AN ANALYSIS OF THE EMPLOYMENT OPPORTUNITIES THAT EXIST IN UGANDA'S OIL AND GAS DEVELOPMENT STAGE

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M17M47/010

A RESEARCH DISSETATION SUBMITTED TO THE FACULTY OF BUSINESS AND ADMINISTRATION IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION OIL AND GAS AT THE INSTITUTE OF PETROLEUM STUDIES KAMPALA WITH AFFILIATION TO UCU.

FEBRUARY 2018

DECLARATION

I hereby declare that this research study has never been presented for any academic award in any Institution or University. All sources used in this research study have been rightfully acknowledged.

…….. ……

Mugerwa Abbey James **Date**

M17M47/010

APPROVAL

I acknowledge that this dissertation titled: "**An analysis of the employment opportunities that exist in Uganda's oil and gas development stage,**" has been under my supervision and is ready for submission.

…… …….

Mr. Vincent Kisenyi **Date**

DEDICATION

I wish to dedicate this work to my parents Dr. Robert Joseph Jjumba and Mrs. Caroline Jjumba as well as my brothers, David, Andrew and Ivan who have always given me support morally, financially and spiritually through their prayers. I would like to thank them for all the unconditional and unquestionable love, care and support they have always given me.

May God bless them.

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ABSTRACT

Uganda's oil and gas industry has attracted foreign investment in form of companies such as Tullow Oil plc, CNOOC Uganda, Total Exploration and Production, Schulmbager, Halliburton, Enviroserve Uganda and many others. As the country gears up for the oil and gas sector, there is need for quality services, especially in the logistics and shipping sector. This means that the sector will require massive labour force and quality logistics services, among other services. In addition, very few industries require this immense array of supplies to be moved daily and frequently in large quantities.

The study therefore aimed at analyzing opportunities in the Oil and Gas development stage, determining whether local companies have taken up these opportunities or participated in doing so, and if the government of Uganda has made it favorable for local companies to take up opportunities in the Oil and Gas development stage.

In chapter three, a mixed research study design was adopted with a sample size of 19 respondents within the office. The methodology that was used also involved the use an interview guide. The key informants that were selected were those that were believed to have the required information. Secondary data information was used to discuss the results using information from journal articles and the internet.

The respondents were asked to verify if Ugandans had prepared for the upcoming opportunities in the oil and gas development stage. The response rate from the selected sample size was 79%. The data was analyzed, presented and discussed in chapter four and it proved that there indeed exist employment opportunities in Uganda's oil and gas development stage. The research conducted shows that all respondents from the area of study acknowledged to this effect.

The summary, conclusions and recommendations were made by the researcher in chapter five after a proper analysis and presentation of the data.

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CHAPTER ONE

INTRODUCTION

1.0 Introduction

There is big money in oil, gas and minerals, big not only in absolute terms but also, and more importantly, relative to the overall size of many resource endowed countries. Upfront investment costs are commonly huge, as are potential rewards and losses. How all this gets shared between the governments that control access to the resources and those who discover and exploit them that is how the resources that are taxed can have a powerful impact on the economic and political fate of resource rich countries (Daniel, Keen, & McPherson, 2010). This presents an opportunity for entrepreneurs to provide services to the industry and in so doing they create value for the citizens through job creation which ultimately helps a country to reduce the levels of unemployment as well as increasing the income percapita.

The study provides an exhaustive account to all those with more than a passing interest in the topic of opportunities that exist in Uganda's Oil and Gas development stage; both entrepreneurial and employment opportunities.

This chapter introduces the study showing the general background of the study, the purpose and objectives of the study, the root of the problem to be researched on and the research question. The chapter will also show the scope, significance and justification of the study as well as the conceptual frame work of the study.

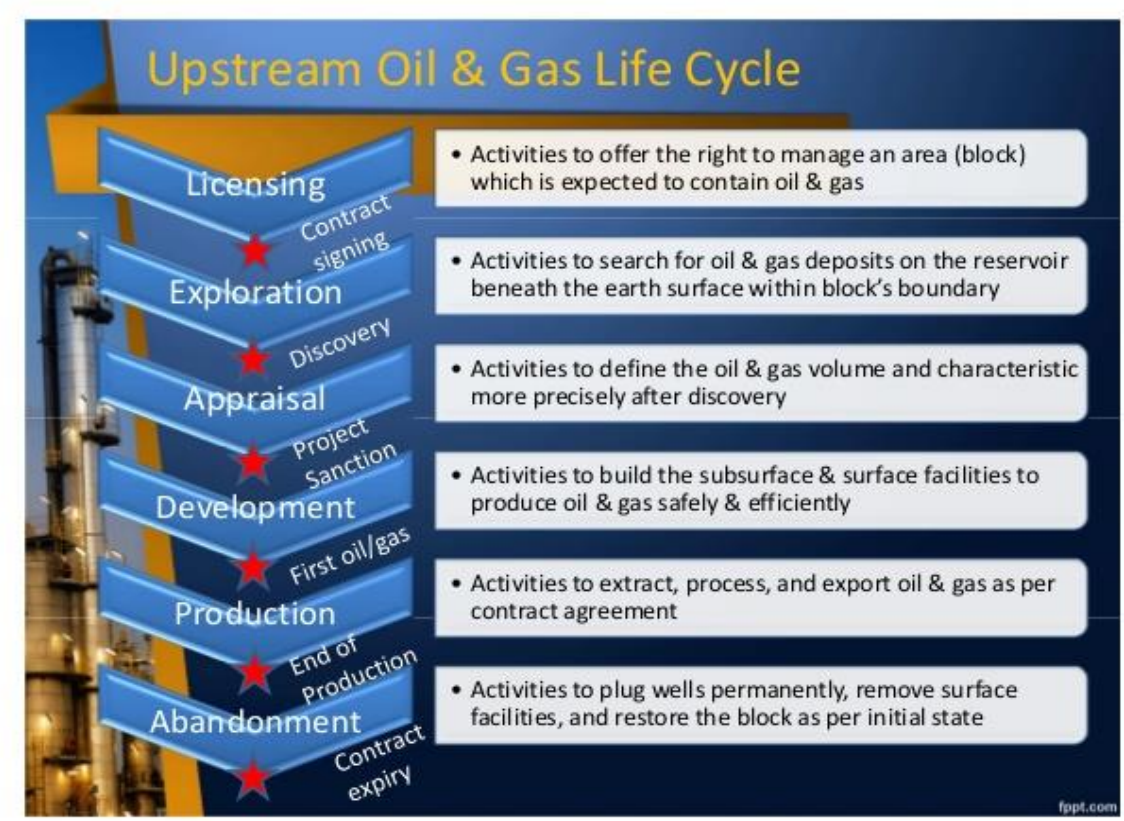
1.1 Background of the study

The hunt for oil in Uganda dates to the early 1920's when significant oil exploration was done by E.J. Wayland, a government geologist who documented substantial amounts of hydrocarbons in the Albertine Graben. This discovery was later to be followed by the first ever drilling of wells in 1938, in which some hydrocarbons were encountered, but no testing was done on this new discovery. However, the hunt did not stop there as later on in the

1940's and 1950's further exploration was carried out and several shallow wells were drilled mainly for stratigraphic purposes. Despite having vivid signs of the country acquiring its newly found wealth, Uganda was affected by World War II. The war had an adverse impact on the oil discovery; its impact was greatly felt as the next sound of oil in Uganda was not going to occur till the early 1980s, which saw the acquisition of aeromagnetic data across the entire Graben region (UOGI, 2016).

The Albertine Graben in which oil has been discovered in Uganda is in the western part of the country, mainly in Masindi, Kibale and Hoima district around Lake Albert which forms the northernmost part of the western arm of the East African Rift Valley. It is situated at the Uganda and Congo border further stretching to the border with Sudan (UOGI, 2016).

Figure 1.1 A figure showing the Upstream Oil and Gas Lifecycle



Source: (Risanto, 2017)

The Ugandan government revised upwards the country's petroleum resources by over 85% to about 6.5 billion barrels of oil initially in place. This was an upgrade of the 3.5 billion barrels of oil, which the government announced in 2006 (Musoke, 2014).

In addition, about 500 billion cubic feet of non-associated gas (independent gas) is also now estimated to have been discovered in Uganda to date. The gas volumes are equivalent to about 90 million barrels of oil equivalent (Musoke, 2014).

Ernest Rubondo, the then commissioner for Petroleum Exploration and Production Department (PEPD), had a day earlier told an oil conference organized by the Konrad Adenauer Stiftung Foundation and Leo Africa Forum that the increase in the estimated petroleum resources is as a result of the evaluation of the data and information acquired from the appraisal of 13 oil wells by the oil companies licensed in the country during the ongoing evaluation of the discoveries in the Albertine Graben (Musoke, 2014).

But despite the sudden jump in volume, the government said recoverable or proved oil reserves have only improved marginally, from 1.2 billion barrels to 1.4 billion barrels. Previously, Uganda's proved oil reserves were estimated at 1.2 billion barrels of oil from the 3.5billion barrels of oil initially in place. Rubondo said Uganda's new proved oil reserves had been calculated using an average of 30% of in place volumes, which is the world average (Musoke, 2014).

Uganda's oil and gas sector has transitioned from the exploration and appraisal phase to the development phase in preparation for sustainable production of the petroleum resources that have been discovered in the country. The oil companies currently licensed in the country to undertake petroleum exploration, development and production are: - China National Offshore Oil Corporation Uganda Limited (CNOOC (U) Ltd), Total E&P Uganda B.V and Tullow

Uganda Operations Pty Limited (MEMD, Progress of Implementation of the National Oil and Gas Policy, 2016).

During the development stage, construction of infrastructure to facilitate production and eventual sale of crude oil takes place. It is important to note that to enable all this to happen, the government of Uganda has set up companies such as the Uganda National Oil Company, Petroleum Authority Uganda, Uganda Refinery Holding Company Limited and many more. Some of the infrastructures needed include; Feeder pipelines, the East African crude oil pipeline, Oil refinery, Kabaale International Airport, new production wells, camps, utilities and many more.

The envisaged pipeline through Tanzania will be of benefit not only to Uganda and Tanzania but other countries in the region such as Kenya, South Sudan, Rwanda, Burundi and the Democratic Republic of Congo (DRC). President Museveni made the decision to construct the pipeline through Tanzania during the 13th Northern Corridor Integration Projects (NCIP) summit in Kampala, which was also attended by President Paul Kagame and Uhuru Kenyatta of Rwanda and Kenya, respectively (Mwakyusa, 2016).

