenge to local suppliers, so we accelerate their payments for services in such a way that they will be able to meet the company's supply needs without exposing themselves so much to the banks." P04 also stated that sometimes paying a little higher rate to the local suppliers against lower rates for goods and services serves as an incentive to encourage local suppliers' participation. The joint

operating agreement and production sharing agreements between the oil companies and NAPIMS provide for the oil companies to pay higher for goods and services provided by a local supplier if it is within 10% of what a foreign supplier offers for the same services (Onyi-Ogelle, 2016). P04 explained that the intangible benefit of paying a little higher to local suppliers does outweigh the cost because of an improved relationship with communities and the license to operate.

All the participants discussed how the oil companies collaborated with the banks to provide low-interest rate loans to local suppliers for funding contracts or projects awarded to the suppliers. P01 stated, "We collaborate with banks and other financial institutions for a low-interest loan for local suppliers." In some cases, the oil companies must intervene to persuade the banks to provide loans to the suppliers for funding some specific projects awarded to the suppliers. The banks in Nigeria have confidence in the international oil companies (IOCs) and are ready to support local suppliers that can show evidence that they have a contract with the IOCs. P02 echoed,

> We recommend the local suppliers to the banks where they can have access to funding, and with the local purchase order issued by the company, the banks are always willing to advance the local suppliers some money to enable the execution of contracts awarded to the suppliers.

The use of local purchase orders to obtain loans from banks aligns with the financing scheme described by Tang et al. (2017).

Theme 4: Development of Leadership and Technical Skills

Table 4

Development of Leadership and Technical Skills

Code	Number of Participants	Percentage
Hands-on training	5	100%
Supervision	5	100%
Participation in formal courses and conferences	5	100%

An important theme that emerged from the data analysis is the development of

leadership and technical skills of local suppliers. All the participants attested to a lack of

professional competency and leadership skills among local suppliers to execute the scope

of services in the oil and gas industry. The finding on local suppliers' incompetency to

execute contracts aligns with the literature on the inadequacy of local suppliers'

capability. P02, P03, and P05 noted that critical activities in engineering, logistics,

drilling, and production operations require high technical skills, which are lacking among

many local suppliers. P03 stated, "When the contract started, some of the personnel were

not experienced in certain aspects like marine, facility management, maintenance of

equipment, construction, and so on."

Possession of leadership and technical skills is important for a small- and

medium-sized organization to remain competitive. Aladejebi (2018) indicated that

technical and managerial skills development is essential for the growth of small business

owners such as local suppliers and serves to increase firm profitability and capabilities.

P03 and P05 explained that the first thing their companies did was to identify the

competency gaps in the ability of the local suppliers to perform the job. The identification

of competency gaps of local suppliers is the first step in developing the strategies to

develop technical and managerial skills. P03 and P05 explained that on completion of the

analysis of the competency gaps, their companies developed action plans to close the

competency gaps. Bridging competency gaps can occur through formal and informal

training.

All the participants stated that the most common actions taken to address local

suppliers' professional competency gaps are through formal technical and leadership

courses. The other actions taken as explained by the participants are seminars,

workshops, on-the-job training or handholding by the oil companies, and direct

supervision and mentoring. Joshi et al. (2018) found that formal training and education

through seminars and workshops have been an effective means of developing suppliers.

P01 stated,

> Once we can identify those suppliers and award minor contracts to them, we
>
> encourage those local contractors to attend relevant training programs, including
>
> in-house training that we arranged for them, in the area of health, safety, and
>
> environment as well as some technical and financial management courses.

Identification of training needs is important to know the appropriate training

intervention to close competency gaps. P03 stated,

> So, when we identify areas of competency gaps in the personnel, that are
>
> hindering effective delivery, we did either some form of a workshop or full-blown

training or whatever is required to reduce the gaps at the initial stages until the contractor was able to stand on their feet properly.

