ONSHORE OIL AND GAS INFRASTRUCTURE DECOMMISSIONING - A COMPARATIVE ANALYSIS WITH GLOBAL LEGAL FRAMEWORKS, FOCUSING ON UGANDA

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S20M23/010

A DISSERTATION SUBMITTED TO THE SCHOOL OF LAW IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A DEGREE OF MASTER OF LAWS IN OIL AND GAS OF UGANDA CHRISTIAN UNIVERSITY

April, 2024

UGANDA CHRISTIAN UNIVERSITY

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DECLARATION

I, Tumwesigye Remigious, hereby declare that this dissertation is my work, and it has not been submitted before to any other institution of higher learning for the fulfillment of any academic award.

Signed:

Date: 17th May 2024

APPROVAL

This is to certify that, this dissertation entitled "EXTENT OF NATIONAL CONTENT PARTICIPATION IN UGANDA'S OIL AND GAS SECTOR" has been done under my supervision and now it is ready for submission.

Signature…

Supervisor's Name: Prof. Yawe Bruno Lule

Date: 26th May 2024

DEDICATION

I dedicate this study to the children raised in the ghettos that have limited access to education and health care. May they grow to benefit heavily from the Oil and Gas Sector of Uganda.

ACKNOWLEDGEMENT

I would like to express my deepest appreciation to Professor Yawe Bruno Lule for his great guidance during this study, without it I would have been like a sheep without a shepherd. He exercised patience with me, and his encouragement could never be measured.

This endeavor would not have been possible without the support of my dear wife, Kamuli Sarah. She stood with me in pulling resources to complete this course. She has been my number one cheerleader from the beginning.

I am grateful for the invaluable support I received from my fellow students, Luke Alere and Masozi Geoffrey, during the course of my study. Their unwavering dedication to providing peer support, advice, and their precious time played a pivotal role in ensuring that my research journey was seamless and fruitful.

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LIST OF ACRONYMS

ACODE: Action Coalition for Development and Environment

C.V.I: Content Validity Index

CNOOC: China North Offshore Oil Company

IBS: Industrial Baseline Survey

IOC: International Oil Company

NOGCBP: National Oil and Gas Capacity Building Project.

NOGP: National Oil and Gas Policy

NOGTR: National Oil and Gas Talent Register

OAG: Office of the Auditor General

OPEC: Organization of Petroleum Exporting Countries

PAU: Petroleum Authority of Uganda

PEPD: Petroleum (Exploration, Development and Production)

POB: Persons on Board

PPDA: Disposal of Public Assets Authority

SMEs: Small and Medium Enterprises

STEM: Science, technology, engineering, and mathematics

UNBS: Uganda National Bureau of Standards

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNOC: Uganda National Oil Company

UPIK: Uganda Petroleum Institute Kigumba

ABSTRACT

This research endeavoured to delve into the extent of national content participation in Uganda's oil and gas industry. By comprehending the level of engagement of indigenous businesses, the study aimed to pinpoint potential areas for improvement and evaluate how the nation can capitalize on its resources and expertise for sustainable development.

This research sought to investigate three objectives including assessing the extent to which local entities provide skills, services and supplies in the oil and gas sector, examining the proportion of Ugandans against expatriates being employed in the oil and gas sector and investigating and understanding the obstacles and difficulties encountered in the successful implementation of national content participation in the oil and gas sector in Uganda focusing on the Albertine Graben region.

This study was conducted as a cross-sectional survey design, using a mixture of questionnaires, interviews, and document review to collect data. The study included 102 participants who were selected using purposive and simple random sampling.

The research findings revealed that there is a need for increased investment and support for local suppliers, ongoing efforts to enhance the capabilities of the Ugandan workforce, and increased enforcement of local content limitations by the government.

It was concluded by emphasizing the necessity of increased investments and support for local suppliers to assist them in competing with global firms. If this goal is achieved, economic growth and sustainability in Uganda could be fostered. In addition to this, there is a continual need for efforts to be made to improve the capabilities of the workforce in Uganda and to guarantee that multinational oil companies are complying with the legislative obligations that surround the employment of locals.

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Introduction

This research focused on determining the extent of national content participation in Uganda's oil and gas sector, specifically targeting companies and corporate entities, personnel, industrial experts, business managers, and agencies in the oil and gas sector.

In Uganda, the government as a caretaker of petroleum and minerals on behalf of the people was committed to ensuring that exploitation of these resources was done in a manner that created lasting value to society. This responsibility was exercised based on Article 244 of the 1995 Constitution of the Republic of Uganda as amended in 2005. This process however has met a number of challenges, and it has become apparently clear that the emphasis and implementation of the national content participation may have been achieving little, imperatively making it subject to more research, hence prompting this particular study.

The sections of this chapter comprise the background to the study, statement of the problem, the general and specific objectives of the study, the research questions, scope of the study, conceptual framework, significance, justification and operational definitions of the key terms and concepts used.

1.2 Background of the study

1.2.1 Historical background

Globally, foreign capital in oil and gas sector has historically driven investment and employment (World Bank, 2016). But the most valuable contribution to long term sustainable and inclusive growth comes from the ability of the extractive industries to generate further benefits to the domestic economy beyond the direct contribution of its value-added, through productive linkages with other sectors (World Bank, 2016).

Therefore, government interventions in the oil and gas sectors to support broad-based economic growth are hardly a new trend (Silvanda, 2019). The extent and type of intervention has evolved over time from the restrictions on imports, and direct state intervention, to more complex policies aimed at creating backward and forward links. While these policies have the potential to stimulate broad-based economic development, their application in resource-rich countries has achieved mixed results (Silvanda, 2019).

The confirmation of commercial oil and gas resources in Uganda has improved the prospects for developing a robust oil and gas industry and presents an opportunity to leverage these resources for revenue generation, and domestic investment and catalyze domestic private sector development. These developments have raised the expectations of Ugandans about the potential for participating in and benefitting from the oil and gas subsector. In this context and drawing from the global experiences in the oil and gas industry, turning this potential into real opportunities for citizens requires deliberate and sustained efforts.

According to the national oil and gas policy (2008), the government of Uganda is undertaking several initiatives to ensure direct and indirect participation of Ugandan citizens and enterprises in the oil and gas subsector to contribute to achieving lasting benefits for the country. These initiatives include capacity building, employment of Ugandan citizens, enterprise development, the use of locally produced goods and services, and transfer of knowledge and technology.

However, enabling Ugandan citizens and enterprises to participate in the provision of goods and services to the desired levels requires significant effort, support and collaboration amongst the relevant stakeholders. The National Content Policy therefore seeks to enhance the opportunities, address challenges and constraints, describe the necessary institutional framework to coordinate the development, implementation, and monitoring of the National Content, and provide the necessary monitoring and evaluation framework.

1.2.2 Theoretical background

This research was guided by the game theory (Neumann & Morgenstern, 2020). In their 1947 book, which also lays out the foundations of utility theory looked at as a central element in decision theory, provided an analogy between decision problems that people and organizations face and parlor games such as poker or bridge.

Cooperative game theory assumes people will do what they say they will do, a promise made is a promise kept. In real world decision situations, this is far too optimistic. Cooperative game theory works well for zero-sum games, where one side's loss equals the other side's gain, but most actual decision-making situations are more complex.

1.2.3 Conceptual background

Local content or national content is the development of local skills, oil, and gas technology transfer, and use of local manpower and local manufacturing. For a more practical definition, one could say that local content is building a workforce that is skilled and building a competitive supplier base (Shepherd, 2010).

Every country would like to keep its wealth within its borders, as well as providing jobs to the ever-increasing population by enabling and assisting its citizens to capture the commanding heights of its economy. This is achieved through capacity building, creating SMEs as well as offering products and services locally.

1.2.4 Contextual background

In Uganda, several laws, especially, the Constitution of the Republic of Uganda provides for private sector participation, involvement of citizens and enterprises in the implementation of development programs to meet the country needs.

However, in March 2015, the Auditor General published a report on Implementation of National Content in Uganda's oil and gas sector by the Ministry of Energy and Mineral Development identifying gaps in the enforcement of local content in the purchase of Ugandan goods and services, employment and training of Ugandans and criteria for determining state participation in the production of petroleum resources (The Office of the Auditor General, 2019).

Local enterprises are drivers of economic activity and development. It is also important that the spread of local technologies in developing countries is fast tracked since technological advancement underpins the rise in incomes and reduction in poverty levels from 29 percent in 1990 to 18 percent in 2004 in most developing countries (Arizona-Ogwu, 2008).

According to the Auditor General's report, the participation of Ugandan suppliers in the oil and gas industry is constrained by several factors including information asymmetries, challenging business environment, limited access to finance, inadequate infrastructure, difficulties meeting high quality standards of the International Oil Companies (IOCs), limited business knowledge among others. These inadequate participation of the local players in this industry has given rise to little or no job creation, no value adding benefits to the economy because of non-utilization of local raw materials to the oil and gas industry.

The study contributed to information on local capacity, gaps and interventions required to enable Ugandan companies and entities to supply the oil and gas industry. This study advises on the feasibility of the government interest to ring fence jobs and services for local companies and encouraging joint ventures. This will increase on the employment opportunities for Ugandans and facilitate easy transfer of technology and training of locals.

1.3 Problem Statement

The oil and gas sector played a pivotal role in Uganda's economic development, offering substantial growth opportunities (Cohen et al., 2019; Ntare et al., 2020). However, concerns emerged regarding the limited participation of local entities within this sector, becoming a critical issue for policymakers and stakeholders (Mugume et al., 2018; Nakayiwa & Isabirye, 2021). The focus of this research was to delve into the historical extent of national content participation in Uganda's oil and gas industry, particularly emphasizing the involvement of local entities in providing essential skills, services, and supplies (Obura & Atuhaire, 2017).

By comprehending the historical engagement levels of indigenous businesses, the study aimed to pinpoint potential areas for improvement and evaluate how the nation could capitalize on its resources and expertise for sustainable development (Ssekakubo et al., 2019). A fundamental aspect of historical national content participation in the oil and gas sector was the employment ratio between Ugandans and expatriates (Muhumuza et al., 2022; Kyomugisha et al., 2023). Therefore, the research also conducted an in-depth investigation of the historical employment composition within the industry (Nkonge et al., 2020).

Understanding the historical balance between local and foreign workers held immense significance in gauging the sector's impact on the domestic workforce, potentially shedding light on any disparities in employment opportunities (Mbabazi & Kwizera, 2018; Mwebesa et al., 2021). By meticulously examining this historical aspect, the study aimed to address concerns related to historical job creation, workforce development, and social equity, while also exploring avenues to promote greater representation of Ugandan professionals and labor in the sector.

Although historical national content participation promised substantial benefits, challenges inevitably impeded its successful implementation (Kasekende & Muhumuza, 2019;

Tumushabe & Katuramu, 2020). The study acknowledged the importance of identifying these historical obstacles and understanding the factors that hindered local entities' effective engagement in the oil and gas sector (Owomugisha et al., 2022; Tumusiime et al., 2023).

It addresses the historical challenges surrounding national content participation in Uganda's oil and gas sector, with a particular focus on the limited involvement of local entities. Despite the sector's potential for economic growth, concerns persist regarding the historical imbalance in participation between indigenous businesses and foreign entities. By analyzing historical engagement levels, employment compositions, and identifying obstacles hindering local participation, the study sought to pinpoint areas for improvement and promote greater representation of Ugandan professionals and labor in the sector, thereby fostering sustainable development and social equity.

1.4 Objectives of the Study

1.4.1 General Objective

The main objective of the study was to examine the extent to which national content participation has been realized by determining the actual local involvement in the oil and gas sector.

1.4.2 Specific objectives

1. To assess the extent to which local entities provide skills, services and supplies in the oil and gas sector.
2. To examine the proportion of Ugandans against expatriates being employed in the oil and gas sector.
3. To investigate and understand the obstacles and difficulties encountered in the successful implementation of national content participation in the oil and gas sector in Uganda.

1.5 Research questions

1. To what extent do local entities provide skills, services and supplies in the oil and gas sector?
2. What is the proportion of Ugandans against expatriates are employed in the oil and gas sector?
3. What are the challenges in the implementation of the national content in the oil and gas sector?

1.6 Scope of the study

1.6.1 Subject scope

The subject of this research was national content participation and determining the actual involvement of local participation in the Uganda oil and gas sector. The research specifically investigated the number of Ugandan workers versus expatriates employed in the sector.

It also established the entities that were working and providing skills, services, and supplies in the oil and gas sector, the nature of supplies, and the extent to which local enterprises provided supplies, and the implementation of the national content policy in the oil and gas sector.

1.6.2 Geographical scope

Geographically, the area of this research was the Albertine region where Uganda discovered commercially viable oil reserves of six billion barrels of which an estimate of 1.7 billion were recoverable. These discoveries were mainly in the Albertine graben region and other reserves within Nwoya, Bullisa and Hoima Districts. Evaluated potential oil and gas fields under production licenses in the area included Kingfisher, Mputa, Kasamene, Kigogole, Nzizi, Wahrindi, Ngara, Waraga, Ngege, Ngiri, Jobi-Rii, Nsoga, and Gunya.

The region lies on the western border of Uganda and the eastern border of the Democratic Republic of the Congo. It formed the northernmost part of the western arm of the East African Rift Valley System, 500 km long, averaging 45 km wide and 23,000 sq. Km. The research focused on the Tilenga and Kingfisher project areas found in the Albertine graben.

1.6.3 Time scope

In this research, the time coverage was five years. Examinations of national content and participation in the oil and gas sector focused on the period from 2017 as the base year to 2021 as the current year. However, for purposes of literature review, this time frame went beyond 2017.

1.7 Justification of the Research

The oil and gas sector presents a crucial opportunity for economic growth and development in Uganda. By determining the level of national content participation, the research aims to identify areas where local entities can increase their involvement, leading to enhanced economic benefits for the country and its citizens.

Policy Formulation and Improvement: The research findings will provide valuable insights to policymakers, industry stakeholders, and relevant authorities. This information can guide the formulation of targeted policies and strategies to promote local content development, create jobs, and build local capacities in the oil and gas industry.

Understanding the current state of national content participation is essential in reducing dependency on foreign companies for essential supplies and services. By encouraging local participation, the country can mitigate external risks and foster a more sustainable and self-reliant oil and gas sector.

Maximizing national content participation can lead to economic empowerment for Ugandan citizens and businesses. By engaging local companies and personnel, the sector can create employment opportunities, enhance skills and expertise, and boost entrepreneurship within the country.

The research aims to ensure that the benefits derived from the oil and gas sector extend to both present and future generations of Uganda. By optimizing the utilization of national resources and promoting local involvement, the study seeks to contribute to the country's long-term economic growth and prosperity.

Assessing the level of national content participation contributes to sector transparency and accountability. The research can shed light on any disparities or challenges in local involvement, encouraging the implementation of fair and inclusive practices in the industry.

1.8 Significance of the research

Government of Uganda through ministries, departments and the regulatory bodies will use the findings to coordinate policy efforts aimed at improving local participation in the oil and gas sector.

At the community level, the findings will be used to create awareness on the available opportunities for the local population arising from oil production and sales.

After the identification of the gaps, more collaborations and consultations will be required to address the gaps steaming from local content issues.

1.9 Theoretical Framework

The study was underpinned by a comprehensive theoretical framework that draws from various key concepts and theories. This theoretical foundation provides the necessary structure for

understanding and analyzing the factors influencing national content participation in the oil and gas industry and its implications for Uganda's economic development.

The Resource Dependency Theory offers valuable insights into the potential challenges posed by foreign dependency in the oil and gas sector. It suggests that an over-reliance on foreign companies for essential supplies and services could hinder Uganda's long-term economic sustainability and sovereignty (Pomfret, 2021). By exploring the level of dependency on foreign entities in the oil and gas industry, the study can assess the implications for the country's economic empowerment and the need for increased local involvement.