President Museveni and his Tanzanian counterpart John Pombe Magufuli signed the East African Crude Oil Pipeline Agreement (EACOP), which now paves way for construction of the proposed crude oil export pipeline from Hoima, in mid-western Uganda to Tanzania's Indian Ocean port of Tanga (Musisi, 2017). The pipeline is expected to create about 7,000 jobs in the sector.

Uganda's petroleum products consumption is at 27,000 barrels/day and that for East Africa is close to 200,000 barrels/day growing at an annual rate of about 7%. This fact presents an opportunity to Uganda, with the confirmation of over 1.4 billion barrels of recoverable oil in the country. Objective 4 of the National Oil and Gas Policy (2008) for Uganda is to promote

valuable utilisation of the country's oil and gas resources through in-country refining of crude oil. In fulfilment of this objective, the Ministry of Energy and Mineral Development formulated a Refinery Development Programme (RDP) to guide the development of a refinery in the country (MEMD, 2016). The oil refinery is expected to employ about 13,000 people in the oil and gas sector.

Uganda's Works and Transport Minister, Monica Azuba has revealed that the construction of an airport in Kabaale Village, Buseruka Sub-county, Hoima District will start this year,2017. The minister says that last week, a team from the United Kingdom Exporters Finance and Standard Chartered Bank met Uganda's officials and agreed on a funding strategy of the oil airport project in Hoima. The government has consequently agreed on a loan of shillings 2.5 trillion to fund its construction. 298 million shilings have been earmarked for the consultant and designer of the project. Government aims at establishing a 100-meter runway which will enable big planes such as an Antonov cargo plane to land. The government projects that by 2020, the airport will be set. 29 square kilometres have been set for the airport, oil refinery and Industrial Park development (Noel, 2017).

1.2 Statement of the Problem

The oil and gas industry is the most strictly regulated sector, yet; it remains the most profitable and risky. In fact, crude oil or petroleum and its derivatives are essential commodities that are consumed daily. Despite the massive agitation for the adoption of alternative renewable energy resources, oil remains the number one because 99.99% of all vehicles and machines use either PMS (Petrol) or AGO (Diesel). So, the demand for petroleum products is not going anywhere in the nearest future because it will take decades before the concept of renewable energy will fully be accepted (Business I. , 2016).

Running a business in the oil and gas industry is a very lucrative venture, many have become millionaires, and few went on to become billionaires as oil and gas (Black Gold) merchants. Some of the opportunities that exist across the oil and gas value chain include; equipment leasing, fuel importation, filling stations, fuel haulage and logistics, petrochemicals refining, oil and gas consulting, oil and gas related services, investing in oil and gas companies and last but not least direct employment in the oil and gas industry (Business I. , 2016).

Although the Ugandan law through the Petroleum, Exploration, Development and Production Act of 2013 Article 125 (2) provides for national participation of Ugandans so as to benefit from their resource, very little, if any has been done to seize the above opportunities. The extent to which the country's private sector and its entrepreneurs can participate in oil and gas activities is currently limited by inadequate financial capacity, management and technological skills. This is because the oil and gas companies have set high objectives and require high standards with regard to commercial, environmental and social sustainability, which they transfer to all different parts and levels in their supply chains. It is of utmost importance that all suppliers perform their work in a way which meets these standards (MEMD, 2008).

After the discovery of oil in Bunyoro, local entrepreneurs expected a lot of business deals with both government and international oil companies. But as the country enters the oil production phase, most local companies are still wondering where the oil opportunities are. "We are yet to get business from Tullow," said Jackson Wabyona, a Hoima businessman who chairs a local oil and gas advocacy group (OilinUganda, 2014). However, it should also be noted that national companies like Threeways, Bemuga and Daks Couriers won oil company contracts. The failure exhibited by some of the sub-contractors such as Kibibu Engineering that was sub contracted by Kolin Construction Limited, a Turkish firm that won the contract

to tarmac the Hoima-Kaiso-Tonya road also comes into play because these companies have global images to preserve (OilinUganda, 2014).

This research intends to establish the opportunities that exist in Uganda's oil and gas development stage, to evaluate the rate of participation exhibited by the citizens towards identifying and taking up these opportunities, to determine the factors that influence the absorption rate of these opportunities. It is necessary for the country's private sector to acquire and develop the skills necessary to participate in this sector of development, and where possible, for it to be provided with the opportunity to participate (MEMD, 2008).

1.3 Objectives of the Study

1.3.1 Major Objective

The major objective of this research is to analyse the employment opportunities that exist in Uganda's oil and gas development stage.

1.3.2 Specific Objectives

The following are the specific objectives of the study;

i. To establish the opportunities that exist in the Oil and Gas Industry.
ii. To evaluate the participation exhibited by local entrepreneurs towards identifying and taking up these opportunities.
iii. To determine the factors that influence the absorption of opportunities in Uganda's Oil and Gas Industry.

1.4 Research questions

i. What opportunities exist in Uganda's Oil and Gas Industry?
ii. What is the level of participation exhibited by local entrepreneurs in as far as taking up these opportunities is concerned?

iii. What factors influence the absorption of opportunities in Uganda's Oil and Gas Industry?

1.5 Scope of the Study

The scope of the study will focus on three parts which are the content, time scope as well as geographical scope.

1.5.1 Content

The study will determine if Ugandans have built their capacity to take up the opportunities in the sector, the level of participation exhibited by Ugandans in as so far to taking up the opportunities in the sector as well as what the government of Uganda has done to make it suitable for the Ugandans to take up the said opportunities.

1.5.2 Time Scope

The study will focus on a period of 5 years from the time CNOOC Uganda was granted a Petroleum Licence in 2013 to date. This is because the development stage of Uganda's oil and gas industry starts when production licences have been issued to the International Oil and Gas companies.

1.5.3 Geographical Scope

This study will be conducted at Association of Uganda Oil and Gas Service Providers offices at 1st Floor, Suit E49, Akamwesi Complex. Plot 112/114 Port Bell Road.

1.6 Significance of the study

The study is significant to the citizens of Uganda because it shows them the various opportunities that exist in the oil and gas development stage. The study also shows the would be potential investors in the oil and gas development stage where the opportunities lie and how they can take them up.

The study is also significant because it stands out to portray the efforts put in by the government of Uganda towards making it smooth and easy for Ugandans to take up the opportunities in the sector. It also shows if companies have heeded to the call by the government to take up the said opportunities in the sector.

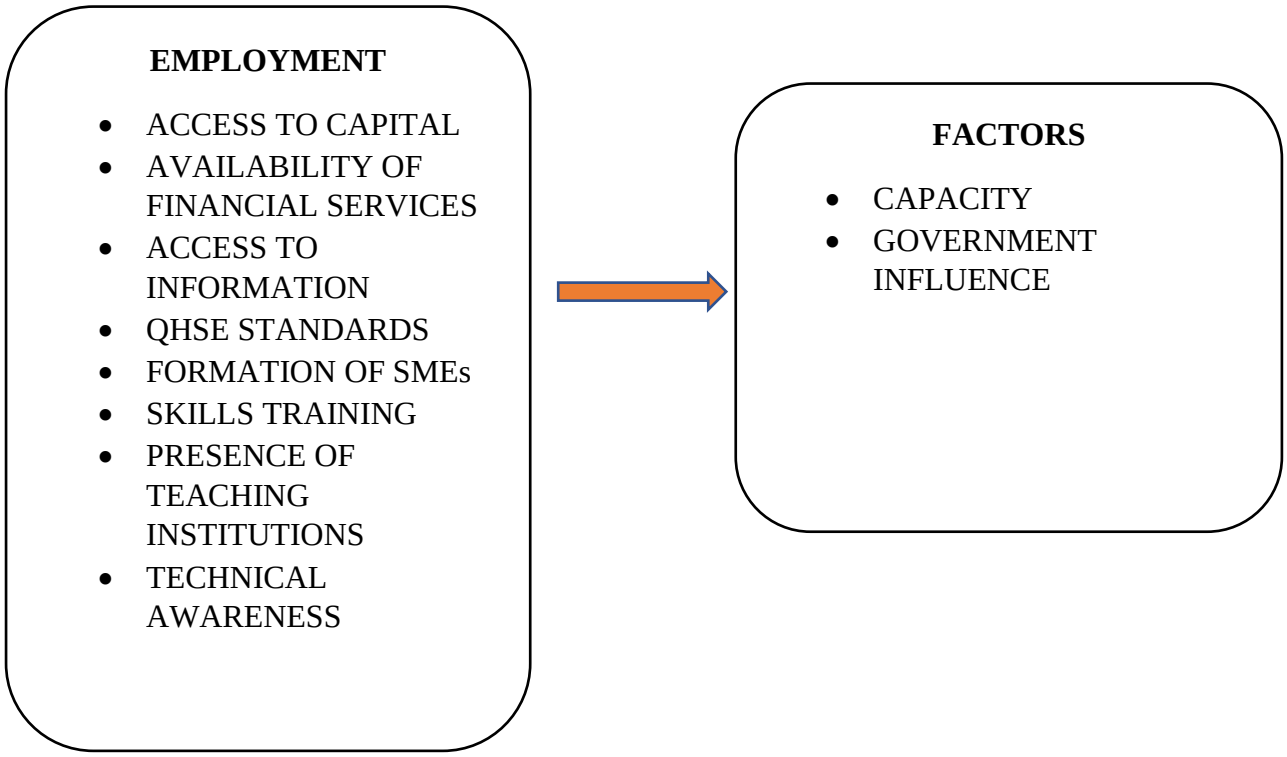
1.7 Justification of the study

This study is important because the government through its Parliament enacted laws to protect and support the locals when it comes to the opportunities that come with the oil and gas industry. These opportunities are backed up by the Ugandan law in the Petroleum (Exploration, Development and Production) Act of 2013. Article 125 (1) of the PEDP Act of 2013 states that, "the licensee, its contractors and subcontractors shall give preference to goods which are produced or available in Uganda and services which are rendered by Ugandan citizens and companies." Article 125 (2) of the PEDP Act of 2013 states that, "Where the goods and services required by the contactor or licensee are not available in Uganda, they shall be provided by a company which has entered into a joint venture with a Ugandan company provided that the Ugandan company has a share capital of at least forty-eight percent in the joint venture." However, this study is meant to investigate how far private companies and their entrepreneurs have gone towards taking up the said opportunities in Uganda's oil and gas sector.