P01 stated, "So once in a while, we sponsor events such as training and workshops, and encourage our local contractors to participate in such workshops or seminars so that they will be able to build their capacity." According to Saghiri and Wilding (2021), direct supplier development programs, provided by buying organizations, encourage supplier's participation, increases supplier's absorption capacity, and have a strong positive impact on the suppliers.

Another form of capacity building through training was understudying foreign companies providing those services. Using the legal framework of local content, some of the foreign suppliers were encouraged to establish a branch of their businesses in Nigeria. Part of the effort to improve the competency of local suppliers as explained by P01 is the deliberate provision in some engineering contracts that the construction of the facilities should happen wholly or partly in Nigeria. A company's report contains the action they took through a contracting process to encourage a foreign supplier to complete the topside of a production storage facility in Nigeria to create opportunities for local suppliers to learn from the expertise of the foreign company. Dladla and Mutambara (2018) demonstrated through their study that training intervention enhances the managerial and technical skills of local suppliers.

There were times that oil companies had to consciously handhold some of the local suppliers and provided professional hands-on training to them. P03 cited a situation where their company had to send staff from their company to the local supplier's

organization to impact technical, managerial, and safety knowledge to them. The other form of mentoring and supervision came from original equipment manufacturers and contractors who were already technically competent. These competent contractors through arrangement by the oil and gas company provided mentorship to the local suppliers and helped to build the local suppliers' capability. According to Rentizelas et al. (2020), awarding the contract to local suppliers that meet some sustainability criteria is good but for the suppliers to build capacity to a point where they can be independent, the oil firms should monitor and mentor the suppliers diligently.

PO2 stated, "We had the big contractors that now became like mentors to the younger suppliers, and with time they were able to cope." As part of handholding, the companies even helped them to select competent personnel. Most of the contracts given to the local suppliers were under very close supervision of the companies' personnel as a way of training and mentoring. P02 stated, "I kind of worked closely with them for a period, to help them go through the learning process and resolve some contractual issues, as this was part of building capacity." P05 stated, "There is supervision by competent experts and even local competent hands to oversee the activities of the local contractors to guide them to improve their skills." P03 stated, "It is possible, based on my experience to develop local suppliers, even if they do not have all the qualities that are required in executing certain contracts, they can develop the skills over time and thereby become critical suppliers."

The aspect of creating opportunities for the local suppliers to participate in some of the services and supplies of goods to the oil companies is one of the ways of building

suppliers' technical and managerial capacity. As noted by Lebdioui (2020), the gradual acquisition of technological and managerial skills through learning by doing enables the development of the capacity of local firms to meet the high standard demands of the oil and gas sector. There are reports in some of the IOCs' documents, about the support provided to build the capacity of local companies that acquired some of the divested oil acreages, through handholding, coaching, and mentoring for a period of 6 months to 1 year to enable them to operate the assets effectively. As noted by P01, P02, and P04, several of the local companies are operating the divested assets successfully.

From the SSCM theory of Pagell and Wu's (2009), development of technical and managerial skills promotes innovation and improves the performance of local suppliers. Theme 4 links to the literature on building innovation capability and aligns with the proposition of the conceptual framework on innovation-oriented strategies for the sustainable development of suppliers. Development of leadership and technical skills are achievable through traditional methods of formal training, workshops, and seminar attendance. However, from the participants' perspectives, handholding and mentoring of local suppliers have been very effective in building the innovation capabilities of local suppliers.

Theme 5: Collaboration with External Stakeholders

Table 5

Collaboration With External Stakeholders

Code	Number of Participants	Percentage
Stakeholder mapping	5	100%
Relationship management	5	100%
Alignment of goals and priorities	5	100%

One of the themes that emerged was collaborating with external stakeholders to improve local suppliers' capabilities. The key stakeholders and the oil companies that collaborate together to develop local suppliers are the NCDMB, NAPIMS, host communities, NIMASA, financial institutions, and educational institutions such as universities and polytechnics. P01, P02, and P03 confirmed that the key stakeholders they collaborate with are NCDMB, NAPIMS, host communities, and NIMASA. P01 stated,

We collaborate with several key actors, that is, our partners, in the entire value chain including communities, NCDMB, NAPIMS, NIMASA, training organizations, and educational institutions to develop something that will be acceptable to all parties because each of the key stakeholders has their priorities.