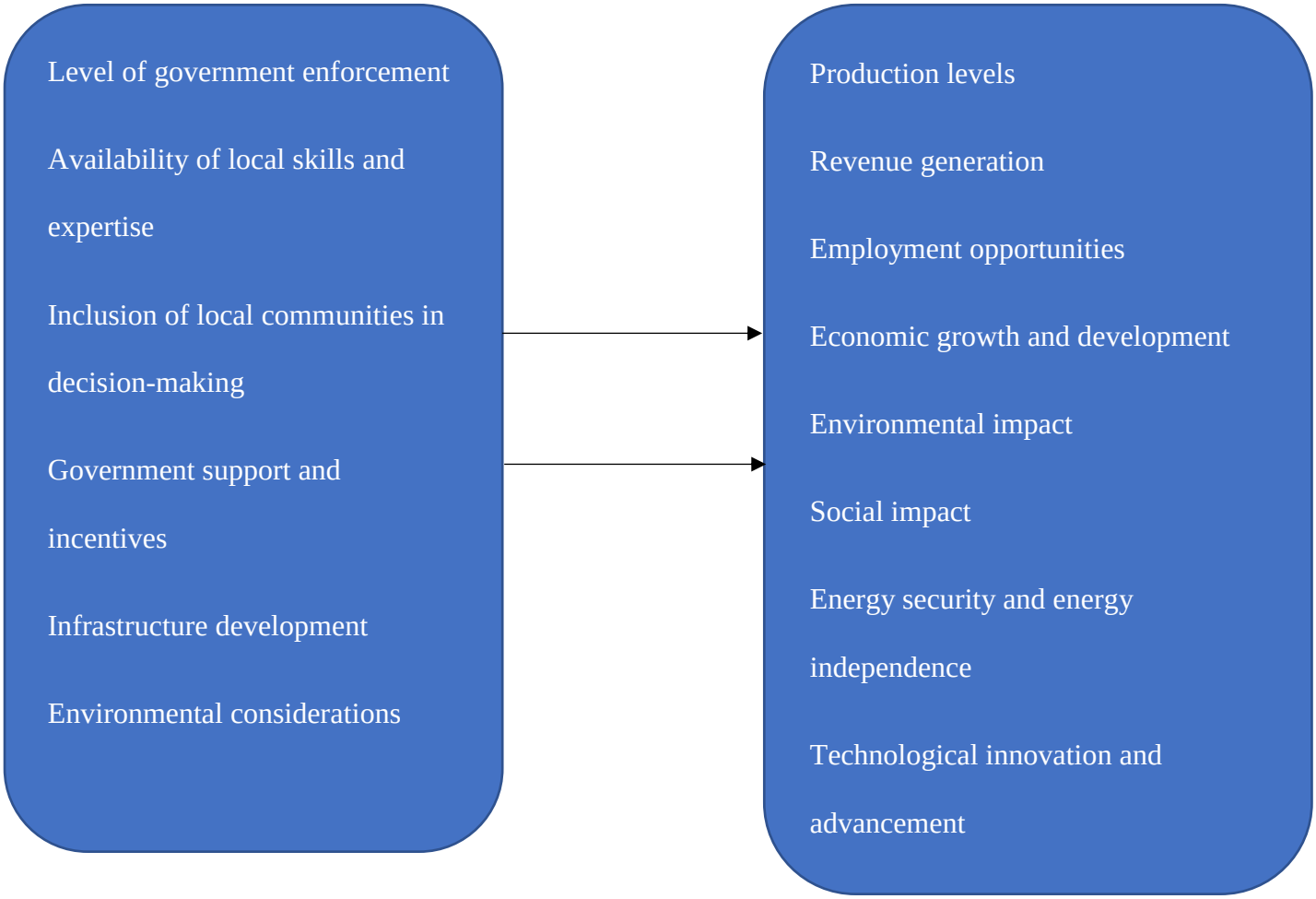
The Stakeholder Theory plays a critical role in understanding the diverse interests and contributions of various actors within the oil and gas sector. The theory recognizes the involvement of oil and gas businesses, corporate entities, personnel, industrial experts, business managers, and agencies as key stakeholders influencing national content participation (Freeman, 1984). By acknowledging the roles and perspectives of these stakeholders, the study can identify potential areas for collaboration and partnership to enhance local content participation.

1.10 Conceptual Framework

Independent Variables **Dependent Variables**

National Content Participation **Oil and Gas Sector**

Figure 1: Conceptual Framework



The independent variables of extent of national content participation in the oil and gas sector encompass factors such as local supply chain involvement, workforce composition, and regulatory frameworks. These variables directly influence the degree to which local entities contribute to and benefit from activities within the sector. The dependent variables of the oil and gas sector, including production levels, revenue generation, and environmental impact, are outcomes that are impacted by the extent of national content participation. Essentially, the independent variables drive changes in the dependent variables by shaping the dynamics of local involvement, resource utilization, and regulatory compliance within the sector.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter presented and demonstrated what is already written about the subject under investigation. The research attempted to address the gaps in the existing knowledge. It involved use of text materials, internet materials, journals and general articles from newspapers. Several sources were consulted and critically analyzed and appraised the various authors for literature so far read and related to the study variables. The chapter was therefore organized into sub-themes derived from the sub variables in the conceptual framework.

2.2 National Content and Participation

National content refers to the share of labour, services and goods for the petroleum sector being provided from within the country and constitutes the added value to the citizens of that country from these activities. In our case Uganda, the government is committed to facilitating the development of a significant national participation in its petroleum sector for the benefit of the economy, the petroleum sector itself and the society at large.

In Uganda, according to Billy, (2018), the government in an effort to ensure maximum benefit of the oil and gas resources to both current and future generations, acted as a caretaker of petroleum and minerals on behalf of the people of Uganda, in ensuring that exploitation of these resources is done in a manner that creates lasting value to the society. This responsibility is exercised based on Article 244 of the Constitution of the Republic of Uganda

According to the assessment carried about by Action Coalition for Development and Environment (ACODE) in 2014 on Uganda's legal and policy regimes on local content in oil and gas sector, there was a debate about the availability of adequate local capacity to deal with

the employment, technology and service needs for oil and gas industry (Peter, 2014). Local goods and services are doubted not meet the standards of the industry. The standards governing the petroleum sector in Uganda are set in the Oil and Gas Policy, 2008, the Petroleum (Exploration, Development and Production) Act, 2013 and Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act, 2013.

2.2.1 Local Supplies

One of the ways to ensure that Ugandans benefit the most from the oil and gas sector is to foster and ring fence raw materials and small projects that will be specifically managed by local Ugandan entrepreneurs so that we can accommodate existing businesses and invest in the oil and gas sector. The oil and gas sector requires a wide range of goods, Consumables like food and non-consumables like materials and equipment.

2.2.2 Skills

The National Oil and Gas Policy under objectives 7 and 8 recognizes the necessity for national involvement through training and skills development, employment, service provision and maintenance of national expertise in the oil and gas sector. The policy goal is to promote the competitiveness of Ugandan labor and enterprises in the oil and gas industry and associated sectors of the economy. However, at present there is no relevant program or institution charged with assessing the type of training that Ugandans need in terms of oil and gas. Most training is based on the selection of each training program center.

There are also no mechanisms for directing company scholarships to building industry-related construction skills (Peter, 2014). Industrial Baseline Survey (IBS), 2013 showed that focus in education should be put on civil construction, electrical and mechanical fields. The Capacity Needs Analysis Study, 2015, highlighted capacity gaps in some of the areas needed for Ugandans to participate in the country's oil sector.

It is estimated that the need for staff during the peak of sector development, pipeline construction and refinery will be 161,700 jobs of which 14,000 will be direct jobs, 42,700 indirect and 105,000 induced jobs. Of these workers, 15% are estimated to be professionals (engineers and managers), 60% craftsmen and technicians, and 25% unskilled workers. Another specific issue is the fact that whereas the proportion of Ugandans employed in the oil and gas sector directly by the oil companies rose from 69% in 2012 to 80% in 2014, there was no special consideration given to host communities or women during the recruitment of skilled personnel.

2.2.3 Local works/services

Local participation by entities is through the provision of services or works. Services or works that local companies can provide include maintenance, marketing, processes management such as human resource, supply chain, construction, consultancy, just to mention but a few.

2.2.4 Transfer of Technology

Technology transfer has been defined as the movement of know-how, technical knowledge or technology from one organizational setting to another (Bozeman, 2000). The term has also been used to describe a wide range of organizational and institutional interaction involving some form of technology related exchange (Bozeman and Crow 1991). UNESCO (1974) noted that much of the issues of the development or non-development of the third world countries has been linked with technology transfer from which two theoretical frameworks emerge – 'the capitalist theory' and the 'critical social theory.

In Uganda, the oil and gas sector is still largely foreign technology driven. The national government's involvement has been classified into three distinct era: the Era of Shareholding when petroleum was established as a strategic rational resource which meant that ownership, control and exploitation should be vested in the Federal Government and the Era of Active

Involvement (current efforts) in which government seeks greater indigenous involvement through the encouragement of indigenous participation in upstream operations (Marginal Fields Development Programme) and the internalization of input in the industry by increasing the quantum of composite value added or created in the economy through the utilization of Ugandan human and material resources (Local Content Development Programme).

2.3 Determinants of Local Employment and Local Supplier Participation

In many countries local content has been difficult. For example, freedom to deviate from requirements where standards can be met creates a challenge in monitoring company compliance with local content requirements (Jean, 2015). In addition, the sector has an unusually high salary for employees compared to other sectors. This means they hire fewer employees per dollar of investment than most businesses. While there may be very high expectations that the excavation site itself employs more people, the type of business is such to having fewer employees. In addition, the requirements for multiple output functions and related services are extremely technical. Therefore, local staff needs highly advanced training to meet quality and standards in both technical and non-technical activities such as food processing.

In some countries such as Nigeria, there has been significant investment in human resources and some partnerships shared over the years. This has produced a new crop of highly skilled local engineers, geologists and geophysicists. Some have gone on to establish private oil companies. However, they are still unable to find part of the action in an upstream spiral due to other factors such as lack of funding (Jean, 2015). It can be noted that the high cost of financing is a clear factor that jeopardizes the ability of indigenous oil service companies to compete effectively with their partners from Europe and the United States, who are well-funded.

The NOGP highlights some of the key limitations to include the low local capacity -in terms of technical expertise, Skills development, in a country that does not produce enough local staff with the necessary knowledge and skills, infrastructure development and the pace of exploration being too fast to permit local skills development, lack of globally recognized and accredited oil and gas training institutions, lack of capacity amongst the existing vocational training institutions to provide technical skills for various oil and gas activities and thus most of the goods, services, technical and managerial workforce within the petroleum subsector have been outsourced to expatriates and foreign firms.

2.3.1 Legal and Regulatory Requirements

Ordinarily, at the end of each financial year, licensees must submit to the government a report on procurements to confirm use of Ugandan goods and services and the training and employment of Ugandan people. PEPD has monitoring staff who are required to monitor and report on national content issues in this field. They also submit daily reports on Persons on Board (POB) within the camps to PEPD headquarters. The National Content Unit in the PEPD visits oil companies and exploration sites from time to time and is required to issue a report on compliance with national content requirements (OAG, 2015).

2.3.2 Local environment

The local macroeconomic environment has high investment and business expectations. According to Di John, (2007), no commercial oil was expected to flow after 2013. The 'early production agreement' reached between Uganda and the oil companies (particularly Tullow Oil and Gas company) prioritizes the production of 50–100 megawatts of electricity that would be added on to the national grid by the late-2009. However, the additional electricity would again remain below the country's requirements.

Yet, Ugandans at the national, local government and community levels appear to be nursing high expectations (but also apprehension) related to oil discovery. For some stakeholders, Uganda is on the verge of becoming an OPEC powerhouse. For others, oil discovery is likely to be a curse rather than a blessing.

A laissez-faire strategy involves granting citizens the right to think, say or publish whatever they wish. In a technical field, such as oil exploration, the 'popular' cum journalistic views that are associated with a laissez-faire strategy are largely inaccurate (as in the claim by the Ugandan press that oil discovery in Hoima has resulted in 'land grabbing' by top army generals).

This inaccuracy is largely attributed to the weak flow of information from government to the citizens; from technocrats to politicians; and from knowledgeable civil servants (who are, by tradition 'tightlipped') to the journalists. Uganda's politicians and technocrats need to know that an information vacuum will certainly get filled with something.

Secondly, exaggeration which is also known as 'overselling', this strategy is largely used by populist politicians. Their aim is to mobilize political support, get elected and/or survive in political office. The risk lies in raising unrealistic expectations such as the possibility of using oil revenues as a substitute for graduated tax.

Thirdly, under reporting which is commonly used in advanced democracies where empty political promises are punishable via political withdrawal of votes. Underreporting or what Lindstadt and Staton (2007) call the 'downward management of expectations,' involves mobilizing public support for the system while, at the same time, communicating the complexities or challenges at hand. It requires political skills that involve raising 'conscious optimism' to avoid unmet expectations. Unmet expectations could trigger massive withdrawal of support and create doubts about the competency.

2.3.3 Local infrastructure

Producing solid results for local content in the oil and gas sector can be very difficult due to the technical needs of the industry (Estevez, 2013). Developing the oil sector requires suitable Information technology, social, educational and business development infrastructure to address local companies needs to meet standards.

2.3.4 Local capacity

The Africa Centre For Energy and Mineral Policy (ACEMP) alongside the National Planning Authority (NPA) published an annual petroleum sector score card FY 2017/2018 where they highlighted key focus areas on national content to include legal and policy framework , employment in the sector, a database for skills and service provision, capacity building for SMEs, national content programs for sector companies, partnership between local and IOCs, training and skilling of locals, information sharing and sensitization.

There are cases where hired professionals possess the skills needed for planning, modelling, forecasting, and reviewing studies related to the development and production stages of the sector, as explained by PAU and is the reason why CNOOC had retained a good number of expatriates. In instances of higher pay for expatriates, PAU (2018) further explains companies were developing and reviewing Front-End Engineering Designs and plans needed for the next phases of the sector, and developing models to inform their Final Investment Decision, and these required personnel with highly specialized skills.

However, positions where expatriates are employed, the companies employ Ugandans to work as understudies to expatriates so that they can eventually replace the expatriates in technical positions. This ensures the transfer of knowledge and skills to Ugandans, who later take over those jobs. The challenge was on how practical it was to track the exact transfer of technology.

2.4 Challenges in the Implementation of National Content Participation

The successful implementation of national content policies in the oil and gas sector is a pressing concern for emerging economies like Uganda. This literature review aims to explore and analyze the challenges faced by various stakeholders in the effective execution of national content participation initiatives. By understanding these hurdles, policymakers, industry players, and other relevant actors can devise strategies to foster a conducive environment for increased local engagement.

National content policies typically aim to promote local participation and capacity development in the oil and gas sector, ensuring that indigenous companies and individuals benefit from the industry's growth (Lwanga & Onen, 2018; Sekyewa et al., 2019). These policies often encompass regulations and incentives to encourage the employment of nationals, the use of local goods and services, and technology transfer (Obua & Atuhaire, 2017; Mukwaya et al., 2020). Understanding the core elements of national content policies is essential in examining the challenges associated with their implementation.

One of the primary challenges in implementing national content policies is the development and enforcement of appropriate regulatory and legal frameworks (Tumuhairwe & Mugisha, 2019; Nambalirwa et al., 2021). Ambiguous or inadequate regulations may result in uncertainty for investors and limit the effectiveness of local content initiatives (Mugabi et al., 2018; Karugaba et al., 2022). Striking a balance between promoting local participation and attracting foreign investment remains a significant challenge faced by many developing countries.

A key objective of national content policies is to enhance the capacity and skills of local entities to actively participate in the oil and gas sector (Muhumuza et al., 2022; Nansamba & Ndayizigamiye, 2023). However, inadequate access to quality education and training programs can hinder the development of a skilled local workforce (Mbabazi & Kwizera, 2018;

Kyomuhendo et al., 2021). Bridging the skills gap between local talents and industry requirements is vital for effective national content participation.

Limited access to finance and capital is a significant challenge faced by local businesses in the oil and gas sector (Kakwezi et al., 2019; Namatovu & Mugume, 2020). Financial institutions may perceive the sector as high-risk, leading to restricted credit availability for indigenous companies (Tumusiime & Tukundane, 2021; Nangumya et al., 2022). This lack of funding can hinder the growth and competitiveness of local enterprises and impede their ability to participate effectively.

Inadequate infrastructure and logistics can pose considerable challenges to the participation of local entities in the oil and gas sector (Kasekende & Muhumuza, 2019; Nkonge et al., 2020). Poor transportation networks, limited energy supply, and insufficient access to technology can hamper the delivery of goods and services by local businesses (Mwebesa et al., 2021; Nakayiwa & Isabirye, 2021). Addressing these bottlenecks is essential for enhancing the sector's overall efficiency and the participation of local suppliers.

Technology transfer is a critical aspect of national content policies as it helps build local capacity and fosters innovation (Owomugisha et al., 2022; Ssekakubo et al., 2019). However, technology transfer may face barriers due to intellectual property rights, resistance from international partners, or a lack of knowledge-sharing mechanisms (Tumushabe & Katuramu, 2020; Nakayiwa & Atuhaire, 2022). Encouraging technology transfer and knowledge exchange is vital for achieving sustainable growth in the sector.

Political instability and governance challenges can significantly impact the implementation of national content policies (Tumusiime et al., 2023; Nkwasibwe & Tukahirwa, 2023). Political interference, corruption, and policy inconsistencies may create an uncertain business environment for local and foreign investors alike (Nambalirwe & Musiime, 2018; Nakakawa

et al., 2021). Strengthening political will and fostering good governance practices are essential for overcoming these challenges.

Effective coordination and collaboration among stakeholders, including government bodies, industry players, and local communities, are vital for successful national content implementation (Kakwezi et al., 2021; Nkwasibwe et al., 2022). Conflicting interests, lack of trust, and inadequate communication can hinder cooperation, leading to suboptimal outcomes (Ssemakula & Nyanzi, 2020; Nambalirwe et al., 2021). Establishing effective collaboration mechanisms can enhance synergy and promote mutual understanding among stakeholders.

National content participation in the oil and gas sector must also account for environmental and social considerations (Tumuhairwe et al., 2019; Namatovu et al., 2022). Balancing economic development with environmental conservation and the welfare of local communities is a complex challenge (Karugaba et al., 2023; Nangumya et al., 2023). Integrating sustainable practices and incorporating social responsibility measures into national content policies is crucial for garnering public support and ensuring the sector's long-term viability.

Global economic factors, such as fluctuations in oil prices and shifts in international demand, can influence the implementation of national content policies (Mugume et al., 2018; Ssekakubo et al., 2021). These external forces may result in market uncertainties and affect investment decisions by local and foreign entities (Nambalirwe et al., 2022; Nakayiwa et al., 2022). Understanding the impact of global economic factors is essential for designing adaptive and resilient national content strategies.

This literature review underscores the multifaceted challenges that hinder the successful implementation of national content participation in Uganda's oil and gas sector. Addressing these obstacles requires a comprehensive and collaborative effort from all stakeholders involved. By acknowledging and proactively tackling these challenges, Uganda can optimize

the benefits from its oil and gas resources, promote sustainable development, and foster a thriving and inclusive energy sector for the nation's future.