The findings of this study may change the thinking of most people both present and the future. These include the researcher as well as other researchers that will use the findings as literature, government of Uganda, Ministry of Energy and Mineral Development, Petroleum Authority, Uganda National Oil Company, Uganda Revenue Authority, other industry players and the citizens of Uganda.

1.8 Conceptual Framework

Dependent Variable **Independent Variable**



Source: Primary Data

KEY:

The Independent Variables affect the Dependent variables

The dependent variables which are the employment opportunities that exist in the development stage depend on a number of factors such as access to capital to fund these capital-intensive projects, availability of financial services such as AAA rated banks. Others are skills training, presence of teaching institutions such as Uganda Petroleum Institute Kigumba and Institute of Petroleum Studies Kampala among others.

The independent variables which are the factors that influence the absorption of opportunities in Uganda's Oil and Gas Industry for example capacity building, government's role in enabling its citizens to participate profitably in the development stage of its Oil and Gas sector. A number of factors are advanced such as favourable laws, monitoring of the policies put in place which is supposed to be done by the Petroleum Authority of Uganda as mandated by law.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter gives an illustration of the views and thoughts of various authors, scholars and business analysts on the topic of study. The researcher compared the findings from different authors in line with the topic of the study.

2.1 Status of the Oil and Gas Industry in Uganda

Uganda's Albertine Graben is now a mature Oil and Gas province and has nine (9) production licenses issued to Total E&P Uganda, CNOOC (U) Ltd and Tullow Uganda Operations Pty Ltd. The Front-End Engineering Designs (FEED) for the above nine (9) production licenses are being carried out. The FEED for the Kingfisher field development area together with that of the fields in the Kaiso – Tonya area is expected to be completed by the end of this year. The Feed of the other seven (7) production licenses located in Bulisa and Nwoya districts (the Tilenga project) is also expected to be concluded in June 2018 after which, the final investment decision will be made (MEMD, 2017).

2.2 Capacity Building

2.2.1 The human resource base

The human resource base of Uganda consists of many rather young people. Only just above 20 per cent of the population is older than 30 years. School enrolment is high, and the literacy rate is high and improving. Still, the quality of the school system is considered as rather poor in many areas when compared to other countries (MEMD, 2011).

More severe is, however, the situation for vocational training, which is essential in industrial capacity building and for businesses to develop. In-firm training is very low in Ugandan industry. The Ugandan system seems to lack appropriate equipment, tools and adequate

supply of training materials, adequately trained instructors and no harmonized certification system, resulting in low quality of vocational training. In addition, vocational training suffers severely from negative social perception and stigma, as vocational training is fit for only the academically less endowed (MEMD, 2011).

A little less than 10 per cent of Uganda's labour force can be expected to be in jobs which produce work experience of some relevance for the oil industry directly. These encompass plant and machinery operators, crafts and related workers, legislators, managers, professionals and associate professionals. This could be sufficient for a start to expand local content without crowding out nonpetroleum related industries (MEMD, 2011).

2.2.2 Importance of Capacity Building and Industrial Diversity

There are, of course, several factors that explain differences in GDP and GDP-growth. Good or bad enforcement of local content policies is only one. Good or bad policy enforcement in this area, however, is likely to correlate with good or bad enforcement of policies in other areas, as with policies to handle huge oil revenues (MEMD, 2011).

There is, however, one striking difference which occurs and cuts through all other explanations. Capacity building and industrial diversity is essential if Uganda is to reap the benefits from huge endowments of oil and gas. The need for capacity building and private sector development is well in accordance with theories on industrial development and economic growth. A competitive, creative and expanding industrial base is a must for a country to prosper and an economy to generate sustainable national wealth (MEMD, 2011).

Manufacturing is more or less bound to play a key role in private sector development. Thus, it is interesting to notice the differences in manufacturing development between Nigeria, Brazil, Mexico, Indonesia and Malaysia. Nigeria, which experienced no real GDP growth from 1960-1999, was not able to expand industrial activities in manufacturing over the period at

all. The countries that performed better, either have had a significant manufacturing sector over the whole period or have been able to expand it (MEMD, 2011).

2.2.3 Oil and Gas Local Content in Uganda

Local content in the oil and gas sector in Uganda broadly focuses on involving citizens in the sector. This is through training and building capacity for citizens, technology transfer, employment and service provision. Given the fact that Uganda's oil and gas sector is still growing, there is need for exerting more deliberate efforts to ensure that citizens competitively take part in the sector through exploitation of the existing opportunities (ACODE, 2014).

One of the ways has been through government providing for Ugandans to take part in the sector is through local content. Government is in the process of making policies and laws that will ensure citizens take part in the oil and gas sector (ACODE, 2014).

2.2.4 BTVET Training for Oil and Gas in Uganda

The BTVET policy and Strategic Plan 2011-2020 provides for skilling Uganda with a special focus on the oil and gas sector. The Strategic Plan is drawn from the draft BTVET Policy that sets out to develop demand-responsive, employable skills and competencies relevant to the labour market needs for Uganda. BTVET training in Uganda is supposed to be achieved through creation of centres of excellence within the petroleum sector targeted at the apparent skills gaps. Because of the gaps in the BTVET policy and strategic plan, Cabinet is considering a proposed Skilling Uganda Technical, Vocational Education and Training (TVET) Reform Policy. The reform policy seeks to provide and enable technical institutes and polytechnic colleges provide tailored vocational training based on industrial needs and the needs of specific sectors. At present this is not possible since all training institutes have to

follow a curriculum approved by Ministry of Education and Sports (MoES) and the Curriculum Development Centre (ACODE, 2014).

There have been attempts to reform BTVET training in Uganda to focus on oil and gas. Government has introduced courses at university and tertiary level with former Cooperative Institute getting transformed into Petroleum Institute. On top of these, there are several private institutions offering courses in petroleum ranging from law, finance, and economics, among others for example Institute of Petroleum Studies Kampala which is located in Muyenga (ACODE, 2014).

The Uganda Petroleum Institute, Kigumba (UPIK) was created as a response to the various capacity need for the oil and gas sector. UPIK is expected to train Ugandans in the different skills to be able to provide labour for the oil and gas sector (ACODE, 2014).

According to UPIK's strategic plan 2014-19, a Sector Skills Council (SCC) consisting of sector players for the oil and gas sector will be created, the SCC will be mandated in assisting UPIK in reviewing different courses and curricula to modify and fit them to the sector needs and demands (ACODE, 2014).

Presently there is debate on the location of UPIK, whereas UPIK is presently located within the Ministry of Education and Sports (MoES), the feeling is that the institute together with other related institutes should be located in the ministry responsible for petroleum and be under the direct control of the Petroleum Authority of Uganda (PAU) to be able to provide sector driven courses and skills and provide oversight and feedback on the quality of products from the training institutes. On the other hand the capacity needs for the oil and gas training institutions needs to be reviewed. At present government has not reviewed the capacity of technical institutions which will provide training for oil and gas sector jobs. Whereas instructors at UPIK and Nakawa Vocational Training Institute (NVTI) have had some basic

training for the oil and gas sector, the same cannot be said of other technical colleges. This will greatly undermine the nature of skills imparted by these institutions.

At present UPIK is able to graduate about 200 students in a year, this is a small number compared to the 10,000 or more qualified personnel that will be needed for the construction phases. There are plans to have other technical institutes incorporated in the oil and gas sector, however efforts seems to be focused on only Uganda Technical Institute (UTC) Kicwamba and NVTI, however these need to be brought on board before the construction phase begins (ACODE, 2014).

It should be noted that by design UPIK focuses on providing skills for direct employment in the oil and gas sector and may not necessarily focus on other support sectors. However, there is need to link BTVET training with direct and indirect services to the oil and gas sector. For example, BTVET training needs to focus on other sectors like textiles industry, road construction, mining and agriculture among others. This will ensure the support sectors provide goods and services that are competitive for the oil and gas sector (ACODE, 2014).

2.2.5 Employment Trends in the Ugandan Oil and Gas Industry

Prior to 2010, much of the activity in the Albertine Graben was in oil exploration, with seismic survey work providing the bulk of the employment. The initial exploration phase has a short duration, typically up to five years. In this phase a high proportion of specialist services will be required for seismic acquisition, drilling operations and well services. These are more likely to be sourced from international suppliers. If the exploration phase concludes positively, a field development phase will start. This phase will also have a compressed time horizon but will generate substantial employment when the construction phase begins. The total workforce demand will be lower than during the construction phase (Twebaze, 2013).

Good progress was made in 2011 on the first phase of the EA2 development. An EWT programme started in the second quarter, with test crude to be sold to a domestic industrial user. Field development plans were also submitted to the Government for the Waraga, Mputa and Nzizi discoveries, as required at the end of the appraisal period. The Kasamene Field Development Plan was submitted in the second quarter of 2011 (Twebaze, 2013).

The front-end engineering and design (FEED) phase for the Nzizi and Kasamene development projects has been completed and work is under way to progress these developments to final approval stage. The Nzizi gas field development will deliver gas to a new power plant in the Lake Albert area; the first gas from Nzizi is subject to gas sales agreements and the readiness of the new plant. The timing of the Kasamene development, based on a production facility with an initial capacity of up to 10,000 bopd, is under review to determine how this development can best be integrated into the overall Lake Albert development plan (Twebaze, 2013).

2.2.6 Categories of Core Skills

Four categories of skilled workers will be especially required for the development of the oil and gas industry. It is anticipated that most Ugandans will work as “normal labourers” while some will be engineers, technicians and operators. The core skills required, by category, are:

Graduates and postgraduates. This level is comprised mainly of geologists and engineers, more specifically in petroleum geology, geophysics and petrochemical engineering. Earth sciences and petroleum engineering are the oil and gas industry’s two main subsurface disciplines. Petroleum geology and geophysics focus on the provision of a static description of the hydrocarbon reservoir rock, while petroleum engineering focuses on estimations of the recoverable volume of this resource using a detailed understanding of the physical behaviour of oil, water and gas within porous rock at very high pressure (Twebaze, 2013).