The view of P01 aligns with the stakeholder management aspect of the SSCM theory of Pagell and Wu (2009), which recognized that stakeholders' needs vary and are sometimes conflicting. Stakeholders' needs drive their behavior and actions towards the oil firms.

All the participants alluded to the fact that stakeholders have priorities that differ from that of others, so their companies tried to align the conflicting priorities of the

stakeholders and narrow their varying objectives to a common goal towards sustainable local supplier development. In the reports from two of the three oil companies on collaboration with stakeholders, the companies reported that there were overlaps of regulatory guidelines between NAPIMS and NCDMB. Through collaboration, the stakeholders streamlined the operating guidelines to achieve a common objective of the local supplier development. This aligns with the SSCM theory of Pagell and Wu (2009) regarding how positive leadership orientation can foster collaboration among stakeholders. P03 and P05 noted that the partnership among stakeholders motivated the Nigerian Government to appoint the executive secretary of NCDMB from one of the oil and gas companies to head NCDMB. Ablo (2020) advocated for better collaboration between stakeholders to build a shared vision and engender value co-creation, which is central to the successful implementation of local supplier development programs in the oil and gas industry.

Before the existence of NCDMB, each oil company used its best endeavors to create menial jobs for the local suppliers. P01 and P02 explained that NCDMB developed a more sustainable guideline for local supplier development, which NAPIMS and the oil companies follow when awarding contracts to suppliers. According to L. Liu et al. (2018), external stakeholders contribute to supplier development as drivers, facilitators, or inspectors. NCDMB's role relates to that of the drivers in L. Liu et al.'s framework of a multistakeholder approach to supplier development. NCDMB ensures that the oil companies meet the minimum compliance level set by the board before the award of the contracts. NAPIMS is responsible for approving all contracts award to suppliers in the oil

and gas industry in Nigeria and this role aligns with that of an inspector. NCDMB and NAPIMS roles on local capacity building support the proposition of the SSCM theory of Pagell and Wu (2009) on the positive impact of collaboration among stakeholders. Institutional framework as described by all the participants has become an instrument that engenders collaboration among stakeholders towards the improvement of local suppliers' capability. Belitski et al. (2017) noted that leveraging local content policy to develop suppliers, works better when stakeholders collaborate.

The local suppliers at first were skeptical about the oil companies' commitment to the building of local capacity. P03 explained that building trust amongst stakeholders and transparency was necessary to ensure the cooperation of all stakeholders. P01 stated that oil companies always carry out several engagements with key stakeholders to share their plans towards achieving supplier development. There was also periodic engagement to review performance under the company plans and NCDMB key performance indicators. Early engagement of key stakeholders before project conceptual designs provides the opportunity to stakeholders to make their input into the strategy on how local suppliers will be involved. Leaders in the oil and gas industry know the appropriate measures to take to address the weaknesses of the local suppliers around competency and finance towards participation in the execution of projects. P02, P03, and P05 stated that early engagement helps to delineate roles and responsibilities amongst the stakeholders.

Collaboration among stakeholders is one of the key propositions of the Pagell and Wu (2009) theory of SSCM. All the participants expressed during the interviews that cooperation among stakeholders positively affects the development of local suppliers. An

element of stakeholder theory discussed by Barney and Harrison (2020) and expanded in

the conceptual framework of the study is creating consciousness among business leaders

about how their business decisions can affect society in the short- and long-term. Such

business decisions for supplier development when co-created among stakeholders

produce more effective results than when leaders in the companies take unilateral

decisions. The SSCM theory of Pagell and Wu and the literature emphasized that

stakeholders have roles to play in ensuring supplier continuity through the development

of managerial and technical competencies, as well as the financial capacity of local

suppliers.