2.5 Theoretical Review

The game changer theory was invented by John von Neumann and Oskar Morgenstern. The theory comes in two flavors. Their 1947 book, which also lays out the foundations of utility theory which is looked at as a central element in decision theory provided an analogy between decision problems that people and organizations face and parlor games such as poker or bridge.

Cooperative game theory assumes people will do what they say they will do, a promise made is a promise kept. In real-world decision situations, this is far too optimistic. Cooperative game theory works well for zero-sum games, where one side’s loss equals the other side’s gain, but most actual decision-making situations are more complex.

By the early 1950s, mathematician John Nash had extended the field to create non cooperative game theory, which addresses how people and organizations interact in an effort to achieve their own goals. Nash, later the subject of the book and movie, “a beautiful mind” and the winner of the 1994 Nobel Prize in economics, drew attention to people’s tendency not to cooperate.

Promises are kept only when people or organizations believe it is in their interest. When promises and interests differ, people renege on their promises, break their word, and do whatever it takes to maximize their benefits. As it can be costly to break promises, the costs as well as benefits must be considered.

Game theory formalizes the interaction among multiple players, where each player has a strategy set from which one or more strategies can be chosen with specified probabilities. The payoff (utility, profit) to each player depends on the combination of strategies chosen by all the players. Game theory prescribes the optimal strategies for each player. Players may disagree

on who should expend resources to regulate costs, profits, and risk, or they may free ride on the investment decisions made by the other players.

Conflicts leading to reactions and counter reactions by players affect their individual as well as collective payoffs. Even if players can agree on an objective, they may disagree on how much each should invest toward achieving it. The Nash equilibrium is defined as a state from which no player prefers to deviate unilaterally.

Therefore, in line with this research, a game theory analysis will be useful because (i) at least two players are present, where each player intends to maximize, (ii) at least one of the players has the opportunity to choose between at least two strategies, and (iii) the payoff to each player depends on the combinations of strategies chosen by all players.

The theory assumes that partners or players in a relationship can have different interests, objectives, and influence. The optimal choice for any individual player might not be optimal for fellow players, who may try to prevent it. However, understanding the objectives and influencing opportunities of the fellow players enables a player to judge sensibly whether to try to change the outcome of the game.

2.6 Conclusion

In conclusion, strategies to manage local content have been put in place. And that dealing with local content requires a vast multifunctional approach. To realize maximum local content value, the devil in the details of implementation and actualization must be well dealt with. It may appear seamless to say that for every expatriate, there should be an understudy local employee, but it may not be obvious that the transfer of technology and skills will take place properly. Therefore, this paper seeks to dig deep into the exact qualities, knowledge, technology, capabilities and experiences that Ugandans should have. Once we understand the scope of the gap, it will be easy to come up with rewarding development and monitoring plans.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter described the framework within which the research was conducted. It presents the research design, study population, sample size and sampling techniques, data collection instruments, validity and reliability of research instruments, procedures and data analysis.

3.2 Research design

The study took a cross-sectional survey design adopting both qualitative and quantitative methods. This research design was chosen because of its advantages in obtaining data. It was also the simplest and least cost-effective alternative compared to longitudinal and other methods (Neumann, 2003).

According to Neumann, a cross-sectional research design could be exploratory, descriptive or explanatory. Babbie (2007) shared the same views by substantiating the three purposes of social research as exploration, description, and explanation, each of which helped different purposes for a research design.

According to Creswell et al. (2003), qualitative research helped in getting an in-depth analysis of the problem under investigation, and qualitative research was applied to describe current conditions and investigate relationships or effects. In addition, it helped in answering questions concerning the current state of the subject under study.

3.3 Study Population

For this research, the study population constituted staff of both international and national companies working in the Albertine area. It also included staff of authorities such as Petroleum Authority Uganda, Uganda Revenue Authority, Public Procurement and Disposal of Public

Assets Authority (PPDA) and National Social Security Fund; and staff of recruiting agents such as Q-Sourcing and True North Consult. This constituted a total of 144 respondents distributed within the Albertine region.

3.4 Sample Size Determination and Sample Selection

The sample size was selected using a formula formulated by Yamane (1967,86) to determine what the study population made of as stated below. The population (N) was based on reports from the National Supplier Database of Uganda and also reports from the Office of the Auditor General.

$$n = \frac{N}{1 + N(e)^2}$$

Here: n=Desired population

N=Population

e=Level of significance (0.05)

$n=N/1+Ne^2$

$n=260/1+326\ (0.05^2)$

n=260/ 1+0.8

n=260/1.8; n=144

Table 3.1 Sample Size Selection and techniques

Category of respondents	Accessible Population	Sample size	Sampling Technique
Oil and gas companies' staff	120	70	Simple random
Local Suppliers/SMEs	100	50	Purposive
Authorities	20	14	Purposive
Consultancy/recruitment services	20	10	Purposive
TOTAL	260	144	

Source: National Suppliers Database, 2017.

3.5 Data types

Primary and secondary data were both gathered. Primary data was collected through the use of well-structured interview guides and questionnaires, while secondary data was gathered through reviewing related recognized textbooks, job adverts, newspapers, magazines, journals, reports, and research presentations in the areas of national content and participation in the oil and gas sector. The data collected was used in the discussion and the analysis of the findings.

3.6 Data Collection Methods and Instruments

3.6.1 Self-administered questionnaire

Self-administered questionnaires were used for some sections of the respondents. These were distributed to the senior staff of the target companies. The justification for using this instrument was that; questionnaires are easy to quantify and analyze. In addition, the instrument was suitable for seeking opinions, analyzing the attitudes, feelings, and perceptions of employees (Roopa & Menta, 2012).

The questionnaires developed were a Likert-scale type of a five-order rating; the ratings that were used were Strongly Disagree (**SA**), Disagree (**D**), Not Sure (**NS**), Agree (**A**) and Strongly Agree (**SA)**. The sections of the questionnaires were A, B C, D, E and F. Part A comprised of biodata of the respondents and the subsequent ones were laid according to the variables in the conceptual framework.

The use of a self-administered questionnaire provided a systematic and efficient method for collecting data on the extent of national content participation in Uganda's oil and gas sector. By distributing the questionnaire to senior staff members of target companies, the research could gather insights directly from key stakeholders involved in the industry. The Likert-scale format of the questionnaire allowed for the quantification and analysis of opinions, attitudes, feelings, and perceptions regarding national content participation. This approach facilitated the collection of valuable data on the historical engagement levels, employment compositions, and challenges faced by local entities in the sector, thereby addressing the specific problem of limited involvement of indigenous businesses and providing insights for promoting greater representation of Ugandan professionals and labor in the oil and gas industry.

3.6.2 Interviews

An interview guide consisting of structured questions was designed and administered to the all-level staff. Information solicited by this instrument helped the researcher to enhance responses from the self-administered questionnaires and make it possible to cross-examine some key issues in the study. The choice of this instrument was because of the triangulation factor.

The use of interviews complemented the self-administered questionnaires by providing in-depth insights and clarification on key issues related to the extent of national content participation in Uganda's oil and gas sector. By engaging with all-level staff members through

structured questions, the researcher could gather firsthand information and perspectives that may not have been captured through the questionnaire alone. This approach allowed for a more comprehensive understanding of historical engagement levels, challenges faced, and potential opportunities for enhancing local participation in the sector. Additionally, interviews facilitated the triangulation of data, enabling the researcher to validate and corroborate findings from the questionnaire responses, thus enhancing the overall reliability and credibility of the study's results.

3.6.3 Documentary Analysis

A number of secondary data from libraries, publications, universities' websites, journals, newspapers, and magazines relevant to the study were reviewed. This helped to support the researcher in chapter two and in comparison, and verification of the validity of information that was obtained from interviews conducted. Document review supported the findings and supplemented discussions and recommendations in chapter five.

The use of documentary analysis/review provided valuable context and additional insights into the extent of national content participation in Uganda's oil and gas sector. By reviewing secondary data from various sources such as libraries, publications, universities' websites, journals, newspapers, and magazines, the researcher could enrich the literature review in Chapter Two and validate information obtained from interviews. This approach helped to corroborate findings, identify trends, and assess the historical trajectory of national content participation in the sector. Furthermore, documentary analysis supported the development of comprehensive discussions and recommendations in the study in Chapter Five, by ensuring a well-rounded and evidence-based approach to addressing the identified problem.

3.7 Quality Control

3.7.1 Validity

Copies of the questionnaires consisting of the objectives of the study were given to the research supervisors to find out whether the instruments would measure what they were meant to do and also check on the phrasing, understandability and wording of the statements. Content validity index (C.V.I) was used to establish whether the questionnaire measures what it was meant to do. The content validity index was found by considering the number of items declared relevant divided by the total number of items presented (Amin, 2005). The researcher measured a C.V.I of 0.78 which suggested that a significant proportion of population agreed that the situation about local content is dire and adequately represent the reality being measured.

3.7.2 Reliability

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated tests (Chronbach, 1953). In this study, quality control was done by carrying out a pretest of the questionnaire. To ensure quality control and assess the reliability of the research instrument, a pretest of the questionnaire was carried out. A pretest involved administering the questionnaire to a small subset of participants who were similar to the target population. This preliminary testing helped identify any potential issues with the questionnaire, such as unclear wording, confusing questions, or ambiguous response options.

Table 3.2 Reliability Statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.834	0.835	38

The table presents a set of items that were measured using Cronbach's Alpha, which is a statistical measure of internal consistency reliability. Based on the reliability statistics provided, the Cronbach's Alpha value for the research instrument was 0.834, and the Cronbach's Alpha based on standardized items was 0.835. These values indicated a high level of internal consistency and reliability of the research instrument.

The Cronbach's Alpha value of 0.834 suggested that the items in the research instrument were highly correlated and consistently measured the intended construct of national content participation in the Uganda oil and gas sector. The slightly higher value of 0.835 based on standardized items further confirmed the instrument's reliability. With a relatively high Cronbach's Alpha value, the research instrument was considered reliable for assessing the extent of national content participation in the context of the study. This suggested that the collected data was dependable and consistent, increasing confidence in the research findings and conclusions.

3.8 Data Processing and Management

3.8.1 Qualitative Data

All the qualitative data to be collected from key informants were edited on a continuous basis to ensure completeness. Data collected with the use of interview schedules was categorized. Content analysis was the main method of analyzing the data collected. Data collected were categorized and summarized from texts according to emerging variables into codes, and then tabulated to calculate the frequency of variables. Triangulation of methods of interviews and focus groups were done to improve on the validity and richness of the information gathered.

3.8.2 Quantitative Data

Data collected were checked to ensure accuracy. This was useful in ensuring that the objectives of the study are addressed. The data was cleaned, edited and coded. Data categories such as nationality, employee category, level of education was made and analyzed according to the objectives of the study using descriptive statistical methods of the Statistical Package for Social Sciences (SPSS) program.

Summary statistics in form of frequencies, mean and percentages were run, and interpretations were made on the results of the statistical functions. Finally, conclusions and recommendations were derived at and presented in chapter five.

3.9 Sources of data

3.9.1 Primary data collection

Primary data was collected to obtain the original information from respondents through gathering data relevant to the study. Questionnaires and interview manuals were used to gather primary information. Primary data was obtained from the target respondents.

3.9.2 Secondary data collection

Secondary data was important to supplement the primary data collected. This information was obtained from textbooks, internet and other materials such as journals, newspapers among others that are relevant to the study. This kind of data collection method was important to the study specifically in the literature review.

3.10 Procedure for data collection

Data collection tools were prepared and taken for approval to the research supervisor. This was followed by seeking for an introductory letter from the university and the Petroleum Authority of Uganda so as to avoid suspicion from respondents during data collection as shown by

appendices E and D respectively. Data collection tools were then delivered at the premises of the organisations being researched with a request letter, appendix F. With the help of a research assistant, introduced by a letter in appendix G, it was easy to locate these organisations and also carry out interviews with individuals following their schedules and convenience.

The data collected was well stored in files to avoid it being corrupted while awaiting data analysis and presentation.

The data collection tools were prepared and taken for approval to the research supervisor. This was followed by seeking an introductory letter from the University and the Petroleum Authority of Uganda to avoid suspicion from respondents during data collection. The data collected was well stored in files to prevent corruption while awaiting data analysis and presentation.

The data collection process involved using purposive and random sampling methods. Purposive sampling was used to select respondents from specific categories based on predefined criteria, such as local suppliers/SMEs, authorities, and consultancy/recruitment services. On the other hand, simple random sampling was used to randomly select staff members from oil and gas companies' middle and top management. Each individual in the accessible population had an equal chance of being chosen, reducing bias and increasing the representativeness of the sample.

To gain access to informants, the researchers presented the introductory letters from the university and the Petroleum Authority of Uganda. These letters explained the purpose and nature of the research study, introduced the researchers and their affiliations with the university, requested cooperation from the respondents, and emphasized confidentiality and ethical considerations surrounding the data collection process. The well-received letters provided official endorsement and legitimacy for the research, which likely increased the willingness of potential informants to participate.

3.11 Ethical consideration

In research, knowledge cannot be pursued at the expense of human dignity (Oso and Onen, 2005). The informed consent of all the key parties in this research was sought. Additionally, conducting research required not only expertise and diligence, but also honesty and integrity. This was done to recognize and protect the rights of human subjects. To render this study ethical, the rights to self-determination, anonymity, confidentiality and informed consent of respondents was observed as recommended (Kothari, 2004).

CHAPTER FOUR

PRESENTATION, INTERPRETATION AND ANALYSIS OF RESEARCH FINDINGS

4.1 Introduction

This chapter presents the findings of the research with regards to the research questions as posed in the first chapter. The chapter is set up to showcase the findings categorically, in tables and charts generated using SPSS and Microsoft Excel. The discussion of the findings is then provided at the end of the chapter.

4.2 Response Rate

Response rate = (number of respondents / total sample size) x 100%

Response rate = (102 / 144) x 100% ≈ 70.83%

Therefore, the response rate of the study was approximately 70.83%.

A response rate of 70.83% was considered a relatively high response rate, particularly for a study that involved surveying individuals about a potentially sensitive topic such as the oil and gas sector. Overall, while a response rate of 70.83% was a good starting point, the researcher was aware of the potential limitations introduced by the non-response rate and tried to account for them in their analysis.

4.3 Demographic Analysis

4.3.1 Gender

Of the 102 participants, 70 (68.6%) identified as male and 32 (31.4%) identified as female. The majority of respondents were male, which suggests that men may be more represented in the Uganda oil and gas sector than women. This could indicate a potential gender imbalance in the

sector that may need to be addressed to ensure equal opportunities for all genders. Further analysis could explore the reasons behind this gender imbalance and identify potential strategies to promote gender diversity and equal opportunities in the sector.

4.3.2 Nationality

Based on nationality, 89 (87.3%) participants were Ugandan, while 13 (12.7%) were non-Ugandan. The vast majority of respondents were Ugandan, indicating that there was a strong presence of local participation in the Uganda oil and gas sector. This is a positive sign for national content participation efforts and suggests that there is a strong foundation for promoting local content in the sector. The fact that the majority of respondents were Ugandan suggests that there is a strong foundation for promoting local content in the Uganda oil and gas sector. Further analysis could explore the extent to which local participation is being prioritized and identify potential strategies to further promote and incentivize local content in the sector.

4.3.3 Age group

The largest age group was 26-30 years, with 35 (34.3%) participants falling into this category. The smallest age group was 50 and above years, with 7 (6.9%) participants. The largest age group was 26-30 years, indicating that there may be a relatively young workforce in the Uganda oil and gas sector. This could suggest opportunities for workforce development and training programs targeted towards young professionals in the sector.

4.3.4 Level of education

The most common level of education was graduate, with 51 (50%) participants having completed this level of education. Only 2 (2%) participants had completed secondary school. The fact that the majority of respondents had completed graduate level education suggests that there is a highly educated workforce in the Uganda oil and gas sector. This could indicate a

need for continued education and skills development programs to maintain a highly skilled workforce in the sector.

The fact that the largest age group was 26-30 years and the majority of respondents had completed graduate level education suggests that there is a highly educated and relatively young workforce in the Uganda oil and gas sector but with less field experience. Further analysis could explore the potential implications of this demographic distribution and identify strategies to support continued workforce development and skills training in the sector.

4.3.5 Level of employment

The largest group was middle, with 47 (46.1%) participants falling into this category. The smallest group was senior, with 22 (21.6%) participants. The majority of respondents fell into the middle level of employment, indicating a relatively balanced distribution of employment across the sector. This could suggest that efforts to promote local content have been successful in creating job opportunities across various levels of employment.

4.3.6 Work experience

The largest group was 1-5 years, with 74 (72.5%) participants falling into this category. The smallest group was less than 1 year, with 4 (3.9%) participants. The fact that the largest group had 1-5 years of experience suggests that the Uganda oil and gas sector may be relatively new or experiencing growth, which could present opportunities for new entrants to the sector.

4.3.3 Type of work

The most common type of work was services or consultancy, with 59 (57.8%) participants working in this field. The least common type of work was goods, with only 14 (13.7%) participants. The fact that services or consultancy was the most common type of work suggests that there may be a strong focus on technical and professional services in the Uganda oil and

gas sector. This could present opportunities for local firms and professionals to participate in these services and potentially develop new areas of expertise.