Petroleum engineers are of the following types: – reservoir engineers work to optimize production of oil and gas via proper well placement, production rates and enhanced oil recovery techniques; – drilling engineers manage the technical aspects of drilling exploratory,

production and injection wells; and – production engineers, including subsurface engineers, manage the interface between the reservoir and the well, including perforations, sand control, downhole flow control, and downhole monitoring equipment; evaluate artificial lift methods; and also select surface equipment that separates the produced fluids (oil, natural gas and water) (Twebaze, 2013).

Petroleum engineering requires a good knowledge of many other related disciplines such as geophysics, petroleum geology, formation evaluation (well logging), drilling, economics, reservoir simulation, well engineering, artificial lift systems, and oil and gas facilities engineering (Twebaze, 2013).

Technicians. Many engineering-related trades will be required in the oil and gas exploration and production. Welding, for example, is an essential component of the oil industry especially in the construction of refineries, the building of exploration and production sites and the construction of pipelines. In general terms, a ratio of 1:5 engineer/technicians and 1:10 technician/help-hands will be required (Twebaze, 2013).

Operators. These include, inter alia, rig hands and machine operators.

Normal labourers. These include construction workers (welders, pipe-fitters, carpenters, metal fabricators, plumbers). Camp facilities and other structures will have to be built by these workers. Motor vehicle mechanics and drivers will also be among the key skilled workers needed in the construction of the refinery and the birth of the petrochemical plants. This category will include manual labourers, assistant technicians and operators to move equipment, cleaners, guards and so on. About two-thirds of these would work directly with

the oil and gas companies, while one third could work for associated oil drilling and service companies (Twebaze, 2013).

2.2.7 Skilling of Employees

A 2013 report from Ernst & Young indicated that human capital deficit is one of the top ten risks facing the global Oil & Gas industry, affirming that, 'as the sector develops technologically . . . companies that can retain and mobilize people will be able to sustain their competitive advantage (Herbert, 2015).'

Effective and efficient personnel mobilization is crucial to any significant oil and gas project. Research published in 2012 by the Australian Centre of Excellence for Local Government (ACELG) into the prevalence of FIFO in Australia predicts that percentage of Australian mining sector jobs filled by FIFO roles will only increase over the coming years (Herbert, 2015).

Improper workforce utilisation increases susceptibility to many internal and external issues, such as: a high employee turnover, high ongoing operational costs to the business, and under- or over-allocation of staff to specific jobs (Herbert, 2015).

2.2.8 Analytics to cut through complexity

People logistics for a large project requires the coordination of travel and accommodation for hundreds, sometimes thousands of people in various remote locations. As with traditional logistics, several crucial decisions have to be made including BIBO vs FIFO, choice of airports or bus routes and staff roster schedules. In addition to this complexity, working with personnel often requires much greater scrutiny, we don't always require a minimal-cost solution, we need to balance cost, project risk, employee safety and employee satisfaction (Herbert, 2015).

Trying to weigh up all these variables and make decisions in an intelligent way for all of the personnel involved in a project very quickly becomes complex. A 2014 interview by Mining Australia notes that "for many companies [workforce management] is manual, or only semi-automated, which increases the risk of error or processing in-efficiencies, increasing costs". Managing a large workforce is difficult, and only with the right technology can companies provide efficient and effective workforce management (Herbert, 2015).

Through analytics companies can cut through the complexity involved in workforce management. By considering specific variables and how they affect outcomes companies can make better decisions (Herbert, 2015).

Analytics empowers organisations through quantitative justification so that decision makers can be certain that employees will be spending less time in transit, and working on the right jobs at the right times, with the right people (Herbert, 2015).

2.3 Opportunities in the Oil and Gas Development Stage

The steadily increasing global demand for oil and its derivatives such as petrochemicals has enabled companies providing these products to reach more customers and increase their market share and profitability. This boom in global demand along with the ease of international trade and the inflexibility involved in the petroleum industry's supply chain has made its management more complex and more challenging (Raed, 2006).

Despite the importance of supply chain management and its growing complexity, the petroleum industry is still in the development stage of efficiently managing their supply chains. In fact, according to Steve Welsh, a managing director of the College of Petroleum and Energy Studies at the University of Oxford, the oil and petrochemical industry's insight into the supply chain is still in its infancy. However, even with the inflexibility and complexity involved in the industry's supply chain, there is a lot of room for improvement

and cost reduction, specifically in its logistics area. Werner Paratorius, president of BASF's petrochemicals division said "Supply chain management is the backbone of a business where logistics costs can be greater than manufacturing costs (Raed, 2006)."

By the end of 2004, world-wide demand for oil reached 75 million barrels per day and has been projected to increase at a rate of 2 percent per year over the next ten years. For example, China's demand for energy alone is expected to grow at a rate of 4.5 percent per year for the next five years and reach four million barrels by 2010. However, due to recent political unrest in the Middle East, which is the largest oil producing region, sustainable oil supply has become highly unpredictable. Oil and petrochemicals companies are forced to maintain higher safety stocks and search for alternative sources of supplies (Raed, 2006).

Commodities such as oil, gas, and petrochemicals require specific modes of transportation such as pipelines, vessels or tankers, and railroads. These commodities are produced in specific and limited regions of the world, yet they are demanded all over the globe since they represent an essential source of energy and raw material for a large number of other industries. Several weeks' lead-time from the shipping point to the final customers' location is very common in this type of industry. For example, it takes five weeks for the Persian Gulf's oil to make its way to the United States and up to another three weeks for it to be processed and delivered (Raed, 2006).

Opening new production sites or distribution centers closer to dispersed customers is one way to reduce the lead time and transportation costs. However, the acquisition of such facilities in the oil and petrochemical industries, if feasible, is typically very costly and often results in higher inventory and operating costs. Red Cavaney, president of the American Petroleum Institute, said "Most companies are unlikely to undertake the significant investment needed to even begin the process." These factors are pushing oil and petrochemicals companies to

either absorb the increase in costs or pass the costs on to customers who are already facing increasing prices (Raed, 2006).

Companies therefore have recognized that improved supply chain efficiencies represent a huge area for cost savings, specifically in the logistics area; they are estimated to be an average between 10 and 20 percent of revenues. Also, companies believe that the supply chain in which they participate as customers and suppliers is what creates competition rather than individual companies (Raed, 2006).

In an effort to manage their supply chain and reduce costs, oil and petrochemical companies are outsourcing their logistics functions. As the trend in outsourcing has grown, these companies have become increasingly reliant on the services of third-party logistics companies for managing their supply chains. Companies in the petroleum industry, however, took the outsourcing idea one step further and found that one way of outsourcing their logistics functions is to ally and collaborate with competitors. This form of collaboration is referred to as a systematic cooperative reciprocal barter (also called “swaps” or “exchanges”) of supplies, assets, market share, or even the entire business among competitors (Raed, 2006).

However, despite the significant advantages this practice has generated for companies, a defined model for making such decisions does not exist. The subject has barely received any attention in the operations management literature. Currently, no specific method has been adopted to determine when companies should attempt to make swap decisions. An interview with supply chain directors in two international petrochemical companies that have been involved in swapping with their competitors for the past few years revealed that the only methods used are judgmental methods and spreadsheets. Although judgmental approaches may improve accuracy in many decision-making problems, they should not be the only

methods employed. The use of only such approaches cannot guarantee an optimal solution (Raed, 2006).

2.4 Government Influence on Taking up Opportunities in the Oil and Gas Development Stage

Today, there are many opportunities for the coordination of activities across the supply chain even in the ever-complex oil and gas sector. This is largely due to the development of information systems and communication technologies within the sector. Integrating supply management with other factors of operations allows all functions to be involved in the management decisions (Fahad, 2011).

Over the years, the oil industry has continued to face growing challenges, from stricter government regulation, political risks, competition, emergent new comers and political hostilities, which has affected growth and output. Due to the scramble for resources, many oil companies have been driven to explore and produce in some of the most hostile and harsh environments, which in turn tend to be extremely costly. Also, there have been concerns in the industry about the growing scarcity of natural resources, which underlies fears of not being able to meet production levels and goals. However, the resources are not the cause of supply restrictions with vast potential still available due to continuous discoveries of oil reservoirs around the world. The main challenge facing the oil industry is not the availability of oil resources but putting these reserves into production and delivering the final products to consumers at the minimum cost possible. Thus, a solid supply chain management program will enhance this goal (Fahad, 2011).

2.4.1 Petroleum Authority of Uganda (PAU)

The mandate of the PAU is to monitor and regulate the exploration, development and production, together with the refining, gas conversion, transportation and storage of petroleum in Uganda (PAU, 2017).

2.4.1.1 National Supplier Database

The Petroleum Authority of Uganda, the petroleum sector regulator, launched the National Supplier Database(NSD), which will serve as a one-stop centre for local and international oil and gas suppliers (Business U. , 2017).

The centre will list all companies providing services which range from catering, clearing & forwarding, logistics, and security to the petroleum industry. This is to enable easy access and consideration during procurement (Business U. , 2017).

“Only entities listed in the NSD will be eligible to participate,” said Mr Ernest Rubondo, the executive director of the PAU. The NSD was also launched alongside the PAU’s website, www.pau.go.ug, on which it can be viewed by anyone (Business U. , 2017).

Mr Rubondo revealed that 753 local and international service providers have so far expressed interest and provided contact information for listing in the database. Of the 753 companies, 501 are registered in Uganda. The authority is working with both the Uganda Revenue Authority and the Uganda Bureau of Registration to authenticate the information they provided regarding tax compliance and proof of registration. The other 253 companies are registered in, among other countries, the United Kingdom, Australia, China, France, Tanzania, Norway and India.

“For international entities, we are working with their embassies here to try to verify their information from back home,” Mr Rubondo added (Business U. , 2017).

So far, 293 firms which applied before the first deadline, last year, have already been verified and listed on the database. Others will be added “subject to verification.” The launch of the NSD came in the wake of ongoing debates on local participation in the sector, particularly as the country moves to the development and commercial oil production stages (Business U. , 2017).

The PAU board chair, Dr Jane Mulemwa said that an estimated $20bn will be invested in the country during the two phases over the coming years. Local participation in the petroleum sector has been a thorny subject from the announcement of the discovery of commercial oil deposits ten years ago. To make things worse, the last two years have seen prominent local service providers in the freight, clearing and forwarding businesses handicapped by high interest loans against a backdrop of slow activity in the sector and the slowed economy (Business U. , 2017).

But the recent awarding of production licences to the UK’s Tullow Oil and France’s Total E&P paved way for the next capital-intensive development phase. This will lead to production, which the government hopes will commence in 2020 (Business U. , 2017).