Theme 6: Effective Performance Management

Table 6

Effective Performance Management

Code	Number of Participants	Percentage
Performance monitoring	3	60%
Continuous improvement	4	80%
Impact and reward	5	100%

An interesting theme that emerged during the analysis is effective performance

management. Buying organizations use performance management to identify the

strengths and weaknesses of a supplier towards the mitigation of risk of poor services or

quality of products in the supply chain (Tse et al., 2018). Performance management is

one of the strategic relationship management practices used by buyers to improve the

skills of suppliers. Lee et al. (2018) posited that an effective performance management

process has a positive outcome on the improvement of supplier capability and improves supply chain performance.

The participants categorized performance management into two aspects. One aspect is the oil companies managing the performance of the local suppliers and the second aspect is the regulatory bodies, such as NCDMB, NAPIMS, and NIMASA using their various institutional frameworks to manage the performance of the oil companies. On the performance monitoring of the local suppliers, each organization has a set of key performance indicators for managing the local suppliers' performance. P02 and P04 stated that some of the key performance indicators are parameters in the areas of health, safety, and environment; timeliness in project or service delivery; and quality of products and service delivery. The other performance measures are adherence to the code of conduct and supplier's ability to meet financial obligations to employees and creditors. P03 noted that with the key performance indicators, their company detects early warning signals of poor performance, and takes immediate actions to address the failures. P02 noted, "We have tools we use to track the performance and then regularly review the performance with the local suppliers."

The participants stated that the oil companies are beginning to recognize the impact of the local suppliers' activities on the oil firm's sustainability performance and such indicators on environmental and social performance are included in the key performance indicators. Performance management has provided the local contractors the required lens to know the impact of their activities on the environment and hence their commitment to improving their competency. The participants admitted that the local

suppliers are becoming aware and getting more committed to environmental improvement; however, commitment towards social responsibility is still low. P01, P03, and P05 explained that though ethical issues such as the nonuse of child labor are included in their contract terms, the oil firms are unable to monitor compliance because of the complexity of the supply chain. Stressing the importance of the triple-bottom-line, Shibin et al. (2020) argued that the long-term success of a firm depends on social, environmental, and economic measures.

The companies continue to monitor the local suppliers' performance over time to know the progress they are making and where they need help to improve. Through performance management, companies can discover suppliers' weaknesses and strengths (Saunila, 2017). Identifying local suppliers' strengths helps to determine the services or goods they can provide, and identifying their weaknesses helps the companies to know what actions to take in their technical and managerial development. As explained by the participants, their organizations use performance management to identify areas of weakness in business that needs attention and improvement.

The monitoring of pilot projects created for local suppliers is one strategy the oil and gas company leaders are using to improve competency through performance management. P02 stated that pilot projects provide the opportunity for their company to monitor local supplier performance during the period of the pilot project. As P02 noted, the performance process in the pilot project goes through a process of "plan, do, check, and improve." P04 indicated that through performance monitoring, suppliers who excel get more business opportunities. P05 indicated that one way of ascertaining improvement

in the capability of local suppliers is when they start competing favorably with foreign

suppliers.

As part of performance management, some local suppliers that excel in the

services are recognized and rewarded to encourage them to do better and motivate those

lagging to improve. P02 noted that some of the suppliers are usually recognized and

rewarded in conferences, such as the National Oil and Gas Conference held annually in

Abuja, Nigeria. As P02 and P04 explained, "recognition and reward given to high

performing local suppliers encourage improvement and innovation, as well as motivate

low performing suppliers to improve." P04 added that the essence of recognition and

reward was to display the recorded successes and to encourage the suppliers to continue

on the side of continuous improvement. P05 and P01 linked reward and recognition to the

incentives and penalty clauses built into contracts terms and conditions. According to

Selviaridis and van der Valk (2019), penalizing suppliers for poor quality and rewarding

good performance encourages suppliers to improve their skills and performance. The

participants noted that while the oil companies promote incentives for local suppliers, the

application of penalties is rare in order not to discourage the local suppliers.