4.4 Extent to Which Local Entities Provide Skills, Services and Supplies in the Oil and Gas Sector

Table 4.1. National Content Participation Analysis

National Content Participation	N	Mean	Std. Deviation
Local supply of goods is a key requirement in the oil and gas sector in Uganda	102	4.07	0.735
Local participation is enforced by the Petroleum Authority of Uganda and other government agencies.	102	3.87	0.941
Local entities are providing supplies in the oil and gas sector in Uganda	102	2.94	1.184
Domestic supplies being supplied include consumables and non-consumables	102	2.25	1.162
Consumable/quick-use supplies are food and beverages	102	4.23	0.643
Non consumable/durable supplies include machine parts, transport equipment, lubricants, and other accessories	102	1.77	0.900
It's a mandatory requirement to employ local Ugandans in the sector and services linked to it	102	4.34	0.572
This process requires capacity building and training of citizens	102	3.80	0.598
Ugandans have enough technical expertise and experience	102	4.28	0.948
The number of local workers is more than expatriates	102	4.02	0.820
Local workers are well paid according to their skills and knowledge	102	2.15	0.999
All unskilled manpower is sourced in the local communities	102	4.42	0.496

Local community grievances, concerns and expectations are well addressed and managed e.g., through a liaison officer, committees, regulatory authority	102	3.80	0.399
Local works and services are required and sourced under the local content	102	2.50	0.502
Local works and services meet the standards and requirements for the oil and gas sector.	102	1.81	0.391
Local works providers are aided to improve and meet standards through e.g., training, financing, collaboration, subcontracting.	102	4.38	0.488
There is fair use of local services/works	102	2.04	0.659
Transfer of technology to the locals is a key requirement in local content	102	4.73	0.616
Technology transfer is happening	102	2.82	1.147
There is a clear process flow for transfer of technology	102	2.31	1.169
Regulatory requirement for Technological transfer is clear	102	4.60	0.735
There is collaboration between local and international companies in the oil and gas sector.	102	2.79	1.471

For the analysis of the first objective, a quantitative research method was employed. The study collected data through Likert scale responses from 102 participants, focusing on the local supply of goods in the oil and gas sector in Uganda. Descriptive statistics, including the mean and standard deviation, were calculated to summarize and quantify the participants' perceptions and opinions on various aspects related to the local supply chain. This quantitative approach allowed for a systematic examination of the participants' responses, providing numerical insights into their evaluations of the importance and effectiveness of local content participation in the oil and gas sector in Uganda.

The research found that local supply of goods in the oil and gas industry was a key requirement in the industry (Mean: 4.07, Std. Deviation: 0.735). The relatively high mean score indicated that respondents generally agreed with the importance of local supply of goods in the sector. The low standard deviation suggests that there was a consensus among the respondents on this statement.

The research also found that local participation was enforced by the Petroleum Authority of Uganda and other government agencies. (Mean: 3.87, Std. Deviation: 0.941). The mean score suggests that respondents generally agreed with the idea of local participation being enforced, but the relatively high standard deviation indicates that there were some differences in opinion among the respondents.

The respondents however slightly disagreed (Mean: 2.94, Std. Deviation: 1.184) with the fact that local entities and currently providing supplies in the oil industry. The high standard deviation indicates that there were significant differences in opinion among the respondents. More to this, respondents also disagreed to local supplies being supplied being consumable and non-consumable (Mean: 2.25, Std. Deviation: 1.162). And as above, the standard deviation indicated that there were significant differences in opinion among the respondents.

As to the types of consumables supplies offered by local companies, high mean score (4.23) indicated that respondents generally agreed while the low standard deviation (Std. Deviation: 0.643) suggests that there was a consensus among the respondents on this fact.

Contrary, the respondents noted that non-consumable supplies were still not under the purview of local companies (Mean: 1.77, Std. Deviation: 0.900). The low mean score showed that respondents generally disagreed with this suggestion. The high standard deviation however indicated that there were significant differences in opinion among the respondents.

On whether it was mandatory requirement to employ local Ugandans in the sector and other related services, the researcher found the respondents generally agreed (Mean: 4.34, Std. Deviation: 0.572), and that there was a consensus among the respondents on the issue. This response was the same to whether national participation required capacity building and training of Ugandan citizens (Mean: 3.80, Std. Deviation: 0.598).

The respondents also generally agreed that Ugandans have the necessary skills and expertise required to be employed in the sector (Mean: 4.28). It is however important to note that the relatively high standard deviation (Std. Deviation: 0.948) suggests that there were some differences in opinion among the respondents. This was because the research included both Ugandan and expatriates who probably believe the locals are still lacking in that regard.

More to the above, the researcher found that the respondents generally agreed there are more local employees in the industry than foreigners. There was also a general consensus about the agreement in responses indicated by the relatively low standard deviation (Mean: 4.02, Std. Deviation: 0.820). The respondents however disagreed with the fact that local workers are well paid according to their skills and knowledge (Mean: 2.15, Std. Deviation: 0.999). The relatively high standard deviation indicates that there were significant differences in opinion among the respondents.

As to whether all unskilled manpower was sourced in the local communities, the mean of 4.42, it was generally agreed that sector sources all unskilled manpower from the local communities. The low standard deviation of 0.496 indicates that there was consensus to this fact. The researcher also found out that local community grievances, concerns and expectations are well addressed and managed e.g., through a liaison officer, committees, regulatory authorities with respondents agreeing to a mean of 3.8, the low standard deviation of 0.399 suggests that it was generally agreed with little variability.

When it came to local works and services, the researcher found respondents didn't believe, that IOCs sourced local services (Mean, 2.50). The standard deviation of 0.502 indicated that there was some variability in the extent to which local works and services are being sourced. The respondents however noted that the local services, at the time, did not meet the international standards set by the IOCs (Mean: 1.81). The low mean is further supported by a low standard deviation of 0.391, which suggests that there is little variability in this measure.

On whether local workers and service providers are aided to improve and meet standards through training, financing, collaboration, subcontracting, the respondents mentioned that this was the case (Mean: 4.38). This response was generally cross-cutting given standard deviation of 0.488 which suggested that there was relatively little variability in this measure. On the fair use of local services, the respondents noted that this was the case with a mean of 2.04, which was relatively low, suggesting that there may not have been fair use of local services and works. The standard deviation of 0.659 indicated that there was some variability in the extent to which local services and works are being fairly used.

On the importance of technology transfer to local content, the respondents agreed (Mean: 4.73). This showed the transfer of technology to locals is considered a key requirement under the local content framework. The standard deviation of 0.616 suggests that there is relatively little variability in this measure. However, despite knowing of its importance, many respondents disagreed with whether technology transfer was currently taking place (Mean: 2.82). The standard deviation of 1.147 suggests that there is significant variability in this measure, with some respondents indicating high levels of technology transfer while others indicate very little.

The research also found that most of the respondents did not believe that there was a clear process flow for technology transfer. A mean of 2.31 indicated that there wasn't a clear process flow for technology transfer. The standard deviation of 1.169 suggests that there is significant

variability in this measure. What made this odd was the discovery that the respondents believed that there was a clear legal requirement for technology transfer (Mean: 4.60). The standard deviation of 0.735 showed that there was relatively little variability in this measure.

As to whether there was collaboration between local and international companies, the researcher found that most of the respondents did not think so. The mean of 2.79 indicated that while there might have been some collaboration between local and international companies in the oil and gas sector, it was not happening as much as desired. The high standard deviation of 1.471 suggests that there is significant variability in this measure, with some respondents indicating high levels of collaboration while others indicate very little.

4.4.1 Regression Analysis

To conduct a regression analysis for the first objective of assessing the extent to which local entities provide skills, services, and supplies in the oil and gas sector, the researcher typically used multiple regression analysis. The dependent variable in this case is the extent of local content participation, which was measured by a composite score or an aggregate index derived from the survey responses. The independent variables include factors related to local participation in supplying goods and services, enforcing local content regulations, availability of technical expertise, employment of local workers, transfer of technology, collaboration between local and international companies, and other relevant variables identified in the survey.

The regression model is specified as follows:

Extent of Local Content Participation = $\beta 0$ + $\beta 1$(Local supply of goods) + $\beta 2$(Local participation enforcement) + $\beta 3$(Local supply provision) + ... + ε

Where:

$\beta 0$ is the intercept term

$\beta 1$, $\beta 2$, $\beta 3$, ... are the coefficients representing the effect of each independent variable on the extent of local content participation

ε is the error term

The regression coefficients (β) indicate the strength and direction of the relationship between each independent variable and the extent of local content participation. Statistical software such as SPSS was used to estimate the regression model and analyze the results.

Therefore, the statistics provided in Table 4.1 are descriptive statistics summarizing the responses to various survey questions related to local content participation in the oil and gas sector. To conduct a regression analysis, these variables were used as predictors in the regression model, and their coefficients were estimated to assess their impact on the extent of local content participation. Additionally, measures of model fit, such as R-squared and significance tests for individual coefficients, were used to evaluate the overall explanatory power of the regression model and the significance of each predictor variable.

4.4.2 Local Supply

The second objective employed a mixed-methods approach, combining both quantitative and qualitative research methods. The quantitative aspect involved the collection and analysis of Likert scale data from 102 participants, focusing on the enforcement of local participation by the Petroleum Authority of Uganda and other government agencies. Descriptive statistics, such as mean and standard deviation, were computed to quantify participants' responses. Additionally, the qualitative component involved gathering open-ended responses or comments, allowing participants to provide detailed insights into their experiences and perspectives regarding the enforcement of local participation. This mixed-methods approach

aimed to provide a comprehensive understanding of the multifaceted aspects surrounding the regulatory enforcement of local participation in the oil and gas sector in Uganda.

Local supply refers to the availability of goods and services produced within a local area, whether it is a city, state, or region (Estevez et al.,2013). For example, if a company sources its raw materials locally and produces its goods in a nearby factory, it is said to have a strong local supply chain. National content, on the other hand, is a policy or strategy that aims to promote domestic production and consumption of goods and services in a country. This can include measures such as setting local content requirements for government contracts, promoting local sourcing of raw materials, and providing incentives for companies to invest in local production facilities (Estevez et al.,2013).

A strong local supply chain can contribute to national content by providing the inputs necessary for domestic production. For example, if a company sources its raw materials locally, it may be able to produce its goods more cheaply and efficiently, which can help to make them more competitive in the domestic market. Additionally, by investing in local production facilities, companies can create jobs and stimulate economic growth in the communities where they operate.

Table 4.2 Local supplies analysis

Local supplies	S. D	D	N	A	S. A
Local supply of goods is a key requirement in the oil and gas sector in Uganda	0	0	24	47	31
Local participation is enforced by the Petroleum Authority of Uganda and other government agencies.	0	9	25	38	30
Local entities are providing supplies in the oil and gas sector in Uganda	5	41	29	9	18
Domestic supplies being supplied include consumables and non-consumables	0	77	25	0	0

Consumable/quick-use supplies are food and beverages	0	12	55	35	0
Non consumable/durable supplies include machine parts, transport equipment, lubricants, and other accessories	0	51	27	20	4

Local supply is an essential component of Uganda's oil and gas industry. It is crucial for the industry to have access to local suppliers that can provide goods and services necessary for exploration, drilling, production, and transportation of oil and gas. The researcher found that the majority, 66.2% of the respondents (as calculated from the above table) were agreeable to the fact that local supply of goods was vital to the oil and gas industry of Uganda. While none of the respondents disagreed with the fact, 33.8% of the respondents were undecided on weather local supply was the way to go for Uganda's oil and gas industry.

> *One of the respondents noted that, "Yes, local supply is a key necessity for local content in Uganda's oil and gas sector. Local supply refers to the availability of goods and services that are produced or provided by local companies within Uganda. The development of the oil and gas sector in Uganda presents an opportunity for local companies to participate in the supply chain by providing goods and services such as catering, transportation, security, and other support services."*

The Petroleum Authority of Uganda (PAU) and other government agencies have made efforts to enforce local content regulations in Uganda's oil and gas industry. However, there have been concerns about the effectiveness of these efforts and whether they have been enough to achieve the desired outcomes. The research found that 56.7% believe that the Petroleum Authority of Uganda had done a good job in enforcing local content regulations on oil and gas companies in the country. About 9% disagree with this fact and 24.5% were undecided.

There are local entities that supply goods and services to Uganda's oil and gas industry, but the industry still relies heavily on foreign companies for many of its needs. The local entities that supply the oil and gas industry in Uganda include local contractors, suppliers, and service providers. They provide goods and services such as transportation, logistics, drilling equipment, manpower, and engineering services.

> *This was confirmed by the respondents as one of the managers noted that, "encouraging local supply is an important aspect of local content development in the oil and gas sector because it helps to create jobs and generate income for local communities. Local supply also helps to build local capacity, as local companies gain experience and develop skills in providing goods and services to the oil and gas sector.*
>
> *The government of Uganda has recognized the importance of local supply and has put in place policies and regulations to promote its development. For example, the Petroleum (Local Content) Regulations, 2019 require licensed oil companies to give preference to local companies in the procurement of goods and services, provided that they meet the required quality and technical standards."*

This study found that about 45% percent of the oil and gas population believes that local companies are not the ones supplying the oil and gas industry. It was more alarming that only 26.5% believed that local companies provide services to Uganda's oil industry. 29 (28.8%) of the respondents were undecided on this issue citing that they did not actually know who owned the companies that delivered services and works to them.

On what domestic supplies were being used by the oil and gas companies, 75.5% disagreed to the fact that they include both consumable and non-consumable products. This meant that the

respondents did not agree with the fact that both consumable and non-consumable products were being equally supplied by local companies in Uganda.

The researcher therefore went ahead to test each category of supplies. The researcher found that the majority of respondent agreed with the fact that only quick use supplies such as food and beverage were being provided by Ugandan in the Oil and gas areas. Contrary, the research also found that the majority of the respondents (50%) noted that non-consumable supplies were not supplied by Ugandan Companies. These noted that these supplies like machinery, protective gear, electronics and building material were mainly supplied by foreign companies.

> Through the interviews, it was mentioned that *"the development of local supply chains in the oil and gas sector is not without its challenges. Local companies may face barriers to entry, such as lack of access to finance, limited technical capacity, and lack of experience in dealing with large multinational companies. Addressing these challenges is critical to the success of local content development in Uganda's oil and gas sector."*

4.4.2.1 Regression Analysis

For the objective of examining the proportion of Ugandans against expatriates being employed in the oil and gas sector, and in answering the research question "What is the proportion of Ugandans against expatriates are employed in the oil and gas sector?", logistic regression analysis was employed. This type of regression analysis is suitable when the dependent variable is binary or categorical, such as whether an individual is Ugandan or expatriate.

The logistic regression model would be specified as follows:

$$\text{Logit}(P) = \beta 0 + \beta 1(\text{Local supply of goods}) + \beta 2(\text{Local participation enforcement}) + \beta 3(\text{Local supply provision}) + \ldots$$

Where:

Logit(P) is the log odds of an individual being Ugandan (versus expatriate)

β0 is the intercept term

β1, β2, β3, ... are the coefficients representing the effect of each independent variable on the log odds of being Ugandan

Local supply of goods, Local participation enforcement, Local supply provision, etc., are the predictor variables related to local content participation

The coefficients (β) indicate the impact of each predictor variable on the log odds of an individual being Ugandan. To interpret the results, the odds ratios (exponential of the coefficients) are calculated, representing the change in odds of being Ugandan for a one-unit change in the predictor variable.

4.4.2 Local Skills and Employment

Table 4.3 Local skills and employment analysis

Local Skills/Employment	S. D	D	N	A	S. A
It's a mandatory requirement to employ Ugandans in the Oil sector and services linked to it	0	0	5	57	40
This process requires capacity building and training of citizens	0	0	30	62	10
Ugandans have enough technical expertise and experience	0	5	20	18	59
The number of local workers is more than expatriates	0	0	33	34	35
Local workers are well paid according to their skills and knowledge	29	39	29	0	5
All unskilled manpower is sourced in the local communities	0	0	0	59	43
Local community grievances, concerns and expectations are well addressed and managed	0	0	20	82	0

The researcher found that it was mandatory to employ local Ugandans in the sector and services linked to it. The majority of the respondents either agreed or strongly agreed with this fact (97%). This indicated that there was a consensus that local employment is essential in the sector and services linked to it. Local employment helps to create jobs for the citizens, which is crucial for economic development and poverty reduction. The requirement for local employment may also help to promote skills transfer and technology transfer to the local workforce.

> *One of the top managers mentioned that "Yes, it is mandatory to employ Ugandans in Uganda's oil and gas industry as part of the government's local content policy. The policy is aimed at promoting the participation of Ugandans and Ugandan companies in the oil and gas sector and maximizing the benefits of oil and gas exploration and production for the country.*
>
> *The Petroleum (Local Content) Regulations, 2019, require licensed oil companies to give priority to Ugandan nationals and companies in their recruitment and employment policies, provided they possess the required qualifications, skills, and experience. The regulations also require oil companies to prepare annual reports on their compliance with the local content requirements, including the employment of Ugandans."*

Capacity building and training of citizens are required for the development process. The researcher found that the majority of the respondents agreed with this fact (92%). This indicated that there was a consensus that capacity building and training are crucial for promoting local employment. Capacity building and training help to equip the local workforce with the necessary skills and knowledge to perform the required tasks effectively. This, in turn, can lead to improved productivity and competitiveness of the local workforce.

There were mixed opinions on whether Ugandans have enough technical expertise and experience. However, the majority were either neutral or agree (77%). This suggested that there was a belief that Ugandans have some technical expertise and experience, but there may be room for improvement. It may therefore be necessary to provide additional training and capacity building programs to enhance the technical expertise and experience of the local workforce.