Mr Emmanuel Mugarura, the chief executive officer of the Association of Uganda Oil and Gas Providers, described the database as a “starting point” to advocate for local content. “What is left for us now is to improve on our standards, so we don’t lose out,” he said (Business U. , 2017).

2.4.1.2 National Oil and Gas Talent Register (NOGTR)

After developing the national supplier database, the Government is now creating a talent skills databank for the oil and gas industry. The national supplier database for 2017 was unveiled by the Petroleum Authority of Uganda recently. The Government and the oil companies hired a consultant to create the talent skills register for the oil and gas sector (Kwesiga, Oil: Government Developing Skills Register, 2018).

A senior communications officer at the Petroleum Directorate, Gloria Sebikari, said the consultant has already developed a draft register. Once it is ready, the Government will kick off the process of registering Ugandans with "skills" required in the oil industry. "The register is in its final stages of development. We will engage the public after it is ready and then registration will start," said Sebikari (Kwesiga, Oil: Government Developing Skills Register, 2018).

Uganda has discovered 6.5 billion barrels of oil resource. Between 1.4 and 1.7 barrels of oil (reserves) are expected to be recovered from the resource. The Government and oil companies plan to establish two central processing facilities in Buliisa and Buhuka in Hoima to move the crude oil from planned production sites to the refinery in Kabale (Kwesiga, Oil: Government Developing Skills Register, 2018).

The central processing facilities, refinery and the 1450km-long crude oil export pipeline from Hoima to Tanga seaport in Tanzania are expected to be established in the next three years.

Uganda intends to start oil production by 2020 (Kwesiga, Oil: Government Developing Skills Register, 2018).

2.4.2 Laws Governing the Oil and Gas Opportunities in Uganda

Article 125 (2) of the PEDP Act of 2013 states that, “Where the goods and services required by the contactor or licensee are not available in Uganda, they shall be provided by a company which has entered into a joint venture with a Ugandan company provided that the Ugandan company has a share capital of at least forty-eight percent in the joint venture (Gazette, 2013).” This was put there to enable Ugandan companies to be able to tap into the glorious opportunities in the oil and gas supply chain so that they too could benefit from the natural resources in order to enhance economic growth and development in the country.

Other laws such as the Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act of 2013, National Oil and Gas Policy of 2008 and subsequent procurement laws have also been enacted in order to enable Ugandan companies to embrace and take up opportunities in the oil and gas supply chain.

The Petroleum (Exploration, Development and Production) (National Content) Regulations, 2016 provide a list of goods and services to be provided by Ugandan companies, Ugandan citizens and registered entities which are; transportation, security, foods and beverages, hotel accommodation and catering, human resource management, office supplies, fuel supply, land surveying, clearing and forwarding, crane hire, locally available construction materials, civil works, supply of locally available drilling and production materials, environment studies and impact assessment, communications and information technology services, waste management, where possible (MEMD, 2016).

2.4.3 Government Taxation Systems

The Ugandan tax system is residence-based, with a standard corporate tax rate of 30 percent. Capital gains are aggregated with business income and taxed at the standard corporate income tax rate. VAT at a standard rate of 18 percent is imposed on imported goods and the

local supply of goods and services. Withholding tax is deducted at source on specified payments both to residents and non-residents. Withholding tax is generally an advance tax in the case of residents and a final tax in the case of non-residents (Becker, 2014).

In Uganda, every corporate entity (excluding exempt entities) that has chargeable income for the year of income is subject to corporate income tax. Uganda tax residents are subject to income tax on their world-wide income, whereas non-residents are subject to tax on income from a source in Uganda. A company is a Ugandan tax resident if it is incorporated or formed under the laws of Uganda, has its management and control exercised in Uganda or undertakes the majority of its operations in Uganda during the year of income (Becker, 2014).

Tax exempt entities include religious, charitable or educational institutions of a public character, trade unions, employees' associations, association of employers, and certain associations established for the purpose of promoting farming, mining, tourism, manufacturing, or commerce and industry and amateur sporting associations (Becker, 2014).

The basic rate of corporate income tax in Uganda is 30 percent. Mining companies are subject to a corporate income tax calculated according to a specified formula. Petroleum operations are taxed in accordance with a specific tax regime contained in Part IXA of the ITA, which mirrors the Production Sharing Agreements, in terms of which tax is generally levied at 30 percent of the aggregate contract share and any other credits earned by petroleum operations. Small-business taxpayers, with a turnover of between UGS5 million and UGS50 million, are taxed on a turnover basis (Becker, 2014).

Transfer pricing regulations were introduced in July 2011, which in principle follow the OECD guidelines. In addition to transfer pricing documentation for cross-border transactions, Uganda also requires documentation for local (in-country) related party transactions exceeding in aggregate UGX500,000,0000 (USD$250,000) (Becker, 2014).

In terms of Uganda's thin capitalisation provisions, interest payments by a foreign controlled resident company to its foreign controller or its associates are disallowed to the extent that it has a debt-to-equity ratio of more than 2:1. A foreign controlled resident company is defined as a resident company in which 50 percent or more of the underlying ownership or control is held by a non-resident person (the foreign controller) either on its own or jointly with an associate/(s) (Becker, 2014).

In the 2014/15 budget it was announced that deductions of interest paid to non-resident associate persons will not exceed 50 percent of earnings before interest and depreciation. The Income Tax Amendment Bill is to clarify if this requirement will replace the current 2:1 debt to equity ratio, or will be an additional requirement (Becker, 2014).

This taxation system clearly gives a chance to Ugandan companies to take up opportunities in the oil and gas supply chain because the contractors would not want to face the tax burdens of supply which would increase their costs and thereby reduce their overall profits (Becker, 2014).

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter focuses on the presentation of the methodology that the researcher will use when conducting the study. It describes the research design that will be used, study area, and techniques of the study. The chapter also describes the data collection methods and techniques the researcher will use. The chapter further shows the data management and analysis, ethical considerations and the limitations to the study.

3.1 Research Design

Research design is the plan for connecting the conceptual research problems to the pertinent and achievable empirical research (Wyk, 2012). The researcher employed a mixed research study design which involved the combination of both the qualitative and quantitative methods of data collection and analysis.

With the above research design, the researcher was able to ascertain and describe the characteristics of the variables involved in the study.

3.2 Area of Study

The study was carried out at Association of Uganda Oil and Gas Service Providers offices at 1st Floor, Suit E49, Akamwesi Complex Plot 112/114 Port Bell Road.

Putting the time factor into consideration, the respective area of study had a relatively wide enough study population that the researcher used for the study. The Association of Uganda Oil and Gas Service Providers brings together entrepreneurs and local companies interested in taking up opportunities in the Oil and Gas sector.

3.3 Study Population

The researcher targeted a study population of 20 employees of high regard within the organisation. The employees selected were those with managerial positions within the organisations because they will be having first-hand information.

3.4 Sampling Procedures

3.4.1 Sample Size

The researcher used a sample size of 19 members who included the employees who hold management positions in the organisation.

The researcher used Slovin's Formula to come up with the sample size that was used. This was done as shown below;

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

Where; n = Minimum Sample Size

N = Total Population

e = Error Tolerance

$$n = \frac{20}{(1 + 20 * 0.05^2)}$$

$$n = \frac{20}{(1 + (20 * 0.0025)}$$

$$n = \frac{20}{(1 + 0.05)}$$

$$n = \frac{20}{(1.05)}$$

n = **19.0476190476**

The researcher used the Judgmental (purposive) sampling method.

3.4.2 Sampling Techniques

The researcher used the Purposive/Judgmental technique. With the purposive sampling technique, the researcher selected materials for analysis that are particular and specific. This technique was also used for selecting the managers in the organisation to interview because they are the ones charged with knowing the policies that govern the oil and gas sector of a given economy in which they are operating thus they have appropriate information to be able to achieve the objectives of the study.

3.5 Data Collection Methods and Instruments

The researcher used two methods of data collection during the research and these are; primary data sources and secondary data sources.

3.5.1 Primary Data Sources

The primary data was obtained from the respective respondents that is the managers that were selected by use of interviews. This was for the purpose of acquiring first-hand information from the respondents.

3.5.2 Secondary Data Sources

The secondary data was obtained from text books, previous dissertations and the internet from online journals, documentations from the two areas of study. This was for the purpose of acquiring information for the study.

3.6 Procedure for Data Collection

Prior to collection of data, the researcher obtained an introduction letter from the Academic Registrar of Institute of Petroleum Studies, Kampala which was submitted to the human resource manager of the Association of Oil and Gas Service Providers. This letter was accompanied by a request letter on request of the chief executive officer to the Human Resource Managers to seek permission to be able to conduct the study in the organization.

Before the researcher could freely interact with the respective persons, they were informed that the research is purely for academic purposes. Thereafter the procedure for data collection during the research was determined by the method of data collection that was used at that particular time.

3.6.1 Interviewing

This data collection method involved face-to-face interaction between the interviewer and the interviewee. The researcher opted for this method for the purpose of having a one on one interaction with the different employees that take part in the day to day processes of local content.

The researcher used an interview guide to collect data from the respondents.

3.7 Reliability

To ensure the reliability of the data, the researcher determined the sources and the time in which it was collected. The data to be used was from a recognised Institution that had reliable information and the timing is of recent which makes the data reliable.

3.8 Data Analysis

The data was attained from the documents that were received from the area of study. The documents were cross checked for completeness; The rest of the data was also coded, interpreted, and analysed both qualitatively and quantitatively.

While carrying out data analysis, the researcher used Excel, a statistical program to come up with an analysis of the employment and entrepreneurial opportunities that exist in Uganda's oil and gas development stage as regards to Association of Oil and Gas Service Providers. Descriptive statistics will be used during the analysis of the data.

After the data had been analysed, it was then discussed. This process involved the interpretation and presentation of the findings by the use of tables and charts where necessary, and narration in accordance with the objectives of the research.

The findings were first discussed with views related to the findings then presented. This was done co-currently in order remain on track.

3.9 Ethical Considerations

As the research was being carried out, the researcher had to exhibit an ethical kind of behaviour when collecting data, so the following had to be done:

The researcher went through the right procedures to access the information from the organization. It is usually unethical to just walk into an institution and start collecting data without the knowledge and permission of the management in charge of the organisation.

The researcher informed the chief executive officer of the intentions and purpose of the study that is being carried out to enable him understand exactly what the information being collected was to be used for.