The other side of performance management is managing the performance of the

oil companies concerning the progress they are making in developing local suppliers.

According to Yawar and Seuring (2020), supplier development activities require regular

monitoring to ascertain the effectiveness of the programs. Relating to literature and the

conceptual framework, NCDMB and NAPIMS act as inspectors of the oil companies and

monitor the effectiveness of local supplier development programs deployed by the oil

companies. The oil companies also receive feedback from other stakeholders on the effectiveness of the activities deployed for local supplier development. P04, stated, "As we also progress along the line of monitoring progress that we are making, we get feedback from the suppliers, we get feedback from staff, and we get feedback from local communities." The feedback from stakeholders serves as qualitative performance measures for the oil and gas companies. P04 noted that with such feedback they could determine the effectiveness of each strategy and the ones that need improvement.

All the participants stated that they have their internal mechanisms to monitor their performance in local supplier development in line with NCDMB's key performance indicators. The NCDMB monitors the oil firms to ascertain the percentage of the participation of the local suppliers and the success rates in contract bids. P05 stated, "One way of demonstrating performance improvement in the area of local supplier development is the increased in their participation against their foreign counterparts and the quality of work delivered and timeliness in project delivery." P05 continued, "Today you have wholly indigenous companies, and they are participating in those tenders and are winning in some cases, they are winning some of those bids." The objective of supplier development is to improve performance as described in the conceptual framework of this study. Effective performance management is a key strategy for ensuring continuous improvement of local suppliers in the oil and gas industry.

Application to Professional Practice

Suppliers with adequate technical, financial, and managerial capabilities can improve buying firm's sustainability performance. The supply chain of the oil and gas

industry is still evolving (Ahmad et al., 2017), hence, the leaders in the industry lack strategies to develop local suppliers. The purpose of this qualitative, multiple case study was to explore the strategies leaders in the oil and gas industry use for the development of local suppliers.

Six key themes representing the strategies leaders in the oil and gas companies used for the sustainable development of local suppliers emerged from the findings of this study. The themes were: creating business opportunities, leveraging the institutional framework, effective financial management, development of leadership and technical skills, collaboration with external stakeholders, and effective performance management. Leaders in the oil and gas industry may apply the findings of the study to identify the competency gaps of the local suppliers to apply appropriate training intervention measures. Leaders might use the result of the gap analysis to choose the appropriate strategies that can serve the purpose of closing the capability gaps.

Leaders in the oil and gas industry might use the study findings to increase the technical and managerial capability of the local suppliers. Local suppliers are unable to compete with global suppliers because of the high technical and managerial standards required by oil companies (Kragelund, 2020). Leaders might apply the findings of this study to develop the leadership and technical skills of local suppliers for formal and informal development of local capacity.

One of the key problems business leaders in the oil and gas industry face is funding for local suppliers to execute contracts. Leaders in the oil and gas industry might adopt the advanced payment for goods and services to improve the cash flow of local

suppliers and reduce their dependence on local banks that charge high-interest rates. From the study findings, most local suppliers are not financially literate and are unable to manage their finances. Improving the financial management skills of the suppliers through financial literacy and mentoring programs provided by oil and gas companies will reduce the probability of financial losses.

The coronavirus pandemics disrupted the global supply chain especially for oil and gas companies that depended on foreign suppliers. According to Gereffi (2020), competent local suppliers can mitigate the negative impact of supply chain disruption during a global supply crisis. Business leaders can leverage the provision of the local content policy and other institutional frameworks to collaborate with stakeholders to build local suppliers' capability. Goods produced locally and services provided by a competent local labor force cost less than imported foreign goods and services. Therefore, applying the strategies from the findings of the key themes of the study to develop local suppliers will enhance the increase in locally made oil and gas tools.