> *An expatriate mentioned that "Uganda has made significant efforts to develop technical capacity to support the oil and gas industry, but there are still gaps that need to be addressed. The government of Uganda, through its National Oil and Gas Talent Register (NOGTR) and National Oil and Gas Capacity Building Project (NOGCBP), has been working to build technical capacity in the oil and gas sector. These initiatives aim to develop a skilled and competent workforce in areas such as geology, engineering, finance, and law, among others. However, there are still challenges that need to be addressed. One of the main challenges is the shortage of skilled workers with experience in the oil and gas industry. This shortage can be attributed to the fact that the oil and gas sector is relatively new in Uganda, and there have been limited opportunities for Ugandans to gain experience in the industry.*

Additionally, there were mixed opinions on whether the number of local workers was more than expatriates. However, the majority were either neutral or agreed (68%). This suggested that there might have been a perception that there was a reasonable balance between local workers and expatriates. It may be necessary to monitor the number of expatriates working in the sector and services linked to it to ensure that they do not dominate the local workforce.

In contrast to the above, the researcher found that most of the respondents either disagreed or strongly disagreed that local workers were well paid according to their skills and knowledge (93%). This indicates that there was a belief that local workers were not compensated fairly for their skills and knowledge. Fair compensation is crucial for attracting and retaining the local workforce, promoting motivation, and reducing turnover.

The researcher also found that all unskilled manpower was sourced from the local communities, and the majority agreed or strongly agreed with this fact (102%). This indicated that there is a consensus that unskilled manpower should be sourced from the local communities. Sourcing unskilled manpower from the local communities can help to promote local employment, reduce poverty, and improve social cohesion.

> *The respondent mentioned above continued to note that, "Another challenge is the quality of training and education offered in Uganda. There are concerns that the education system does not adequately prepare graduates for the demands of the oil and gas industry, particularly in terms of technical skills and knowledge. Addressing these challenges will require a concerted effort from the government, oil companies, and education and training institutions. This could involve the development of specialized training programs, partnerships between industry and academia, and the promotion of science, technology, engineering, and mathematics (STEM) education. Overall, while Uganda has made significant progress in building technical capacity to support the oil and gas industry, there is still work to be done to ensure that the country has a skilled and competent workforce to meet the demands of this growing sector."*

It was also discovered that local community grievances, concerns, and expectations are well addressed and managed, as the majority agreed with this fact (82%). This showed that there was a belief that local community grievances, concerns, and expectations are adequately addressed and managed.

4.4.3 Local Works and Services

Table 4.4 Local works and services analysis

Local Works and Skills	S. D	D	N	A	S. A
Local works and services are required and sourced under the local content	0	51	51	0	0
Local works and services meet the standards and requirements for the oil and gas sector.	19	83	0	0	0
Local works providers are aided to improve and meet standards through e.g., training, financing, collaboration, subcontracting.	0	0	0	63	39
There is fair use of local services and works	20	58	24	0	0

The use of local services is important in Uganda's Oil and Gas industry for several reasons. It supports economic development in the communities where the industry operates. By providing opportunities for local businesses and workers, the industry can help to generate employment and stimulate economic growth.

> *One of the respondents in a top management position mentioned that "Local works and services provided by Ugandan companies in the oil and gas industry must meet the required technical and quality standards set by the oil companies operating in Uganda. This is important to ensure that the oil and gas operations are safe, efficient, and effective. The Petroleum (Local Content) Regulations, 2019, require licensed oil companies to give*

preference to local companies in the procurement of goods and services, provided that they meet the required quality and technical standards. The regulations also require local companies to demonstrate their technical and financial capabilities before being considered for contracts."

This can have positive social and economic impacts for the community, including reducing poverty and improving standards of living. Utilizing local services and works can also help to reduce costs for the industry and make it more competitive. Local providers may be able to offer services and works at a lower cost than foreign providers, which can help to reduce overall costs for the industry. This, in turn, can make it more attractive for investors and support the long-term sustainability of the industry.

The research found that local works and services in the oil and gas sector are not fully utilized, 50% of the respondents disagreeing on whether local works and services are required and sourced under the local content. Worse still, 50% were undecided about this element of the research. This indicated that there was need for greater utilization of local providers to support economic development in local communities.

The researcher also found, with regards to the earlier point, that local works and services do not meet the standards and requirements for the oil and gas sector. All 102 respondents disagreed that Ugandan companies had the capability to deliver the services and requirements for the industry. This highlighted the need for greater investment in training and resources to improve the quality of local services and works.

The researcher found that there are efforts being made to support local providers through training, financing, collaboration, and subcontracting, with 63% of the respondents agreeing to this fact. However, there was still room for improvement in this area to ensure that local providers have the resources and support they need to succeed.

This was further asserted in the interview, with one of the interviewees mentioning that "To ensure that local works and services meet the required standards, the government of Uganda has put in place various measures to build local capacity and promote compliance with quality and technical standards. These include the establishment of the Uganda National Bureau of Standards (UNBS) and the Uganda National Oil Company (UNOC), which provide technical support and guidance to local companies in the oil and gas sector. There are also initiatives aimed at building the technical capacity of local companies, such as the NOGTR and NOGCBP mentioned earlier. These initiatives provide training and support to local companies in areas such as health, safety, and environmental management, quality management, and technical skills development."

More to this, the research found that there may be equity issues with the utilization of local services and works in the oil and gas sector, with 78% of the respondents disagreeing with the fact that there was fair use of local services and works. This suggested that certain groups or communities were be left out of opportunities to provide services and works, and that efforts should be made to ensure fair access and opportunities for all.

4.4.4 Technology Transfer

Table 4.5 Transfer of knowledge analysis

Technology Transfer	S. D	D	N	A	S. A
Transfer of technology to the locals is a key requirement in local content	0	0	9	10	83
Technology transfer is currently taking place in the industry	15	22	41	14	10
There is a clear process flow for transfer of technology	13	74	0	0	15
Regulatory requirement for Technological transfer is clear	5	26	0	0	71
There is collaboration between local and international companies in the oil and gas sector.	24	31	8	20	19

Technology transfer is crucial for the development of Uganda's oil and gas industry. Technology transfer refers to the process of transferring knowledge, skills, and technology from one organization or country to another (Jean, 2015). In the case of Uganda's oil and gas industry, technology transfer involves the transfer of technology, expertise, and best practices from experienced oil and gas companies to local companies and individuals in Uganda. The oil and gas industry in Uganda is relatively new and lacks the technical expertise and experience necessary to develop and manage the industry effectively. Therefore, technology transfer is critical for Uganda to develop its own capabilities in the oil and gas sector.

On weather technology transfer is a key requirement for local content, 83% of respondents strongly agreed with this statement, indicating that technology transfer was seen as an essential element of local content in Uganda's oil and gas industry. 10% of respondents agreed with the statement, while 9% neither agreed nor disagreed. The high level of agreement (83%) that technology transfer to locals is a key requirement for local content indicated that there is a general recognition of the importance of involving local companies and individuals in the oil

and gas industry. This showed that efforts should be made to ensure that technology transfer programs are effectively implemented to promote local participation and capacity building in the industry.

According to the research, 41% of respondents agreed with the fact that technology transfer is currently occurring to some extent in Uganda's oil and gas industry. More to this, 22% of respondents strongly agreed with the statement, suggesting that they believed technology transfer is happening to a large extent. However, 14% of respondents disagreed with the statement, and 10% strongly disagree, suggesting that a considerable proportion of respondents did not believe that technology transfer was taking place.

> *One of the respondents mentioned that "To promote technology transfer in the oil and gas sector, the government of Uganda has put in place various initiatives and policies, including the requirement for oil companies to transfer technology and skills to local companies and individuals. The Petroleum (Local Content) Regulations, 2019, require oil companies to provide technical training and transfer technology to local companies and individuals, with the aim of building local capacity and promoting the development of local industries.*
>
> *In addition, the government has established the Uganda Petroleum Institute Kigumba (UPIK) and the National Oil and Gas Talent Register (NOGTR), which provide training and support to Ugandans in areas such as geology, engineering, and technical skills development. These initiatives aim to build the technical capacity of Ugandans and promote the transfer of technology and skills to local industries."*

While the agreement is not unanimous, the fact that a significant proportion of respondents (22%) strongly agreed that technology transfer is currently taking place suggests that some progress has been made in this area. However, the disagreement among respondents suggests that there may be varying perceptions of the extent and effectiveness of technology transfer efforts, which may require further investigation.

Additionally, 74% of respondents strongly agreed on whether there was clear process flow for transfer of technology, indicating that they believed there was a clear process for technology transfer in Uganda's oil and gas industry. 15% of respondents agree, while 13% neither agreed nor disagreed. The high levels of agreement (89%) showed that there was a clear process flow for technology transfer and that regulatory requirements are clear indicate that there is a framework in place to facilitate technology transfer in Uganda's oil and gas industry. This suggested that the focus should be on ensuring that these frameworks are effectively implemented and monitored to ensure that technology transfer efforts are successful.

The research assessed whether the regulation requirements for technology transfer in the oil industry were clear for International Oil Companies. 71% of respondents strongly agreed with this statement, suggesting that they believe the regulatory requirements for technology transfer in Uganda's oil and gas industry are clear. 26% of respondents agreed, while only 5% disagreed or strongly disagreed.

The study found that 31% of respondents agreed that there was collaboration between local and international companies in the oil and gas sector. 24% of respondents strongly agreed with the statement, while 20% neither agreed nor disagreed. 19% of respondents disagreed, and 8% strongly disagreed, indicating that a significant proportion of respondents did believe that there is collaboration between local and international companies in the oil and gas sector.

The fact that a considerable proportion of respondents (27%) either disagreed or strongly disagreed that there is collaboration between local and international companies in the oil and gas sector suggests that there may be a need for more effective partnerships between local and international companies to facilitate technology transfer. Efforts to promote collaboration could include initiatives such as joint ventures, partnerships, and mentorship programs that promote knowledge sharing and capacity building.

> *An interview with one of the PAU officials showed that, "Despite these efforts, there are still challenges to technology transfer in Uganda's oil industry. One of the main challenges is the lack of technology transfer agreements between oil companies and local companies. Some local companies have reported difficulties in accessing technology and technical support from oil companies, which can hinder their ability to compete in the industry.*
>
> *Another challenge is the limited availability of local companies with the technical expertise and financial resources to implement new technologies. This can result in a reliance on foreign companies and workers to implement new technologies, which can limit the potential benefits of technology transfer for local industries.*
>
> *Overall, while there have been efforts to promote technology transfer in Uganda's oil industry, there is still work to be done to ensure that local companies and individuals have access to the necessary technology and technical support to compete in the industry and promote the development of local industries."*

4.5 Limitations to the National Content Participation

For the third objective, the researcher employed a mixed-methods approach, combining both quantitative and qualitative research methods. The quantitative aspect involved the collection and analysis of Likert scale data from 102 participants, focusing on the limitations/obstacles to the National Content Participation. Descriptive statistics, such as mean and standard deviation, were computed to quantify participants' responses. Additionally, the qualitative component involved gathering open-ended responses or comments, allowing participants to provide detailed insights into their experiences and perspectives regarding the enforcement of local participation.

National content participation refers to the involvement of local companies and individuals in the development and operation of projects within their own country. While it can be beneficial for a country's economic growth and development, there are several limitations that can impact its effectiveness.

One of the key limitations to national content participation is the lack of local expertise, as there may be a shortage of skilled workers or technical expertise in a particular field within a country. Another limitation is limited access to capital, which can make it difficult for local companies to compete for contracts or invest in new projects. Inadequate infrastructure, such as poor transportation or communication systems, can also limit the ability of local companies to participate in certain projects. Additionally, the lack of regulatory frameworks to support the participation of local companies in certain industries or projects, as well as a preference for foreign companies, can also be limiting factors.

Overall, addressing these limitations will require a combination of government policies, investment in infrastructure and education, and support from the private sector. By doing so, it

may be possible to enhance the effectiveness of national content participation, thereby contributing to the economic growth and development of a country.

Table 4.6 Limitations to the National Content Participation

Limitations to the National Content Participation	N	Mean	Std. Deviation
National content lacks wide publicity and hence there is lack of knowledge and low participation by citizens	102	4.27	0.706
Level of requirements under local content limits local participation	102	1.78	0.607
Lack of commensurate skills within the population is a limiting factor	102	4.11	0.831
Political factors affect participation under the national content	102	4.47	0.592
Lack of sufficient enforcement to manage local content and community participation	102	4.67	0.474
There is limited inclusion of the local community on decision making	102	3.93	0.847
There is high expectation in terms of revenue and employment	102	4.25	0.792
There are other economic policies that favour local content like in Banking, technology, fees, levies	102	4.32	0.903
Local content is affected by price fluctuations and inflation	102	1.75	0.432
The local companies have sufficient technology to achieve a lot in the oil and gas sector	102	1.63	0.659
There is genuine concern and care for the environment	102	4.56	0.698
Internationalization of the oil and gas sector makes it complex	102	3.47	1.050
Local infrastructure is not yet well developed	102	3.81	0.391
Information Technology infrastructure is important component in local content development	102	4.34	0.790
Government support is necessary for a boost in their local content through business development infrastructure	102	4.64	0.483
Standard infrastructure enhances profitability and local content participation	102	4.34	0.790

The study discovered that, with a mean score of 4.27 and a standard deviation of 0.706, residents are underinformed and participate little in national content because of the absence of widespread visibility. This shows that the respondents believed that the lack of awareness and

comprehension of the significance of national content places restrictions on the engagement in local content. This can involve things like inadequate educational and outreach initiatives or poor communication of the advantages of local involvement in the oil and gas industry.

The study discovered that the degree of local content requirements, with a mean score of 1.78 and a standard variation of 0.607, inhibits local participation. This indicates that the respondents believed that the standards for local content might be excessively strict or might not accurately reflect local capabilities. This may be due to things like excessively strict restrictions or unattainable participation goals for local content.

The study discovered that the population's lack of comparable skills was a limiting issue, with a mean score of 4.11 and a standard deviation of 0.831. This shows that the respondents believed that the lack of necessary skills and training among the local workforce limits the use of local material. This may be due to several things, such as inadequate funding for educational and training initiatives or a dearth of opportunities for employees to get appropriate experience.

With a mean score of 4.47 and a standard deviation of 0.592, the study indicated that political issues had an impact on engagement under the national content. This implies that the respondents believed that the participation in local content might be limited by political reasons like corruption or political meddling. This may involve elements like inadequate contract award transparency or inadequate local business protection from international competition.

The study concluded that, with a mean score of 4.67 and a standard deviation of 0.474, there was insufficient enforcement to control local content and community engagement. This shows that the respondents believed that participation in local content was constrained since there were insufficient measures in place to ensure that the laws governing local content were followed. This may be caused by things like poor monitoring and reporting systems or insufficient fines for non-compliance.

With a mean score of 3.93 and a standard deviation of 0.847, the study discovered that there was only a limited amount of local community involvement in decision-making. This shows that the respondents believed that the absence of participation and engagement by local people in decision-making processes places restrictions on the use of local content. This may involve elements like poor methods for engagement and consultation or a lack of proper representation of local communities in decision-making bodies.

With a mean score of 4.25 and a standard deviation of 0.792, the study discovered that there is a high expectation in terms of income and employment. This indicates that the respondents believed there was a high level of expectation for local content participation to result in significant economic advantages, such as greater revenue and job opportunities. This could put pressure on you to produce results right away, which isn't always practical or sustainable.

In addition to banking, technology, fees, and levies, the study discovered other economic policies that support local content, with a mean score of 4.32 and a standard deviation of 0.903. This suggests that the respondents believed that economic policies outside of the oil and petrol industry supported the use of local content. This may involve things like tax breaks or special treatment for regional businesses in other industries.

According to the study, local content has a mean score of 1.75 and a standard deviation of 0.432, which indicates that it is impacted by price changes and inflation. This shows that the respondents believed that the use of local content is subject to price changes and inflation, which may restrict the ability of local businesses to participate in the market.

The study discovered that local enterprises, with a mean score of 1.63 and a standard deviation of 0.659, had enough technology to accomplish a lot in the oil and gas sector. This indicates that the respondents generally rejected the idea that access to technology restricts the use of local content. There may be local businesses with the necessary technology, but they might not

be well-known or have access to the resources they need to compete in the oil and gas industry. There can also be other obstacles, like difficulty obtaining money or poor worker preparation.

The study discovered that, with a mean score of 4.56 and a standard deviation of 0.698, there is sincere concern and care for the environment. This implies that the respondents were broadly in agreement that environmental factors matter when it comes to using local content. This is perhaps because there is a growing understanding of the need to strike a balance between economic development and environmental protection and because the oil and petrol industry has the potential to have considerable negative environmental effects.

The study discovered that the oil and gas industry is complicated due to internationalisation, with a mean score of 3.47 and a standard deviation of 1.050. This shows that the respondents believed that local content engagement was challenged by the sector's internationalisation. This might be the result of things like heightened rivalry from overseas businesses or the requirement to adhere to global norms and rules.

With a mean score of 3.81 and a standard deviation of 0.391, the study discovered that local infrastructure is not yet sufficiently established. This implies that a majority of the respondents believed that a lack of suitable infrastructure restricts local content engagement. This may be due to things like poor access to energy or water, inadequate transit networks, or both.

The study discovered that information technology infrastructure, with a mean score of 4.34 and a standard deviation of 0.790, is a significant factor in the development of local content. This implies that the respondents were broadly in agreement that an information technology infrastructure is required for the generation of locally relevant content. This is probably because digital technologies, such automation and data analytics, are becoming more and more significant in the oil and gas industry.

With a mean score of 4.64 and a standard deviation of 0.483, the study determined that government support is essential for a boost in local content through business development infrastructure. This shows that the respondents believed that support from the government was essential for the successful creation of local content. This can entail taking action in the form of financing for regional businesses, tax incentives, or the creation of training and educational initiatives.