The researcher also ensured that the employees were not coerced into giving the information needed but were free to either agree or to decline participation in the research.

3.10 Limitations of the Study

Being that the area of study is a recognised Institution, the researcher's request took long to be approved by the human resource manager as well as the chief executive officer because a

lot of scrutiny and revision that had to be carried out to ensure that the researcher was actually a student and not an undercover “spy” from another company that was seeking to “steal” the company’s information.

The researcher was given limited information for the study. Because of this, the researcher felt that this disabled complete exhaustion of the research findings from the research study.

The researcher was also unable to get 100% response rate from the sample size because the respondents were always unavailable and in the field due to the various conferences they hold to enable Ugandans get information about oil opportunities.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter deals with the presentation and analysis of the data that was collected from different respondents from the Association of Oil and Gas Service Providers and secondary data information from Petroleum Authority of Uganda "An Analysis of the Employment Opportunities that Exist in Uganda's Oil and Gas Development Stage.'' The responses gathered were interpreted, analysed and presented as follows. The researcher endeavoured to present the findings under each objective of the study showing what the study sought to do and how it was done leading to the findings that are presented.

4.1 Background of the respondents.

The research was carried out at Association of Oil and Gas Service Providers in Kampala. A total of 19 respondents were chosen as the sample size for the study and the response rate was 79%. The researcher therefore had a response rate of 79% which was calculated as follows;

$$\text{Response rate} = \frac{\text{Actual Number of Respondents}}{\text{Sample size}} * 100$$

$$= \frac{15}{19} * 100$$

$$= 0.7894736842 * 100$$

$$= \mathbf{79\%}$$

The background of the respondents was analysed using their gender and the findings are shown as follows;

4.1.1 Gender of the Respondents

As the researcher observed during the time at the office, the males seemed to outnumber the females. The table and chart below show the gender distribution of the respondents.

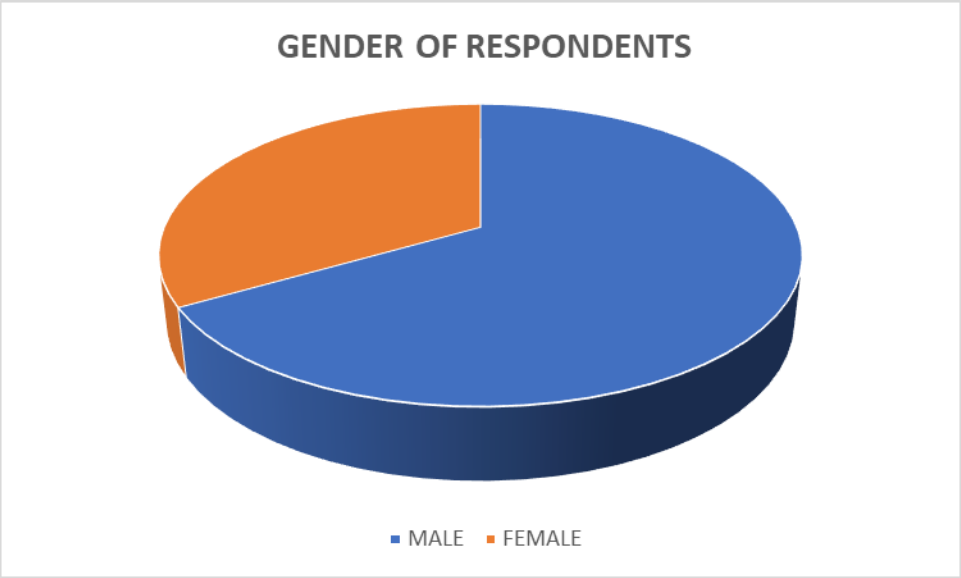
Table 1.1 A table showing the gender of respondents within the organisation

GENDER OF RESPONDENTS	FREQUENCY	PERCENTAGE (%)
MALE	10	66.66666667
FEMALE	5	33.33333333
TOTAL	15	100

Source: Primary Data

The table above shows the gender composition of respondents within the organisation. 66.66% of the respondents were male whereas 33.33% of the respondents were female.

Figure 1.2 A pie chart showing the gender of the respondents



Source: Primary Data

4.2 Employment Opportunities that Exist in Uganda's Oil and Gas Development Stage

Research shows that the much anticipated 'oil' money is expected to start gushing by the middle of this year, as critical studies are in their final stages. Therefore, the industry is getting into the development stage, which means there will be more demand for goods and services from Ugandans or any other supplier. It is generally estimated that the oil companies will spend about $15 billion during the development phase (Kwesiga, 2018).

Table 1.2 A Table Showing If Opportunities Exist in Uganda's Oil and Gas Development Stage

EMPLOYMENT OPPORTUNITIES EXIST	FREQUENCY	PERCENTAGE (%)
YES	15	100
NO	0	0
TOTAL	15	100

Source: Primary Data

The table above shows if opportunities exist in Uganda's Oil and Gas Development stage. All respondents acknowledged that opportunities do exist in Uganda's Oil and Gas development stage.

4.2.1 Employment Opportunities

Research shows that the Petroleum Authority of Uganda goes far enough in giving Ugandans the opportunity to supply the industry. Some goods and services have been ring-fenced for local companies such as; transportation, security, foods and beverages, hotel accommodation and catering, human resource management, office supplies, fuel supply, land surveying, clearing and forwarding, supply of locally available drilling and production materials, environment impact assessment studies, communications and information technology services and waste management services (Rwothungeyo, Benefits For Ugandans in the Kingfisher Project, 2018).

Over 160,000 workers will be required during the peak period which is majorly construction. Of these jobs, 14,000 are direct, 42,700 are indirect and 105,000 are induced jobs (Aheebwa, 2018).

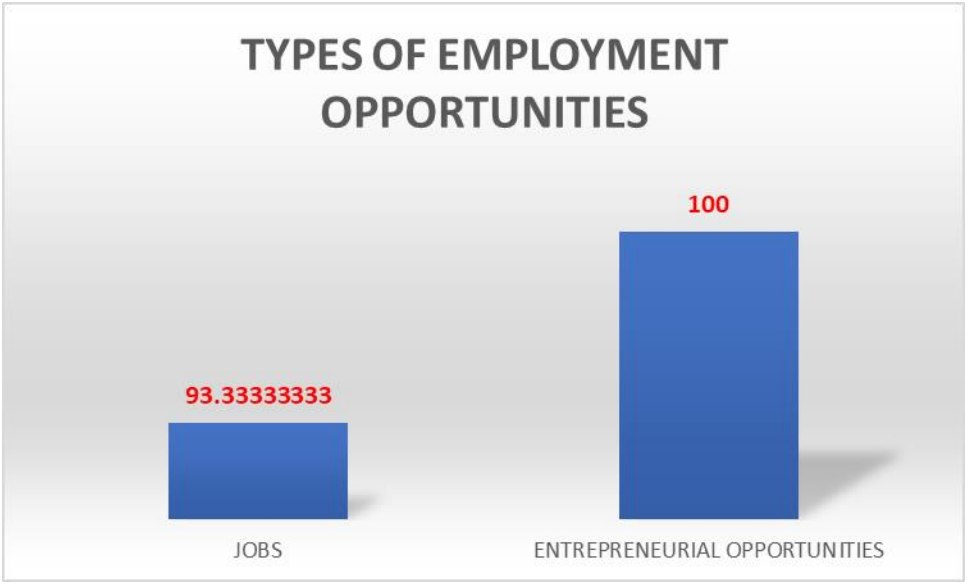
Table 1.3 A Table Showing the Types of Employment Opportunities

TYPES OF EMPLOYMENT OPPORTUNITIES	FREQUENCY	PERCENTAGE (%)
JOBS	14	93.33333333
ENTREPRENEURIAL OPPORTUNITIES	15	100
TOTAL	15	

Source: Primary Data

The table above shows the types of employment opportunities in Uganda's Oil and Gas development stage. 93.33% of the respondents said that jobs will be created out of the entrepreneurial opportunities whereas all respondents said that entrepreneurial opportunities exist in the industry.

Figure: 1.3 A bar graph showing the types of employment opportunities



Source: Primary Data

4.2.2 Proposed Ways in Which Ugandans Should Prepare Themselves to Take Up These Opportunities

Research shows that where local companies do not have expertise, foreign companies are expected to partner with them, says Betty Namubiru, the national content manager at the Petroleum Authority of Uganda. Even highly specialised areas such as building wells, companies are required to subcontract some aspects of their jobs (Rwothungeyo, Benefits For Ugandans in the Kingfisher Project, 2018). Emmanuel Mugarura, the chief executive officer of the Association of Oil and Gas Service Providers, says as more Ugandans pick interest in the sector, they also need to work on building capacity. 'We should meet the standards first, before we start thinking about local content as Ugandans'. We should be able to match

industry requirements before fronting our ‘Ugandaness,’ he said (Rwothungeyo, Benefits For Ugandans in the Kingfisher Project, 2018).

The oil and gas sector is one of the most capital intensive industries in the world. Whether you are supplying food stuffs to an oil camp or installing a rig at a facility, you will need strong financial backing to succeed in this industry. Access to affordable credit is one of the biggest challenges facing small and medium enterprises in Uganda based on a study done by Financial Sector Deepening (FSD) Uganda which notes that 74% of micro, small and medium enterprises in Uganda struggle to get access to finances (Rwothungeyo, 2018).