Beyond economic performance, investors have an interest in how the firms they finance are applying the noneconomic factors of environment, social, and governance (ESG) to identify material risks and growth opportunities. Using the findings of the study, leaders might collaborate with stakeholders to develop training interventions for local suppliers that can improve their skills in environmental management, corporate social responsibility, and governance. Leaders in the oil and gas companies in oil-rich, developing countries may use the findings of this study for strategic management of suppliers relationships. Mentoring and hands-on training were found to be effective in

developing local suppliers, hence leaders in the oil and gas industry may adopt the strategies of mentoring and handholding to build local capacity.

Implications for Social Change

One of the key propositions of the SSCM theory of Pagell and Wu (2009) is supplier and supply continuity. Most of the local suppliers in the oil and gas business are in the category of SMEs. According to Bushe (2019), SME businesses in Africa fail because of a lack of entrepreneurial skills. Applying the strategies from the findings of this study to develop local suppliers will lower the probability of failures of SMEs that provide goods and services to the oil and gas companies in developing countries. Small- and medium-sized businesses employ a large labor force especially in developing countries (Owoseni & Twinomurinzi, 2018). Therefore, as more local suppliers build capability and sustain their businesses, the country's industrial base will increase and more jobs will become available for the unemployed. Reduction in unemployment level reduces poverty level especially in a developing country such as Nigeria.

Some environmental damages caused by oil and gas companies are attributable to local suppliers because of poor technical capability. Environmental damages, create social problems especially for the local population that depend on farming and fishing as means of livelihood. Developing the ESG management skills of local suppliers will increase their commitment to solving the socioeconomic and environmental problems caused by oil and gas activities. The leaders in the oil and gas industry in Nigeria might use the findings of this study to develop performance measures to track and monitor the ESG performance of local suppliers. International oil companies maintain strong ethical

principles, but the same level of commitment is lacking among the local suppliers. Training and monitoring of local suppliers on ethics and compliance are important to prevent unethical practices that can lead to the loss of investors' confidence in the oil companies.

The development of local suppliers in Nigeria has the positive impact of creating employment opportunities for the youths and hence reduction of oil theft activities caused by some of the youths in host communities. Oil theft causes loss of revenue to the country and the oil companies. The activities of oil theft also cause serious safety incidents such as crude oil spills and gas fires. More participation in the oil and gas business by local small- and medium-sized suppliers will improve the gross domestic product of oil-rich, developing countries.

Recommendations for Action

The purpose of this qualitative, multiple case study was to explore the strategies leaders in the oil and gas industry use for the sustainable development of local suppliers. I recommend that leaders in the oil and gas industry use the strategy of creating business opportunities through unbundling of contract scopes to build the capacity of local suppliers. Leaders in the oil and gas industry can identify local suppliers with the potentials to provide goods and services and provide support to them through supervision and mentoring to build their capacity. Learning by doing is a process that facilitates the acquisition of technical and managerial skills and plays a major role in the development of local suppliers in emerging economies (Ikeda, 2020). I recommend that supply chain

practitioners collaborate with foreign OEMs of oil and gas tools to develop local suppliers with the potentials to grow their capabilities.

I recommend the oil and gas industry leaders use the strategy of effective financial mentoring to develop local suppliers in the oil and gas companies. The oil companies have a strong financial base and can make funding available to local suppliers in various ways, such as advance payment for goods and services without interest and shortened payment time or payment for goods and services on delivery instead of paying for services in arrears. The leaders in the oil and gas companies should train the local suppliers on financial management and monitor their financial performance to prevent financial mismanagement.

Leaders in the oil and gas industry in developing countries should leverage institutional frameworks to build the capability of local suppliers. Leaders should explore and apply the benefits of the local content policies to develop action plans that meet the developmental needs of the local suppliers as provided for in the framework. I recommend that the oil and gas industry's leaders identify critical stakeholders and collaborate with them to build shared visions and implement programs for building the capacity of local suppliers.