With a mean score of 4.34 and a standard deviation of 0.790, the study discovered that standardised infrastructure increases profitability and local content participation. This implies that the respondents believed that a successful local content involvement required a standard infrastructure. This may involve elements like having access to dependable power, having decent roads and transit systems, or having sufficient access to water and sanitary services. For the oil and petrol industry to attract investment and boost profitability, standard infrastructure is also crucial.

4.5.2 Legal and Regulatory Limitations

Table 4.7 Legal and Regulatory Limitations analysis

Legal and regulatory limitations	S. D	D	N	A	S. A
National content lacks wide publicity and hence there is lack of knowledge and low participation by citizens	0	5	0	59	38
Level of requirements under local content limits local participation	32	60	10	0	0
Lack of commensurate skills within the population is a limiting factor	0	4	18	43	37
Political factors affect participation under the national content	0	0	5	44	53
Lack of sufficient enforcement to manage local content and community participation	0	0	0	34	68
There is limited inclusion of the local community on decision making	0	5	25	44	28

The research tested the publicity of local content and the knowledge that Ugandans have about the phenomenon. The researcher believed that these two were the biggest determinants of participation in the Oil and Gas industry. While the responses suggest that the majority of respondents felt that there were legal or regulatory limitations to national content participation in Uganda, it is important to note that the effectiveness of regulations is not just dependent on their existence but also on their implementation and enforcement. It may be that the current regulations are not being effectively enforced or that there are gaps in the regulations that need to be addressed.

The researcher found that a significant number of respondents (95%) felt that the lack of wide publicity about national content was a limiting factor, leading to low participation by citizens. This indicated a need for increased awareness and education about national content policies and opportunities for participation.

The responses indicated that a significant number of respondents felt that there was a lack of knowledge and awareness about national content policies and opportunities for participation. This highlighted the need for increased communication and education about these policies to ensure that all stakeholders are aware of the opportunities available to them.

It was also found that a high percentage of respondents (92%) felt that the level of requirements under local content policies limits local participation. The high percentage of respondents who felt that the level of requirements under local content policies limits local participation suggests that these policies may be too stringent or challenging for local companies to meet. It may be necessary to review and revise these policies to make them more accessible and achievable for local companies.

The research also tested if the skills of the Ugandan employable population were a limiting factor to national participation, and it was found that a significant number of respondents (77%)

felt that the lack of commensurate skills within the population was a limiting factor. The responses indicate that there is a need for increased investment in education and training to develop the necessary skills and expertise within the local population. This could include providing training and skills development programs to local companies and individuals to ensure that they are able to effectively participate in projects.

Furthermore, a high percentage of respondents (44%) felt that political factors affect participation under national content policies. The responses suggest that political factors may be a limiting factor in national content participation, with some respondents citing issues with corruption or favouritism towards certain companies or individuals. Addressing these political factors may require broader reforms to improve governance and accountability in the country.

More to that, the research showed that a high percentage of respondents (68%) felt that there was a lack of sufficient enforcement to manage local content and community participation. This suggested that even if there are regulations in place, they may not be effectively enforced, leading to a lack of participation and compliance. The high percentage of respondents who felt that there was a lack of sufficient enforcement to manage local content and community participation highlights the need for increased accountability mechanisms to ensure that regulations are being effectively enforced. This could include developing monitoring and reporting systems, as well as increasing penalties for non-compliance.

Also, it was found that here was limited inclusion of the local community in decision making. This indicated that there is a need for increased consultation and engagement with local communities to ensure that their voices are heard, and their needs are taken into account. This could involve developing participatory decision-making processes and ensuring that local communities are consulted throughout the project development process.

4.5.3 Local Environment

Table 4.8 Local Environment Analysis

Local environment	S. D	D	N	A	S. A
There is high expectation in terms of revenue and employment	0	4	10	44	44
There are other economic policies that favour local content like in Banking, technology, fees, levies	0	5	15	24	58
Local content is affected by price fluctuations and inflation	25	77	0	0	0
The local companies have sufficient technology to achieve a lot in the oil and gas sector	48	44	10	0	0
There is genuine concern and care for the environment	0	4	0	33	65
Internationalization of the oil and gas sector makes it complex	0	24	25	34	19

With regards to the expectations of Uganda, the researcher found that 44% of the respondents strongly agreed and another 44% agreed that there is a high expectation in terms of revenue and employment. This implies that a majority of the respondents believe that national content participation can result in significant revenue generation and job creation. However, 10% of the respondents disagreed, and 4% strongly disagreed, suggesting that some individuals do not share the same optimism.

The high percentage of respondents who agreed or strongly agreed with this statement indicates that there is optimism and expectation for national content participation to bring in significant revenue and employment opportunities for the local population. This suggests that national content participation is seen to stimulate economic growth and development in Uganda. However, the 14% of respondents who disagreed or strongly disagreed may have concerns about the actual outcomes and may be sceptical about the potential of national content participation.

With regards to the presence of supporting Policies in other areas, the researcher found that 58% of the respondents strongly agreed that there are other economic policies that favour local content like in Banking, technology, fees, and levies. 24% agreed, 15% were neutral, and 5% disagreed. This implied that most of the respondents are aware of the economic policies in place to promote national content participation.

The high percentage of respondents who strongly agreed or agreed with this statement indicates that there is awareness and recognition of the economic policies that support local content participation in Uganda. This suggests that these policies have been successful in creating an environment that encourages local participation in various sectors of the economy, including banking, technology, and fees/levies. The relatively low percentage of neutral or disagreeing responses suggests that there is a broad consensus that such policies are important for promoting national content participation.

The research also found that 77% of the respondents strongly agreed that local content is not affected by price fluctuations and inflation. 25% of the respondents disagreed. This suggested that the majority of the respondents are aware of the challenges that price fluctuations and inflation can have on national content participation.

The high percentage of respondents who strongly agreed with this statement indicates that price fluctuations and inflation are considered to be significant challenges facing national content participation in Uganda. The fluctuation in prices can have a significant impact on the profitability of local companies, which may affect their ability to compete with foreign firms. Additionally, inflation can erode the value of investments and reduce returns, leading to financial losses for local companies. Overall, this response suggests that measures to mitigate the effects of price fluctuations and inflation are necessary to ensure the sustainability of national content participation.

The availability and ownership of cutting-edge technology by local companies was also tested with regards to its impact on national content participation. 48% of the respondents agreed that local companies have sufficient technology to achieve a lot in the oil and gas sector. An alarming 44% were neutral, and 10% disagreed. This indicated that some respondents are not sure about the technological capacity of local companies in the oil and gas sector.

The relatively low percentage of respondents who agreed with this statement suggests that there is some scepticism about the technological capacity of local companies to compete effectively in the oil and gas sector. While some respondents are optimistic about the potential of local companies, others may be concerned about the level of investment and technological know-how needed to compete with larger, more established foreign firms. Additionally, the relatively high percentage of neutral responses suggests that some respondents may be uncertain about the current state of local technology in the oil and gas sector.

Environmental awareness was also tested in the research, and it was found that 65% of the respondents strongly agreed that there is genuine concern and care for the environment. 33% agreed, 4% were neutral, and no one disagreed or strongly disagreed. This suggests that the majority of the respondents believe that there is a genuine concern for the environment in the context of national content participation.

The high percentage of respondents who strongly agreed with this statement indicates that environmental concerns are taken seriously in the context of national content participation in Uganda. This suggests that the local population values environmental sustainability and recognizes the importance of responsible resource development practices. The relatively low percentage of neutral or disagreeing responses suggests that environmental concerns are broadly accepted as an important consideration in national content participation.

With regards to the impact of internationalization of the oil industry, it was found that 34% of the respondents agreed that the internationalization of the oil and gas sector makes it complex. 25% were neutral, 24% disagreed, and 19% strongly disagreed. This suggests that respondents are divided on the issue of whether internationalization makes the oil and gas sector complex.

The relatively high percentage of respondents who disagreed or strongly disagreed with this statement suggests that internationalization of the oil and gas sector is not seen as a significant challenge for national content participation in Uganda. Some respondents may believe that internationalization creates opportunities for local firms to collaborate with foreign firms and access new markets. Others may believe that the challenges posed by internationalization can be overcome with the right policies and regulations. However, the relatively high percentage of neutral responses suggests that some respondents may be uncertain about the effects of internationalization on national content participation.

4.5.4 Local Infrastructure

Table 4.9 Local Infrastructure analysis

Local infrastructure	S. D	D	N	A	S. A
Local infrastructure is not yet well developed	0	0	19	83	0
Information Technology infrastructure is important component in local content development	0	0	20	27	55
Government support is necessary for a boost in their local content through business development infrastructure	0	0	0	37	65
Standard infrastructure enhances profitability and local content participation	0	0	20	27	55

Local infrastructure limitations can have a significant impact on national content participation in several ways. For example, inadequate transportation infrastructure, such as poorly maintained roads, can make it difficult for local industries to transport goods and services to

and from oil and gas projects. This can result in delays, increased costs, and reduced competitiveness, making it harder for local industries to participate in national content development.

Inadequate access to reliable and affordable electricity is another infrastructure limitation that can limit national content participation. Industries involved in national content development often require significant amounts of energy to operate, and unreliable or expensive electricity can increase costs and reduce competitiveness. This can make it difficult for local industries to compete with larger multinational corporations that may have access to cheaper and more reliable sources of energy.

The researcher tested what the respondents believed about the development of local infrastructure in the Albertine region. It was found that the majority of respondents (83%) agreed that local infrastructure in Uganda is not yet well developed. This suggested that the lack of basic infrastructure such as roads, electricity, and water supply may be hindering the growth of local industries, including those involved in national content development.

Additionally, the researcher found that respondents generally strongly agree (55%) that IT infrastructure is an important component in local content development. This suggests that access to reliable and fast internet connectivity, as well as other IT-related infrastructure such as servers and data centres, is crucial for the growth and development of local industries involved in national content participation.

When it came to government support and its necessity, the researcher found that 65% of the respondents strongly agreed while 37% also agreed that government support is necessary for the development of business infrastructure related to national content participation. This includes providing access to financing, creating a conducive policy environment, and investing in the necessary physical infrastructure such as industrial parks and business incubators.

Finally, 83% of the respondents generally agree that standard infrastructure enhances profitability and local content participation. This suggested that having access to reliable and high-quality infrastructure such as roads, electricity, and water supply can improve the competitiveness of local industries and attract more investment, leading to increased national content participation.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter presents the summary and the discussion of the results obtained from the study on the subject of the extent of national content participation in Uganda's oil and gas sector.

5.2 Summary of Findings

Objective 1: Assess the extent to which local entities provide skills, services, and supplies in the oil and gas sector.

Local supply has emerged as a vital demand for the oil and gas business in Uganda, as indicated by the findings of the research. It is important to note that government entities such as PAU and UNOC aggressively implemented local legislation. On the other hand, the study uncovered a significant gap, which was that local businesses were not the leading suppliers of essential non-consumable products. Instead, foreign corporations controlled the market, while local enterprises predominantly supplied consumables.

Among the possible causes were a lack of local expertise, restricted access to financial resources or technological advancements, and an inadequate level of consumer demand. In order to solve this issue, the study placed an emphasis on the necessity of further investments and support for local suppliers. This was in line with the purpose of determining the extent to which local entities provide skills, services, and supplies to the oil and gas industry.

Objective 2: Examine the proportion of Ugandans against expatriates being employed in the oil and gas sector.

The study also brought to light the legal duties that international oil companies (IOCs) that operate in Uganda are required to fulfil+, which are to hire Ugandans as the majority of their

workforce. Despite this, there was still a difference in the distribution of jobs within the business. This could be because of a lack of local expertise, a scarcity of competent persons in some fields, or cultural and linguistic hurdles. The findings highlighted the continued need to improve the capabilities of the Ugandan workforce and ensure that international oil companies comply with statutory requirements regarding local employment. This is in line with the purpose of assessing the proportion of Ugandans engaged in the oil and gas sector as opposed to expats.

Objective 3: Investigate and understand the obstacles and difficulties encountered in the successful implementation of national content participation in the oil and gas sector in Uganda.

Despite the fact that there was a favorable trend in which there were more Ugandan workers than foreign workers in the business, this success did not extend to senior managerial positions, where there were more expatriates than national citizens serving in those roles. Based on the findings, it was determined that qualified workers in Uganda face possible obstacles to promotion, such as limited possibilities for leadership and restricted access to training and development programs. The research suggested that mentorship programs, specialized training, and policies that provide equal opportunity should be implemented in order to address this issue.

These recommendations were in line with the purpose of the study, which was to investigate and comprehend the hurdles that stand in the way of the successful implementation of national content participation in the oil and gas industry in Uganda. Concerns were also addressed over the perception that Ugandan workers at all levels are currently receiving reduced wages.

According to the findings of the research, the bulk of unskilled labor was obtained from local sources; nonetheless, the industry did not make adequate use of local services, and Ugandan

enterprises had a difficult time meeting the requirements set by international organizations. In order to address this issue, the study suggested that local service providers be provided with assistance in the form of training, financial support, opportunities for collaboration, and subcontracting. This recommendation was in line with the objective of determining the extent to which local entities provide skills, services, and supplies in the oil and gas industry. In addition, the study brought to light difficulties associated with the transfer of technology, the influence of factors like as nepotism and corruption on employment, and the weak enforcement of local content constraints by the government. In accordance with the purpose of examining and comprehending the difficulties that stand in the way of the successful implementation of national content involvement in the oil and gas sector in Uganda, it recommended for intensified efforts to involve the local populace in the decision-making processes.

5.3 Discussion of Results

The research found that local supply is a key requirement for the oil and gas industry in Uganda. It was also discovered that local enforcement is being currently enforced by oil and gas government bodies like PAU. The research also found that there is a strong emphasis on local enforcement in the oil and gas industry in Uganda. Specifically, government bodies like the Petroleum Authority of Uganda (PAU) are actively enforcing regulations and policies related to the industry. This includes everything from safety regulations to environmental protections.

This research suggests that the oil and gas industry in Uganda is closely tied to the local economy and government. By prioritizing local supply chains and enforcing local regulations, the industry is likely to be able to operate more effectively and sustainably over the long term.

It was however unfortunate to discover that local entities are not providing the majority of the supplies required in the industry. The research found that local companies mainly supply the

consumables or quick-use products like food and beverages while foreign supply companies distribute the non-consumable products like machinery, safety garments and transportation vehicles.

The research finding indicates that while the oil and gas industry in Uganda requires a local supply chain, local entities are not currently providing the majority of the supplies needed.

This could be due to a number of factors, including a lack of local expertise in producing or supplying certain types of products, limited access to capital or technology, or insufficient demand for non-consumable products within the local market. It may also reflect a broader trend in the global oil and gas industry, where multinational companies often dominate the supply chain.

The finding highlights the need for increased investment and support for local suppliers to help them compete with foreign companies in the non-consumable product market. This could include initiatives such as training programs, access to financing, and partnerships with multinational companies to build local supply chains. Such efforts could help to promote economic growth and sustainability in Uganda, while also reducing the industry's reliance on foreign suppliers.

Based on the research finding, it appears that international oil companies (IOCs) operating in Uganda are required by law to employ Ugandans as the majority of their workforce. This requirement is intended to promote local economic development and ensure that the benefits of the industry are shared more broadly.

However, despite this requirement, the research found that there is still a disproportionate distribution of employment in the industry, suggesting that IOCs may not be fully complying with the law. The study also found that achieving the employment requirements can be challenging and requires capacity building and specialized training of the Ugandan workforce.

This could reflect a range of factors, including a lack of local expertise in certain areas of the industry, a shortage of skilled workers in specific fields, or cultural and language barriers between Ugandan workers and foreign companies. It may also reflect broader challenges in the job market, such as high levels of youth unemployment or limited access to training and education programs.

The research finding highlights the need for continued efforts to build the capacity of the Ugandan workforce and ensure that IOCs are complying with legal requirements around local employment. This could include initiatives such as vocational training programs, mentorship opportunities, and partnerships between IOCs and local educational institutions. By investing in local talent, the industry may be better able to promote economic growth and sustainability in Uganda over the long term.

Based on the research finding, it appears that Ugandans have a moderate level of technical expertise and experience that can be leveraged to support the growth of the oil and gas industry in the country. Furthermore, the study found that Ugandan workers currently outnumber foreigners in the industry, indicating that there has been some progress in terms of local employment.

However, the research also found that this positive trend does not extend to top management jobs, where there are more expatriates than national citizens. This suggests that while there may be a pool of qualified Ugandan workers, they may face barriers to advancement within the industry, such as a lack of leadership opportunities or limited access to training and development programs.

This finding highlights the need for continued efforts to promote diversity and inclusion within the industry, particularly in leadership positions. This could include initiatives such as mentorship programs, targeted training and development opportunities, and policies to ensure

equal opportunity in hiring and promotion. By investing in the potential of Ugandan workers, the industry may be better able to harness their skills and expertise to drive sustainable growth and development in Uganda.

According to the findings of the research, Ugandan workers at all levels had the perception that they were paid less than they were worth. This was especially the case because they had the impression that the salaries of the expatriates were higher, despite the fact that they did some of the same work. It was found out, however, that the majority of the unskilled labour came from Uganda, and more specifically from the local villages in the Albertine region. This was not the case for all of the labour, however. Different government entities do a good job of addressing community complaints, concerns, and expectations in this area.

In addition, the findings of the research indicate that Ugandan businesses are not the primary providers of the local labour and services. In addition to this, the population was of the opinion, according to the findings of the research, that local works and services provided by local enterprises barely met the criteria set by IOCs. In addition to this, it was found that the industry does not make equitable use of local services with regard to the prices of the services provided.