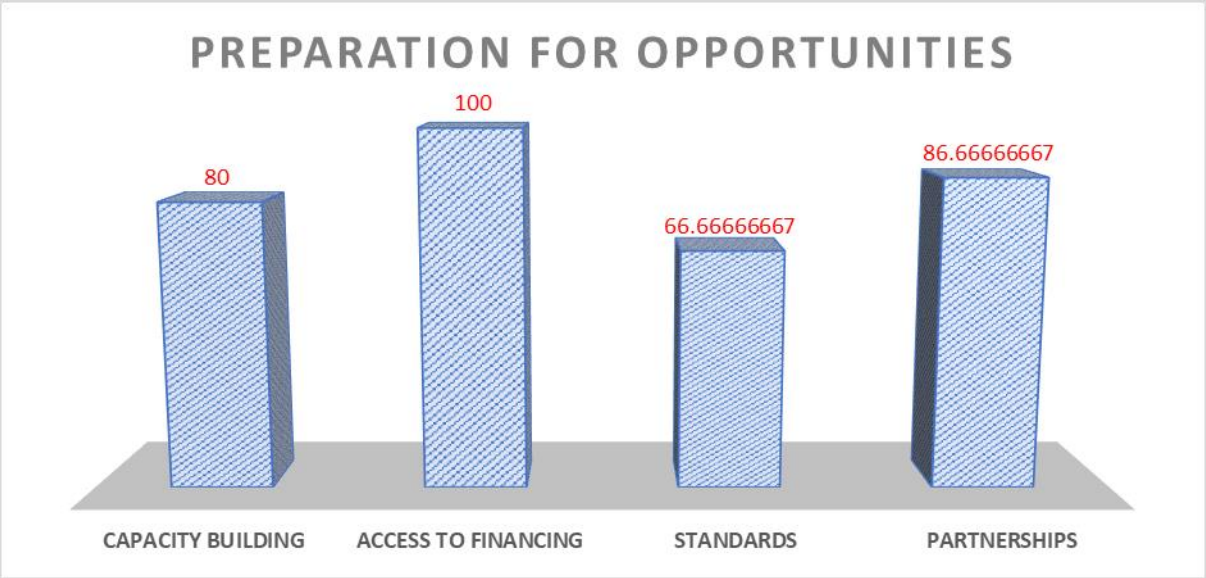
Table 1.4 A Table showing the Proposed Ways in Which Ugandans Should Prepare Themselves to Take Up These Opportunities

PREPARATION FOR OPPORTUNITIES	FREQUENCY	PERCENTAGE (%)
CAPACITY BUILDING	12	80
ACCESS TO FINANCING	15	100
STANDARDS	10	66.66666667
PARTNERSHIPS	13	86.66666667
TOTAL	15	

Source: Primary Data

The table above shows the different proposed ways in which Ugandans should prepare themselves to take up opportunities in the sector. All respondents acknowledged the need for Ugandans to have access to financing, 80% of the respondents acknowledged the necessity of capacity building, 86.66% of the respondents acknowledged the need for partnerships among companies while 66.66% of the respondents acknowledged the need for companies to maintain the oil and gas sector standards.

Figure: 1.4 A Bar Graph Showing the Proposed Ways In which Ugandans Should Prepare Themselves to Take Up These Opportunities



Source: Primary Data

4.3 Ugandan's Interest in Oil and Gas Opportunities

Research shows that 753 local and international service providers have so far expressed interest and provided contact information for listing in the National Supplier Database. Of the 753 companies, 501 are registered in Uganda. The authority is working with both the Uganda Revenue Authority and the Uganda Bureau of Registration to authenticate the information they provided regarding tax compliance and proof of registration. The other 253 companies are registered in, among other countries, the United Kingdom, Australia, China, France, Tanzania, Norway and India (Business U. , 2017).

Table 1.5 A Table Showing the Interest Expressed by Ugandans in Oil and Gas Opportunities

UGANDAN'S INTEREST IN THE OPPORTUNITIES	FREQUENCY	PERCENTAGE (%)
YES	14	93.33333333
NO	1	6.666666667
TOTAL	15	100

Source: Primary Data

The table above shows the interest showed by Ugandans in oil and gas opportunities. 93.33% of the respondents acknowledged the fact that Ugandans have expressed interest whereas 6.67% of the respondents acknowledged that Ugandans are still to show interest in oil and gas opportunities.

4.3.1 Ugandan Companies Participating in Taking Up Oil and Gas Opportunities

Research shows that the regulations require employment of 70% of Ugandans for one to be seen as a Ugandan company, among other requirements. The country needs to prepare drivers, craftsmen, welders, mechanical and electrical technicians to take up the upcoming jobs. Companies such as Qsourcing, Institute of Petroleum Studies, Victoria University, Bemuga, Living Earth Uganda among others have participated in taking up these opportunities in the sector (Natamba, 2018).

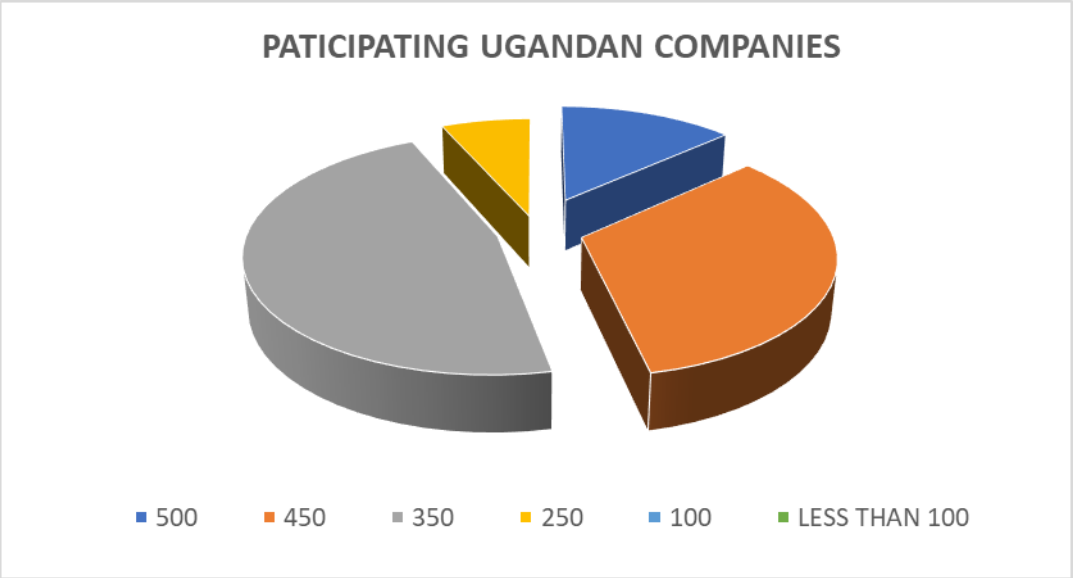
Table 1.6 A Table Showing Ugandan Companies Participating in Taking Up Oil and Gas Opportunities

PATICIPATING UGANDAN COMPANIES	FREQUENCY	PERCENTAGE (%)
500	2	13.33333333
450	5	33.33333333
350	7	46.66666667
250	1	6.666666667
100	0	0
LESS THAN 100	0	0
TOTAL	15	100

Source: Primary Data

The table above shows Ugandan companies participating in the oil and gas opportunities. 46% of the respondents said that there are about 350 companies participating in the oil and gas opportunities, 33.33% of the respondents said that there are about 450 companies participating, 13.33% of the respondents said that there are about 500 companies participating whereas 6.67% of the respondents said that about 200 companies participating.

Figure: 1.5 A Pie-chart Showing the Participating Ugandan Companies in Taking Up Oil and Gas Opportunities



Source: Primary Data

4.3.2 Ugandan Companies That Have Taken Up Oil and Gas Opportunities

Research shows that so far, 293 firms which applied before the first deadline, last year, have already been verified and listed on the national supplier database. Others will be added "subject to verification." The launch of the NSD came in the wake of ongoing debates on local participation in the sector, particularly as the country moves to the development and commercial oil production stages (Business U. , 2017).

The PAU board chair, Dr Jane Mulemwa said that an estimated $20bn will be invested in the country during the two phases over the coming years. Local participation in the petroleum sector has been a thorny subject from the announcement of the discovery of commercial oil deposits ten years ago. To make things worse, the last two years have seen prominent local service providers in the freight, clearing and forwarding businesses handicapped by high interest loans against a backdrop of slow activity in the sector and the slowed economy (Business U. , 2017).

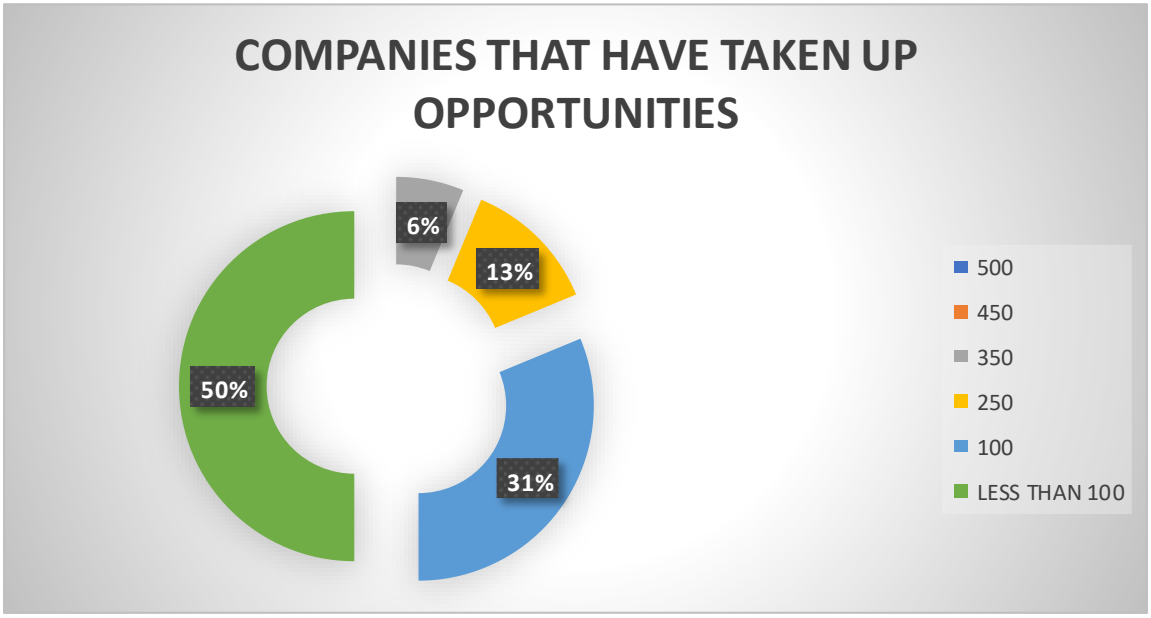
Table 1.7 A Table Showing the Companies That Have Taken Up Opportunities in the Sector

COMPANIES THAT HAVE TAKEN UP OPPORTUNITIES	FREQUENCY	PERCENTAGE (%)
500	0	0
450	0	0
350	1	6.666666667
250	2	13.33333333
100	5	33.33333333
LESS THAN 100	8	53.33333333
TOTAL	15	100

Source: Primary Data

The table above shows the companies that have taken up opportunities in the sector. 53.33% of the respondents acknowledged that less than 100 companies have taken up opportunities, 33.33% of the respondents acknowledged that about 100 companies have taken up opportunities in the sector, 13.33% of the respondents acknowledged that about 250 companies had taken up opportunities, 6.67% of the respondents acknowledged that about 350 companies had taken up opportunities in the sector.