Leaders in the oil and gas industry should collaborate with technical and leadership development organizations and institutions to develop programs specifically for developing the skills of local suppliers that meet the standards required by the oil and gas industries. The training programs should cover all the elements of sustainability; environmental, social, and economic. Programs specifically designed for closing the gaps

in the skills of local suppliers will produce an effective result and will benefit the oil and gas firms in achieving sustainable performance.

I intend to share the findings of the study with the participants and recommend that they share them with their teams in their companies to improve the strategies use for developing local suppliers. I plan to find opportunities during conferences organized by SCM bodies in Nigeria to share the result of the findings with a wider audience of supply chain leaders. I intend to develop the study into an article for publication and submit for publication in the following peer-reviewed journals: (a) *International Journal of Physical Distribution & Logistics Management*, (b) *Journal of Supply Chain Management*, (c) *The Extractive Industries and Society,* (d) *Journal of Purchasing and Supply Management,* and (e) *Journal of Small Business and Entrepreneurship Development.*

Recommendations for Further Research

The scope of the study covered the strategies five leaders in the oil and gas industry used to develop local suppliers in Nigeria. I recommend that researchers continue to study what leaders in the oil and gas industry in other countries in sub-Saharan Africa have done to confirm or explore strategies used in the region. The sample size of five suppliers and the localization of the study to the Niger Delta geographical area in Nigeria limited the study.

Although the study is not about SMEs, the category of business owner's study falls within the SME category. The industry covered in the study is the oil and gas industry; however, there are local suppliers in other sectors in Nigeria with similar problems of limited capacity. Researchers should study the development of local

suppliers in other industries in Nigeria to find if the same strategies apply. The use of a single industry as an area of focus limits the transferability of this study to other industries.

To confirm the effectiveness of the study, researchers will need to explore the views of the local suppliers who have been beneficiaries of local supplier development programs. The study is limited on the effectiveness of the strategies and absorptive capacity of the local suppliers. I recommend that researchers explore how the local suppliers absorb knowledge and skills to ascertain their absorptive capacity and effectiveness of the strategies.

One of the key themes that emerged in the study is leveraging the institutional framework. There is limited study on how focal firms leverage an institutional framework to develop suppliers. I, therefore, recommend that researchers explore this theme in-depth. Similarly, I recommend researchers explore further the theme of creating business opportunities for local suppliers as a sustainable development strategy.

Reflections

The doctoral study was not an easy journey for me but taught me lessons on determination and resilience in project management. It was a very long journey, as I did not appreciate the challenges of combining a very tedious working life, family pressures, and the demanding study at the same time. Suspending and nearly abandoning the program and returning to complete the study at a more opportune time after some years is a lesson on managing conflicting priorities.

I have worked in SCM for more than 28 years in the oil and gas industry. I brought my working experience to bear on the design of my doctoral study but had to manage my biases to ensure that my experience did not influence the findings of this study. I based my findings on the responses from participants and organizational documents of the oil and gas companies. I used member checking by sending a summary of the participants' responses and a summary of my findings to them to confirm that my interpretations reflect their responses, and I received their confirmation. I used interview protocols (see Appendix) and the same open-ended interview questions for all participants; a process that served as multiple bracketing techniques to mitigate my biases.

Even though I have applied coding and thematic analysis subconsciously during brainstorming in my place of work, I did not realize how important it was until I could relate to it during the coding of the qualitative data and categorizing the codes into themes. The experience I had at work made coding and analysis of the data easier and faster and eliminated the fear I had nursed about analyzing my data before the data collection and analysis stages.

The finding on leveraging the institutional framework for supplier development is an addition to the body of knowledge. I reviewed literature during this study and expected that the finding of this study, in addition to others, may close gaps in SCM research and practice. Overall, the findings of this study may contribute to the body of knowledge on global SCM research and practice.

Beyond working in a multicultural environment, studying in a virtual environment has also provided another opportunity for interaction in a uniquely multicultural environment and building a virtual network. Through the study, I improved my skills on some management principles such as receiving feedback, managing expectations, and setting realistic goals. I learned through the study the advantages and disadvantages of multitasking.