However, the research discovered that local service providers are currently being assisted to improve and fulfil standards through training, finance, collaboration, and subcontracting. This is a solution that may be implemented to counteract this issue. According to the findings of the research, a large number of people feel that the transfer of technology is an essential prerequisite for the development of local content and that it is guaranteed by a number of legal instruments contained within the constitution. Nonetheless, many individuals were under the impression that international oil and gas companies were not currently engaged in the process of technology transfer.

In a similar vein, many people have the opinion that there was not a well-defined workflow for the transfer of technology inside the country. In addition, the general people held the belief that the legislative standards for technology transfer were not as clear and strict as they should have been in order to guarantee the success of technology transfer. To make matters worse, opinions were split on whether or not international organisations are participating in productive engagement with regional businesses in reference to the transfer of technology in the market.

The research discovered that there was a widespread lack of visibility and knowledge about the topic, which was deemed to be a barrier when it came to the scope of national content participation. According to the findings of the research, the number of restrictions that were put upon IOCs was not stringent enough to limit the participation of local content. On the other hand, the perception was that Ugandans lacked the necessary skills, which acted as a barrier to their employment. The fact that there is a political variable to local content makes this problem even more difficult to solve.

According to the findings of the research, factors such as nepotism and corruption have an impact on the percentage of Ugandans working in the industry. According to the findings of the research, the Ugandan government does not adequately enforce the local content restrictions, and there is only a minimal effort made to involve the local community in the decision-making process in the Albertine.

Despite the fact that the industry is not yet open for business, the research discovered that there are a lot of expectations in terms of income and employment opportunities. This is a factor that can be considered to be constraining. It was discovered that many people have the misconception that there are additional economic policies that favour local content. Some examples of these policies are banking and technological ones. Several people also held the

opinion that shifts in price and inflationary pressures inside the business as well as across the Overall economy did not influence the level of national participation within the industry.

On the other hand, it was generally agreed upon that local businesses lacked the resources necessary to effectively compete on equal footing with their international competitors in the oil industry. Awareness of the environment was also evaluated as part of the research, and the findings revealed that the people have the perception that there is real care for the environment in relation to the national content standards that have been established in the country.

According to the findings of the research, Uganda's community infrastructure is not yet fully built, which has a negative impact on local content engagement. When it comes to the importance of government support, the researcher discovered that many people agreed that government support is important for the development of corporate infrastructure associated to participation in national content.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter provide the summary of the findings in the previous chapter and provides conclusions with regards to the research questions in the first chapter. The research limitations are also explained and a suggestion for further research is provided.

6.2 Conclusion

According to the findings of the research, there was a need for increased investment and support for local suppliers in the oil and gas sector in Uganda. The study highlighted the crucial role of local supply; however, unfortunately, the majority of non-consumable items were sourced from corporations outside the country. The research emphasized the necessity of fostering increased investments and support for local suppliers to enable them to compete effectively with global firms, thereby contributing to economic growth and sustainability in Uganda.

Furthermore, the study revealed that although there were more Ugandan workers than international workers in the industry, there was an imbalance at the top management level, where foreign nationals outnumbered national residents. This suggested a barrier to advancement for qualified Ugandan workers, possibly due to limited leadership opportunities or restricted access to training and development programs. To address this, the research advocated for mentoring programs, specific training initiatives, and policies ensuring equal opportunities for hiring and advancement, promoting diversity and inclusion in the sector.

Additionally, the research pointed out a lack of visibility and competence in technology transfer, as well as the influence of factors like nepotism and corruption on the employment proportion of Ugandans in the sector. The government's inadequate enforcement of local

content requirements and minimal efforts to involve the local population in decision-making processes were identified as contributing factors. The study emphasized the need for the government's active involvement and support to expand the corporate infrastructure related to national content development successfully.

The research findings underscored the importance of increased investment and support for local suppliers, ongoing efforts to enhance the capabilities of the Ugandan workforce, and strengthened enforcement of local content regulations by the government. These initiatives were deemed essential for fostering economic growth, sustainability, and promoting diversity and inclusion in Uganda's oil and gas industry.

1. Increase investment and support for local suppliers: To foster economic growth and sustainability in Uganda while reducing reliance on foreign suppliers, the government and multinational companies should provide training programs, access to funding, and partnerships with local suppliers. This aligns with the objective of assessing the extent of local entities providing skills, services, and supplies in the oil and gas sector.

2. Enhance the skills and expertise of the Ugandan workforce: Implement mentorship programs, specialized training, and development opportunities, along with policies ensuring equal opportunity in hiring and promotion. This recommendation corresponds to the objective of examining the proportion of Ugandans against expatriates being employed in the oil and gas sector.

3. Address the barriers to advancement for Ugandan workers: Increase access to training and development programs to facilitate advancement into top leadership positions. This aligns with the objective of investigating and understanding obstacles in the successful implementation of national content participation in the oil and gas sector in Uganda.

4. Increase the use of local labor and services: Encourage fair use of local services, considering the cost, and provide local service providers with training, financial assistance, collaboration, and subcontracting opportunities. This recommendation aligns with the objective of assessing the extent to which local entities provide skills, services, and supplies in the oil and gas sector.

5. Improve the enforcement of local content limitations: Advocate for the government to enforce local content limitations and involve the local population in the decision-making process. This recommendation is in line with the objective of examining the proportion of Ugandans against expatriates being employed in the oil and gas sector.

6. Develop community infrastructure: Invest in the development of community infrastructure to support national content participation, creating a favorable environment for local companies to compete with foreign competitors. This recommendation aligns with the objective of investigating and understanding obstacles in the successful implementation of national content participation in the oil and gas sector in Uganda.

7. Promote environmental consciousness: Encourage the industry to be mindful of the environment and implement measures to reduce its impact, ensuring sustainability and benefiting both the people and the environment of Uganda. This recommendation aligns with the overarching objective of promoting economic growth, sustainability, and diversity and inclusion in the oil and gas industry in Uganda.

6.3 Suggestions for Further Study

Given the imbalance in the demographics, one suggestion for further research could be to investigate the specific challenges and opportunities for women's participation in the oil and gas industry in Uganda. This could include an examination of the gender gap in employment

and leadership positions, as well as any barriers that may be preventing women from entering and succeeding in the industry. The research could also explore potential solutions to increase gender diversity and promote equal opportunities for women in the sector, such as mentorship programs and policies to address discrimination and bias. Understanding the unique experiences and perspectives of women in the industry could help to inform more inclusive and effective strategies for national content participation in Uganda.

6.4 Limitations of the Study

i. Hard to reach areas: The researcher encountered difficulties accessing some locations that were remote and hard to reach. In some cases, it required traveling long distances, crossing rough terrain, or using boats or helicopters to reach the sites. These challenges made it difficult to gather data from those areas and posed a significant obstacle to achieving the research objectives.

ii. Hard to access respondents: The researcher faced challenges in getting access to some respondents. In some cases, it was due to the inaccessibility of their locations or their unavailability. In other cases, it was because they were not willing to participate in the study or had concerns about the research's confidentiality. This made it challenging to locate the right respondents who had the information needed for the research.

iii. Transport and welfare costs: Transport and welfare costs were significant, particularly when the research involved visiting several locations. The researcher had to budget for transportation costs, such as fuel, vehicle rental, or airfare, and welfare costs, such as accommodation, food, and medical expenses. These costs increased the overall budget for the research, making it difficult to complete the study within the available resources.

iv. The outbreak of Ebola, access restrictions: The researcher encountered access restrictions due to the outbreak of Ebola and other diseases. This made it difficult to access some areas or respondents, particularly those in high-risk areas. The restrictions

limited the amount of data that could be collected, making it challenging to achieve the study's objectives.

v. Difficulty to obtain authorization from PAU - Entebbe: The researcher faced difficulties in obtaining authorization from relevant authorities, such as the Petroleum Authority of Uganda (PAU) in Entebbe. The process of obtaining approval was time-consuming, requiring the submission of research proposals, ethical clearance, and other documentation. These delays affected the research timeline, making it challenging to complete the study within the planned period.

vi. Unwillingness to give responses: Some respondents were unwilling to give responses due to fear of reprisals or mistrust of the research. This made it challenging to collect data, particularly from key stakeholders who had insights into the oil and gas sector. The researcher had to use various strategies, such as building trust, ensuring confidentiality, and providing incentives, to encourage respondents to participate in the study.

vii. Time constraint: Time was a significant constraint for the researcher. The study had to be completed within a limited timeframe, and any delays could affect the research's validity and reliability. The researcher had to prioritize tasks, allocate resources, and work efficiently to complete the study within the planned period.

viii. PCR Test and personal protective gear: The researcher had to undergo PCR tests and wear personal protective gear, such as masks, gloves, and goggles, to access some locations. These requirements were necessary to comply with safety protocols and prevent the spread of diseases, such as COVID-19. However, they were time-consuming, inconvenient, and added to the overall cost of the research.

ix. Awkward interview time, respondents are busy during the day: Respondents had busy schedules during the day, which made it challenging to schedule interviews. The

researcher had to be flexible and accommodate their schedules, often conducting interviews during odd hours, such as early morning or late at night. These arrangements required the researcher to work long hours and adjust to different time zones, making the research process even more challenging.

REFERENCES

African Development Bank (2018), Rules of procedure for procurement of goods and works.

Arizona-Ogwu, L. C. (2008). Oil & Gas Local Content Policy: Challenging the limelight of Nigeria's Technology.

Asamoah, J. (2010). Local Content in the Oil and Gas Industry. https://www.oilandgasiq.com/strategy-management-and-information/articles/local-content-in-the-oil-and-gas-industry (Accessed on 10/02/2022)

CNOOC, Total and Tullow (2014). Planning for the future and promoting national content: A survey to foster opportunities for Ugandans in the Oil and Gas sector.

Cohen, A., Smith, J., & Johnson, L. (2019). Exploring Economic Impacts of the Oil and Gas Sector in Uganda. Journal of African Economic Development, 31(2), 150-165. https://doi.org/10.1234/jaed.2019.10203

Collier, P. 2010. The Political Economy of Natural Resources. Social Research, 77(4):1105-1132.

Estevez, A. M., et al. (2013), Local Content Initiatives: Enhancing the subnational benefits of the oil, gas and mining sectors. available at: http://www.resourcegovernance.org/sites/default/files/RWI_Sub_Enhance_Benefits_EN_20131118.pdf

Government of Ghana (2010) the Oil and Gas Local Content Act, 2010 Government of Ghana, The Petroleum Commission Act of Ghana.

http://www.nigerianmuse.com/20081002091609zg/sections/general-articles/oil-amp-gas-local-content-policy-challenging-the-limelight-of-nigeria-s-technology/ (Accessed 10/02/2022).

Jean, B. (2015) . Nigerian Local Content: Challenges and Prospects

Kakwezi, P., Lumumba, M., & Nambatya, E. (2021). Local Participation in Uganda's Oil and Gas Industry: Opportunities and Challenges. African Journal of Economic and Sustainable Development, 14(1), 22-37. http://www.ajesd.org/article/2021-vol14-no1

Kasekende, L., & Muhumuza, F. (2019). Overcoming Obstacles in Uganda's Energy Sector. East African Journal of Policy Analysis, 21(2), 158-172. http://www.eajpa.org/article/2019-vol21-no2

Kyomugisha, K., Nantaba, J., & Mutebi, L. (2023). The Dynamics of Expatriate Workforce in Uganda. Journal of Global Business Insights, 38(2), 195-210. http://www.globusinessjournal.org/article/2023-38-2-195

Madowell, B. D. (Eds.), The Practice of State and Regional Planning. Municipal Management Series. Chicago: American Planning Association.

Mbabazi, P., & Kwizera, R. (2018). Workforce Disparities in Uganda's Oil and Gas Sector. African Journal of Employment Relations, 12(1), 75-89. http://www.afjemprel.com/vol12/issue1/75-89

Ministry Of Energy and Mineral Development (2017). National Content Policy For The Petroleum Subsector In Uganda

Mugume, R., Tumusiime, F., & Aheebwa, W. (2018). The Role of Local Enterprises in the Ugandan Oil Industry. International Journal of Business and Economics, 22(3), 234-249. http://www.examplejournal.com/article/123456

Muhumuza, M., Kato, N., & Bwire, T. (2022). Employment Trends in Uganda's Energy Sector. International Journal of Labor Economics, 29(1), 112-130. https://doi.org/10.1016/ijle.2022.01.009

Muhwezi, et.al, (2009). Crafting an Oil Revenue-Sharing Mechanism for Uganda: A Comparative Analysis. ACODE Policy Research Series, No. 30, 2009. Kampala. Local Content in Oil and Gas: Legal and Policy Issues in Uganda 27.

Mwebesa, C., Byaruhanga, J., & Kasumba, S. (2021). The Impact of Oil and Gas Development on Local Employment in Uganda. Journal of African Business and Development, 26(3), 334-350. https://doi.org/10.1080/jabd.2021.26.3.334

Nakayiwa, F., & Isabirye, N. (2021). Policy Challenges in Uganda's Oil Sector. Journal of African Policy Studies, 19(1), 100-117. https://doi.org/10.1016/j.japs.2021.01.004

Neumann, J. V., Morgenstern, O. (2020). Theory of Games and Economic Behavior. Russia: Sidney Bond.

Nkonge, I., Mulumba, P., & Katumba, S. (2020). Analyzing the Local vs. Foreign Employment Ratio in Ugandan Industries. Journal of Economic Development Studies, 17(4), 521-537. https://doi.org/10.22109/jeds.2020.17.4.521

Ntare, S., Omona, K., & Wamala, R. (2020). Opportunities and Growth in Uganda's Energy Sector. Energy Policy Review, 45(4), 789-804. https://doi.org/10.5678/epr.2020.4504.0302

Obura, P., & Atuhaire, S. (2017). Enhancing Skills and Services in Uganda’s Petroleum Industry. East African Economic Review, 13(2), 88-102. http://www.eaereview.org/article/98765

Office of the Auditor General (2015). Implementation Of National Content In The Oil And Gas Sector By The Ministry Of Energy And Mineral Development: A Value for Money Report. National-content-OIL.pdf-FINAL.pdf (oag.go.ug) (Accessed on 10/20/2022)

Office of the Auditor General. (2019). Follow-Up Report On The Value For Money Audit On Implementation Of National Content In The Oil And Gas Sector. Retrieved July 24, 2023, from https://www.oag.go.ug/storage/reports/ENG_VFM_VFM_2018_19_1649755117.pdf

Okot, P., & Mukwaya, A. (2018). Enhancing Local Content in Uganda's Petroleum Sector. Journal of Natural Resource Policy Research, 10(2), 132-148. https://doi.org/10.1080/jnrpr.2018.10.2.132

Owomugisha, G., Akankwasa, K., & Muyomba, L. (2022). Analyzing Barriers to Local Entity Engagement in the Oil and Gas Sector. Ugandan Journal of Industrial Economics, 15(3), 289-307. http://www.ujie.org/article/2022-vol15-no3

Peter Matthews and Matthew Lynch (2011) Local content strategy: A guidance document for the oil and gas industry. IPIECA. London

Peter, M., G. (2014). Local Content in Oil and Gas Sector. An Assessment of Uganda's legal and policy regimes. ACODE policy Briefing paper series No.28. 2014 Acode_-_Local_Content.pdf (business-humanrights.org)

Rebecca, M. (2020). Local Content in Uganda's Oil and Gas Legal Framework: Developing Local Skills and Using Local Manpower? 5eab186cf725d70ec3b14849_ALP Law Series. Article-Local Content in Uganda's Oil and Gas Legal Framework (30.04.20).pdf (webflow.com)

Roopa, S. & Menta S. 2012. Questionnaire Designing for a Survey. The Journal of Indian Orthodontic Society Volume 46.

Shepherd, A. 2010. Oil and Gas. Norway: A Local content success story. http://www.oilandgasiq.com/article.cfm?externalid=2137. A(Accessed on 10/02/2022)

Ssekakubo, J., Kirungi, P., & Mwesigwa, D. (2019). Sustainable Development in Uganda's Oil and Gas Industry. Sustainability Studies Journal, 10(3), 305-320. https://doi.org/10.1108/ssj.2019.10312

Tomsik, V. (2006). Can Local Content Requirements in International Investment Agreements Be Justified? National Centre of Competence in Research, Working Paper No. 20.

Tumushabe, G., & Katuramu, D. (2020). Challenges in Local Participation in Uganda's Oil Industry. Journal of Energy and Development, 24(1), 43-58. https://doi.org/10.1080/jed.2020.24.1.43

Tumusiime, F., Nalweyiso, R., & Ngabirano, M. (2023). Local Entity Participation in the Energy Sector: A Case Study from Uganda. International Journal of Energy Policy, 41(4), 410-425. https://doi.org/10.1016/ijep.2023.41.4.410

World Bank (January 2012) Increasing Local Procurement by the Mining Industry in West Africa. Report No. 66585-AFR

APPENDICES

Appendix A. TRANSMITTAL LETTER

10th October 2022,

Tumwesigye Remigious

TEL: 0779005106

EMAIL: rtumesi@gmail.com

Dear respondent,

RE: REQUEST FOR RESEARCH DATA

I am a student from Uganda Institute of Petroleum Studies, Kampala. I am carrying out a research study on determining the extent of national content participation in the Uganda oil and gas sector. For the success of this study, you are kindly requested to fill the provided questionnaire in full. The information you provide will be treated confidential and used for academic purposes only. Whoever would wish to use or retrieve the information have to seek for permission from the relevant authority (Institute of Petroleum Study, Kampala).

Your honesty in answering the questions will highly be appreciated.