Conclusion

Local suppliers in the oil and gas industry lack capabilities to meet the standards for the supply of goods and services. However, leaders in the oil and gas industry lack the strategies to carry out this SCM activity. The purpose of this study was to explore the strategies the oil and gas industry leaders use for the sustainable development of local suppliers.

The conceptual framework of this study was the theory of SSCM of Pagell and Wu (2009). I structured this study on the propositions of the SSCM theory and carried out an in-depth review of literature that relates to the purpose of the study. Five leaders who had carried out local supplier development in their companies participated in this study. I used semistructured interview techniques to collect data from the participants. I also collected data by reviewing the documents I obtained from the website of the oil companies.

I coded and analyzed the data using the five-step data analysis of Yin (2018). The data analysis yielded six themes as follows: creating business opportunities, leveraging institutional framework, effective financial management, development of leadership and

technical skills, collaboration with external stakeholders, and effective performance management. The themes aligned with the literature and the conceptual framework of this study. The themes relate to the strategies that leaders in the oil and gas industry use for the sustainable development of suppliers and linked to the SSCM theory of Pagell and Wu (2009). The leaders in the oil and gas industry might apply the strategies to build the capabilities of local suppliers in the oil and gas industry to improve sustainability performance. The implication of the findings to social change is the stimulation of entrepreneurial culture and the sustainability of the businesses of local suppliers to reduce unemployment.

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Appendix: Interview Protocol

Interview preparation. When I received approval from Walden University Institutional

Review Board (IRB), I immediately established contact with the participants using my

professional network to obtain the telephone numbers and email addresses of the leaders I

interviewed. I called the leaders participating separately on phone to agree date, time,

video conferencing tool, and place for the interview. I followed up with the participants

by email to confirm our discussions and agreements on email with a proposal to remind

them a day before the interview so they could prepare and ensure their video

conferencing facilities are in functional state and that they have secured a private place

free of distraction for the interview.

Opening the interview. I greeted the participants before commencing the interview. I

thanked the participants for accepting to participate. I explained the purpose of the

interview, the purpose of my research, and the business and the social benefits. I ensured

the participants were comfortable throughout the interview.

Informed consent. I sent a copy of the inform consent in advance for the participants to

review. I had separate discussions with all the participants through telephone to explain

the purpose of the inform consent and ask participants to sign the informed consent forms

and returned signed scanned copy by email to me. I also explained that participants were

free to withdraw from the process at any time if they did not feel comfortable to continue.

I informed the participants before the interview started that I would record the interview

for the purpose of transcriptions. Before starting the interview, I recorded my voice, my

name, date, time, the name of the participant and numeric code for the participants for the purpose of analysis and reporting.

Conducting the interview. I followed a semistructured interview process to interview the participants with open-ended questions.

Follow up with probing questions. Once I received primary answer from the participants to each of the interview question, I followed up with probing questions to get more information from the participants.

Theme verification. I asked the participant about the major themes discussed in the interview to ensure that I understood the intent of the participant.

 Coding. I used numeric coding to ensure the privacy and confidentiality of the participants. For example, I coded the first participant I interviewed as P01. I coded the second participant as P02, and so on for the remaining participants. For the purpose of analysis, I maintained a list of the participants and linked their names with the coded numbers. I maintained confidentiality and privacy of the participants name and will ensure I am the only person who had access to this list for the allowable period of data retention, till I destroy the information.

Recording reflexive notes. I took notes to document any reflexive thoughts I had while the interview was proceeding including probing questions that I asked during the interview.

Ending the interview. I thanked the participants for the time and information they provided, and informed the participants that I would contact them later to verify the accuracy of the transcript, and to engage in member checking to obtain any additional

information they might offer. I reiterated that the content of the interview would remain

confidential and that I would not reveal their names and the names of their companies in

the published research.