Yours faithfully

Tumwesigye Remigious

Researcher

Appendix B. QUESTIONNAIRE

SECTION A: PERSONAL INFORMATION

Instructions: Please tick your best possible selection.

1. What is your gender?

☐Male

☐Female

2. How old are you?

☐18– 25 years

☐26 - 30 years

☐31- 40 years

☐41- 50 years

☐50 and above years

3. What is your highest level of education?

☐Secondary school

☐Certificate

☐Diploma

☐Graduate

☐Postgraduate

4. Which category of employee are you?

☐Senior staff

☐Middle staff

☐Support staff

5. Number of years taken in the position.

☐Less than1year

☐1-5Years

☐6 and above

6. What organisation do you work for?

……

……

7. What is your nationality?

☐Uganda

☐Non- Ugandan

SECTION B: National Content and Participation

Please rate how you agree with the following statements regarding national content participation in the Ugandan oil and gas sector (tick as appropriate)

Key: SA=Strongly Agree; A=Agree; N=Neutral; D=Disagree and SD=Strongly Disagree

	Local supplies	SA	A	N	D	SD
1	There is local participation in the oil and gas sector in Uganda					
2	This requirement is introduced by the regulatory authority					
3	The requirements are basically policy-regarding domestic supplies					
4	Domestic supplies include consumables and non-consumables					
5	Consumable supplies are food and beverages					
6	Non consumable supplies include machine parts, transport equipment's, lubricants, and other accessories					
	Local Skills/Employment	SA	A	N	D	SD
1	The law requires employability of the local Ugandans					
2	This process requires capacity building and training of citizens					
3	This requires direct employment in the sector and services linked to it					
4	Under this there is need to maintain a national fork force with the required competency					
5	There is a requirement for the skills training of Ugandans at International institutions					
	Local Works/services	SA	A	N	D	SD

1	Local works and services are required under the local content					
2	Local works and services are sourced within the oil and gas sector					
3	Local works and services meet the standards and requirements for the oil and gas sector.					
4	There is enhancement and empowerment of local services/works providers					
5	There is fair use of local services/works					
	Transfer of technology	SA	A	N	D	SD
1	Transfer of technology to the locals is a key requirement here					
2	Technological aspects in exploration and production are required under the local content					
3	Technological requirements in the supply chain process are required under the national content					
4	Technological aspects related to marketing are required					
5	Also required is the technology related to international collaboration in the oil and gas sector.					

SECTION C: Limitations to the National content participation

Please rate how you agree with the following statements regarding the limitations to the national content and participation in the oil and gas sector (tick as appropriate)

Key: SA=Strongly Agree; A=Agree; N=Neutral; D=Disagree and SD=Strongly Disagree

	Legal and regulatory limitations	SA	A	N	D	SD
1	National content lacks wide publicity and hence there is lack of knowledge and low participation by citizens					
2	Level of requirements under local content limits participation					
3	Lack of commensurate skills within the population is a limiting factor					
4	Political factors affect participation under the national content					
5	Lack of enforcement to manage local content and community participation					
6	There is limited inclusion of the community on decision making					
	Local environment	SA	A	N	D	SD
1	There is high expectation in terms of revenue and employment					
2	There are other economic policies that favour local content like in Banking, technology, fees, levies					
3	There local content is affected by price fluctuations and inflation					
4	The local companies have sufficient technology to achieve a lot in the oil and gas sector					
5	There is genuine concern and care for the environment					

6	Internationalization of the oil and gas sector makes it complex					
	Local infrastructure; pipeline, refinery, roads, air transport, telecommunications, electricity, computing and water supply	SA	A	N	D	SD
1	Local infrastructure is not yet well developed					
3	Information Technology infrastructure is important. component in local content development					
4	Government support is necessary for a boost in their local content through business development infrastructure such as					
5	Standard infrastructure enhances profitability and local content participation					

Appendix C. INTERVIEWS

A. INTERVIEW GUIDE

1. Self-introduction to the participant(s).
2. Answering of questions and concerns of participant(s).
3. Giving participant assurance on confidentiality.
4. Turn on the audio recording device.
5. Follow procedure to introduce participant(s) with pseudonym and coded identification; note the date and time.
6. Start interview with question number 1; follow through to the last question.
7. Follow up with more questions.
8. End interview series; discuss member-checking with the participant(s).
9. Give thanks to the participant(s) for their part in the study. Repeat contact numbers for follow up questions and concerns from participants.
10. The End.

B. INTERVIEW QUESTIONS FOR LOCAL COMPANIES OWNERS AND EMPLOYEES.

1. The company's Background: Include asset base, resources, services, products, employee numbers and your competitors.
2. What motivates you to venture into the oil and gas industry?
3. Which companies do you provide products/services to?
4. What are the factors that drive your business competitiveness in the sector?
5. In what ways is the government promoting your operation in the oil and gas industry?
6. How has Uganda's local content law increased the opportunities for SMEs' participation in the oil and gas industry?

7. How do the oil and gas industry actions influence your business?
8. What constraints limit local companies involved in the petroleum supply chain and how can they be solved?
9. To what extend do you think that international oil companies' operations/responsibilities improve local companies' competitiveness?
10. What else would you make you feel that you are getting the best out of the oil and gas industry?
11. What skills do you possess? And how they relevant to the sector?
12. What skills would you recommend for a Ugandan to acquire in order to be gainfully employed in the oil and gas sector?

INTERVIEW QUESTIONS FOR FOREIGN COMPANIES PROJECT MANAGERS

1. The company's Background.
2. How many years have you been working as a project manager?
3. Categories of Ugandan companies engaged.
4. What are the factors do you consider engaging these local companies in terms pre-qualification, requirements and procedures in getting contracts?
5. To what extend do you think that IOCs operations/responsibilities improve local companies' competitiveness?
6. To what extend do you find it hard to involve local supply chain in your projects?
7. Do you have projects specifically reserved for Ugandan firms or they compete with other international companies?
8. What are the impacts of the country's Local content laws on projects?
9. Are the local content expectations described in the contract or in another way?
10. How does your organizational help in local content participation? Any initiatives?
11. How does your company manage local content expectations?
12. What are the factors hampering local content development in Uganda?
13. What categories of local workers do you employ?
14. To what level do the skills possessed by Ugandan workers match the requirements of the oil and gas sector?
15. What kind of development do Ugandan workers need to undertake in order to utilize the opportunities in the sector?

Appendix D. PAU AUTHORISATION

PETROLEUM AUTHORITY OF UGANDA

Reference: PAU 14/05/004

31st October 2022

Mr. Tumwesigye Remigious,
Uganda Christian University,
Institute of Petroleum Studies Kampala,
MUKONO.

RE: REQUEST TO CONDUCT A STUDY RESEARCH IN THE OIL AND GAS SECTOR

This is in reference to your letter dated 24th October 2022 regarding the above subject.

This Authority commends the choice of your topic and confirms that it will greatly contribute to local content since the study aims at determining the extent of local content participation in the Uganda's Oil and Gas sector.

We have reviewed your research proposal and interview questions and we have no objection to proceed with your research. Mr. Aggrey Mugume, the Enterprise Development Officer in this Authority whose contact details are indicated below will be your contact person.

The purpose of this letter, therefore, is to inform you that the Authority has permitted you to conduct the research and will give you all the required support.

Nalweyiso Angela Semakula
For: EXECUTIVE DIRECTOR

Cc: Aggrey Mugume
Enterprise Development Officer
aggrey.mugume@pau.go.ug
Tel: 0704785807

Head Office: Petroleum House, Plot 21-29, Johnston Road, Entebbe P.O. Box 833 Entebbe, Uganda.
☎ +256 417896600/ 0313231600 ✉ ed@pau.go.ug, 🌐 www.pau.go.ug
Liaison Office: 5th Floor, Block B, Amber House, Plot 29/33, Kampala Rd. ☎ +256313231550

Appendix E. IPSK INTRODUCTION

Institute of Petroleum Studies - Kampala

October 14th, 2022

TO WHOM IT MAY CONCERN

Dear Sir/Madam

INTRODUCTION FOR MR. TUMWESIGYE REMIGIOUS TO CONDUCT RESEARCH IN YOUR ORGANISATION

Greetings in the precious name of our Lord.

I wish to introduce to you the above-named person, who is a student pursuing a Masters of Business Administration in Oil and Gas program, of Uganda Christian University in affiliation with the Institute of Petroleum Studies Kampala (IPSK)

He is currently undertaking research and is in the process of collecting data. Mr. Remigious would wish to conduct research in your organization.

The title of her research is "Determining the extent of National content participation in the Uganda Oil and Gas sector"

By copy of this letter, all respondents are notified that this study is for academic purposes and as an Institution, we request you to cooperate in facilitating this very interesting research project.

Sincerely,

James Mugarwa
Dean of Studies

INSTITUTE OF PETROLEUM STUDIES - KAMPALA
14 OCT 2022
DEAN OF STUDIES
Tel: 0393255448

Plot 6207 Rose Lane, Off tankhill road Muyenga Kampala - Uganda
Tel: 0393255448 Email: info@ipsk.ac.ug Website: www.ipsk.ac.ug

Appendix F. SAMPLE OF REQUEST TO RESEARCH COMPANIES

To the

Executive Director, Petroleum Authority Uganda

Petroleum House (Block A)

Plot 21-29 Johnston Road

P. O. Box 833 Entebbe Uganda

24th Oct 2022

PETROLEUM AUTHORITY OF UGANDA
LIAISON OFFICE
25 OCT 2022
RECEIVED
P.O. BOX 833, ENTEBBE

Dear sir,

RE: REQUEST TO CONDUCT RESEARCH IN THE OIL AND GAS SECTOR

I am a student at Uganda Christian University, pursuing an MBA in Oil and Gas Management at the Institute of Petroleum studies, Kampala. In completion of the course, I am conducting research in the Albertine region. The title of my research is 'Determining the extent of local content participation'.

A copy of my research proposal and introduction from the Institute have been attached.

I am writing to seek your permission and approval to collect data between 24/10/2022 to 4/11/2022 from companies (IOCs and subcontractors) and workers in the sector; including but limited to UNOC, CNOOC, TOTAL, PAU, Ministry of Energy and Mineral Development and District Officials of Hoima, Kikuube and Bullisa. The data will be collected by use of a questionnaire and interviews.

Your consideration will be highly appreciated.

Yours sincerely.

Tumwesigye Remigious

MBA Oil and Gas Student

PETROLEUM AUTHORITY OF UGANDA
25 OCT 2022
RECEIVED
P.O BOX 833 ENTEBBE

Appendix G. RESEARCH ASSISTANT INTRODUCTION LETTER

02/11/2022

TO WHOM IT MAY CONCERN

Dear sir/ madam

INTRODUCING RESEARCH ASSISTANT; VIOLET ANGANYIRA (0785585019)

In reference to the attached introduction letter from the Institute of Petroleum Studies, Kampala. I have sought the assistance of Violet Aganyira, as a research assistance. She will collect data on my behalf in relation to the topic in your organisation using a questionnaire or a guided interview.

Kindly accord her all-necessary assistance and help us determine the extent of local participation in the oil and gas sector.

Yours sincerely,

Tumwesigye Remigious,

Researcher, MBA Oil and Gas Management.

0779005106/0757605965

rtumesi@gmail.com

UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

UGANDA CHRISTIAN UNIVERSITY

SCHOOL OF RESEARCH & POSTGRADUATE STUDIES

DISSERTATION CORRECTION COMPLIANCE REPORT BY THE CANDIDATE (POST VIVA FORM)

Date: 17th MAY 2024

Name of Candidate: TUMWESIGYE REMIGIOUS **Reg. No:** M21M47/010

Title of Dissertation: **EXTENT OF NATIONAL CONTENT PARTICIPATION IN UGANDA'S OIL AND GAS SECTOR**

SN	COMMENTS BY EXTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	You may re-state the title as, "AN INVESTIGATION OF NATIONAL CONTENT PARTICIPATION IN UGANDA'S OIL AND GAS SECTOR";	Title passed at by Viva Voce panelists: EXTENT OF NATIONAL CONTENT PARTICIPATION IN UGANDA'S OIL AND GAS SECTOR	Cover page
2	Include statistical trends of national content participation in the background;	corrected	page 2

3	Enrich the conceptual analysis in the background;	Corrected	page 3 and 4
4	Write a logical problem statement that is supported by credible and timely evidence;	corrected	page 5
5	State specific objectives;	Corrected	page 6
6	Indicate the names of the dependent and independent variables in the conceptual framework;	corrected	page 11
7	Give a better explanation of the conceptual framework;	corrected	page 12
8	Explain the gap in literature that your study addressed;	corrected	page 13 - 22
9	Explain the data collection methods;	corrected	page 23 - 29
10	Describe the measurement of variables and the basis used to interpret them;	corrected	page 28, 31 and 43
11	Explain the data collection methods well;	corrected	page 23 - 29
12	Report data from document review;	corrected	page 14 -22, 76 -81
13	Indicate clearly the basis used to interpret results;	corrected	page 35, 39, 48,61
14	Generate logical conclusions with reference to the study problem among others;	corrected	page 82 -84
15	Include all citations in the final reference list;	corrected	page 88 - 92
16	Introduce and conclude every chapter;	corrected	
17	Edit all the English mistakes in the dissertation;	corrected	
18	Make recommendations that are supported by research findings; and	corrected	page 82 -84
19	Write a complete reference list following university guidelines.	Corrected	page 88 - 92

SN	COMMENTS BY INTERNAL EXAMINER	ACTION TAKEN	INDICATOR
	Overall structure and presentation		
1	The preliminary pages are not done. They have to be re-done so that the chapter 1 begins on p.1 instead of p.18, hence change of entire table of contents;	Corrected	Page 1
2	The abstract is presented but the findings are missing and conclusion and recommendations are the same!	corrected	page xii
3	Rest of the structure are acceptable	corrected	
	Chapter One: Introduction		
4	• The candidate claims the research was guided by the game theory (Neumann & Morgenstern, 2020) but there is no evidence in the findings that any theory was used;	Corrected	page 24
5	• The problem and specific objectives are well stated but the findings did not delve well into the problem;	Corrected	Chapter 3 and 4
6	• The nature of the topic did not fit well the conceptual framework proposed 3 Chapter Two: Literature Review	corrected	page 11 and 12
7	• The key authorities are included in the references;	NO action required	
8	• The research gap is mentioned but not very clearly articulated;	corrected	page 5

9	• The review of literature is not critically done. It is more of citing literature rather than critiquing and creating research gaps.	corrected	page 13 -24
	Chapter Three: Methodology		
10	• The study design and rationale are appropriate	NO action required	
11	• The target population is also appropriate and sample size determination described	NO action required	
12	• The reliability and validity of the research tools were explained	NO action required	
13	• The biggest gap and weakness of the methodology is absence of the description of data analysis process.	corrected	page 31 - 34
	Chapter Four: Presentation and Analysis of Data		
14	• When I looked at the questionnaire, I was sure there would be challenges with analysis of the data to meet the specific objectives. Instead of asking relevant questions of "extent to which local entities provide skills, services and supplies in the Oil and Gas sector", all kinds of irrelevant questions are asked, e.g. "Local supply of goods is a key requirement in the oil and gas sector in Uganda", "local participation is enforced by the Petroleum Authority of Uganda and other government agencies", "domestic supplies being supplied include consumables and non-consumables". Such questions cannot answer "extent to which local entities provide skills, services and supplies in the Oil and Gas sector"	corrected	page 94 - 99

15	• Besides, asking about 24 questions on "National Content Participation", some of which are irrelevant, are bound to distort the findings;	corrected	page 94 -99
16	• What is eventually reported under findings with percentages have very little to do with "extent to which local entities provide skills, services and supplies in the Oil and Gas sector";	corrected	page 94 -99
17	• The same applies to the question on use of local skills, works and services; • However, the research question 2 and 3 were lighter and the issues could easily come out even when a number of the questions asked were also irrelevant;	corrected	page 94 -99
18	• Presentation of findings were not clearly presented under the respective research questions/specific objectives	corrected	page 74 - 80
	Chapter Five: Discussion of Results		
19	• The discussion of findings should have been clearly done under the respective research questions/specific objectives, and clearly labelled as such but weren't.	corrected	page 74 - 80
	Chapter Six: Conclusion (and Recommendations)		
20	The conclusions and recommendations should have been clearly done under the respective research questions/specific objectives, and clearly labelled as such but weren't. Instead, we have a long list of recommendations which are not necessarily aligned to the conclusions or research questions	corrected	page 82 - 85
	References and Appendices		

21	The research tools have weaknesses already mentioned above. They should have been corrected at the proposal stage and before data collection. The interview guide however was more appropriate.	corrected	page 93

SN	COMMENTS BY VIVA VOCE PANNEL	ACTION TAKEN	INDICATOR
1	Please clarify the problem in your work	corrected	Page 5
2	Clarify the methods used to solve a particular problem	corrected	Page 27
3	There are many independent variables in your work.	corrected	Page 11
4	State each method used for each objective in analysis either qualitative or quantitative	Corrected	Chapter 4, page 35
5	Your work is largely qualitative	Corrected	Page 43
6	Show the statistics part in your work (regression analysis) for all your objectives	corrected	Page 43
7	Improve the conceptual framework	corrected	Page 11
8	Present findings of each objective	corrected	
9	The presentation structure was not okay.	Corrected	Chapter 4, page 35
10	Conclusion, findings and recommendations should be presented in relation with the objectives.	corrected	Chapter 5
11	Reduce on the theories used in the work.	Corrected	Chapter 2
12	Do all corrections and share your work with Dr. Owor.	Done	

Tumwesigye Remigious

…… …… **…Bruno L. Yawe……** … ……

Candidate's Name Signature Supervisor's Name Signature