Figure: 1.6 A Pie-chart Showing Ugandan Companies that have taken up Opportunities in the Oil and Gas Sector



Source: Primary Data

4.3.3 Ugandan Companies That Have Registered with The National Supplier Database

Research shows that the website registration of local companies on the National Supplier Database introduced by Petroleum Authority of Uganda was also raised as an important step towards direct involvement in the oil industry. James Musherure, a senior national content-contracts manager at PAU, said that although being registered does not automatically one to get contracts in the sector, local companies should complain of other issues when they are registered and on the database (Atuhairwe, 2018).

The Petroleum Authority has so far shortlisted 1,140 companies on the National Supplier Database for 2018. These are firms that sanctioned to do business in the oil sector. Of these, 848 are local whereas 669 are registered outside Uganda, and are vying for different opportunities including legal, transport, maintenance among others in the oil and gas sector in Uganda. Some of the local companies include AF Mpanga Advocates, Shonubi Musoke and

Co Advocates for legal services, KK Security Uganda Limited, the Jinja based Sunset Hotel International and Kasese Nail and Wood Industry among others (Kitubi, 2018).

Table 1.8 A Table Showing Ugandan Companies That Have Registered with the National Supplier Database.

REGISTERED COMPANIES WITH NSD	FREQUENCY	PERCENTAGE (%)
ABOVE 500	10	66.66666667
400	3	20
300	2	13.33333333
200	0	0
100	0	0
LESS THAN 100	0	0
TOTAL	15	100

Source: Primary Data

The table above shows the Ugandan companies that are registered with the National Supplier Database. 66.67% of the respondents acknowledged that above 500 companies had been registered, 20% of the respondents acknowledged that about 400 companies had been registered, 13.33% of the respondents acknowledged that about 300 companies had been registered.

Figure: 1.7 A Pie-chart Showing the Ugandan Companies That Have Registered with the National Supplier Database

Source: Primary Data

4.4 Capacity Building

Research shows that there are several factors that explain differences in GDP and GDP-growth. Good or bad enforcement of local content policies is only one. Good or bad policy enforcement in this area, however, is likely to correlate with good or bad enforcement of policies in other areas, as with policies to handle huge oil revenues (MEMD, 2011).

There is, however, one striking difference which occurs and cuts through all other explanations. Capacity building and industrial diversity is essential if Uganda is to reap the benefits from huge endowments of oil and gas. The need for capacity building and private sector development is well in accordance with theories on industrial development and economic growth. A competitive, creative and expanding industrial base is a must for a country to prosper and an economy to generate sustainable national wealth (MEMD, 2011).

Table 1.9 A Table Showing If Ugandans Have Built their Capacity to take Up Opportunities in the Sector

CAPACITY BUILDING	FREQUENCY	PERCENTAGE (%)
YES	10	66.66666667
NO	5	33.33333333
TOTAL	15	100

Source: Primary Data

The table above shows if Ugandans have built their capacity to take up opportunities in the sector. 66.67% of the respondents acknowledged that Ugandans have built their capacity where as 33.33% of the respondents acknowledged that Ugandans have not built their capacity to take up opportunities in the sector.

4.4.1 Favourable Laws

Research shows that to mobilise Ugandans and assess the available capacity, the government has taken significant steps towards implementing the concept of national content and participation. A national supplier database has been set up and all companies seeking to supply goods and services to the oil and gas sector must register. In addition, a national talent register is being developed where all Ugandans with the necessary skills and requirements to work in the sector will be registered (Natamba, 2018).

The Petroleum (Exploration, Development and Production) (National Content) Regulations, 2016 provide a list of goods and services to be provided by Ugandan companies, Ugandan citizens and registered entities which are; transportation, security, foods and beverages, hotel accommodation and catering, human resource management, office supplies, fuel supply, land surveying, clearing and forwarding, crane hire, locally available construction materials, civil works, supply of locally available drilling and production materials, environment studies and impact assessment, communications and information technology services, waste management, where possible (MEMD, 2016).

Table 1.10 A Table showing if the laws governing the sector are favourable

FAVOURABLE LAWS	FREQUENCY	PERCENTAGE (%)
YES	15	100
NO	0	0
	15	100

The table shows if the laws governing the oil and gas sector are favourable. 100% of the respondents acknowledged that the laws governing the sector in this present day are all favourable and they enhance local participation.

4.4.2 Taxation Policies

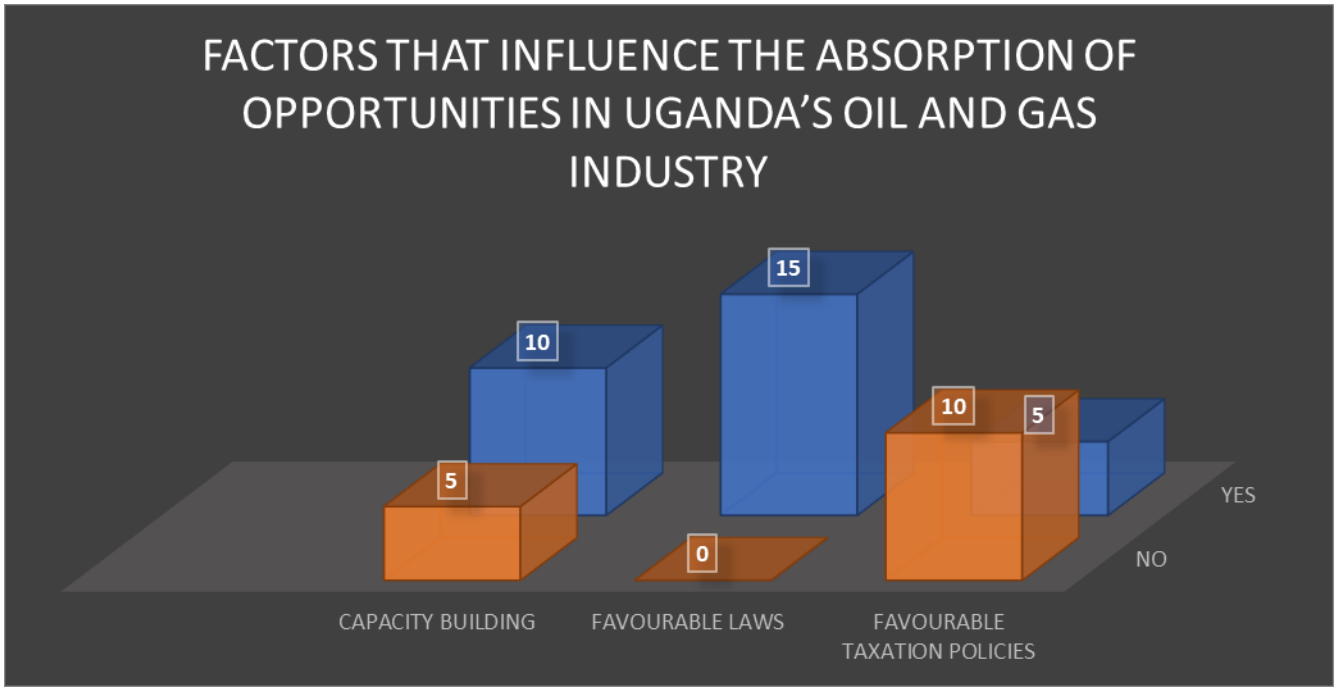
Research shows that in Uganda, every corporate entity (excluding exempt entities) that has chargeable income for the year of income is subject to corporate income tax. Uganda tax residents are subject to income tax on their world-wide income, whereas non-residents are subject to tax on income from a source in Uganda. A company is a Ugandan tax resident if it is incorporated or formed under the laws of Uganda, has its management and control exercised in Uganda or undertakes the majority of its operations in Uganda during the year of income (Becker, 2014).

Table 1.11 A Table showing if the taxation policies are favourable

FAVOURABLE TAXATION POLICIES	FREQUENCY	PERCENTAGE (%)
YES	5	33.33333333
NO	10	66.66666667
TOTAL	15	100

The table above shows if the taxation policies in Uganda are favourable for business. 66.67% of the respondents acknowledged that the policies put in place by government are not favourable for business, whereas 33.33% of the respondents found the taxation policies favourable for business.

Figure 1.8 A Bar Graph Showing the Factors That Influence the Absorption of Opportunities in Uganda's Oil and Gas Industry



Source: Primary Data

4.5 Conclusion

Opportunities in the oil and gas development stage are very vast and it is only companies and individuals that have positioned themselves well that will be able to benefit from these highly rewarding opportunities in the oil and gas sector.

This chapter covered the researcher's analysis, interpretation and presentation of the actual findings of this study. The data collected showed the employment opportunities, capacity building, proposed ways in which Ugandans should prepare themselves for opportunities in the sector, favourable laws, registered companies with the National Supplier Database, company participation in taking up sector opportunities.

CHAPTER FIVE:

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

In this chapter, the researcher summarized the study, drew conclusions as well as recommendations that were made from the study. The conclusions and recommendations were made from the findings that were analysed, interpreted and presented in the previous chapter. The study aimed at accessing if local companies had prepared themselves to take up opportunities in the oil and gas supply chain.

5.1 Summary

The study was meant to find out if opportunities exist in Uganda's Oil and Gas industry. Research shows that the Petroleum Authority of Uganda has done its best in giving Ugandans the opportunity to supply the industry. Some goods and services have been ring-fenced for local companies such as; transportation, security, foods and beverages, hotel accommodation and catering, human resource management among others (Rwothungeyo, 2018). Over 160,000 workers will be required during the peak period which is majorly construction. Of these jobs, 14,000 are direct, 42,700 are indirect and 105,000 are induced jobs (Aheebwa, 2018).

The study was also meant to find out the level of participation exhibited by local entrepreneurs in as far as taking up these opportunities is concerned. The Petroleum Authority has so far shortlisted 1,140 companies on the National Supplier Database for 2018. These are firms that sanctioned to do business in the oil sector. Of these, 848 are local whereas 669 are registered outside Uganda, and are vying for different opportunities including legal, transport, maintenance among others in the oil and gas sector in Uganda (Kitubi, 2018).

The study was also meant to determine the factors that influence the absorption of opportunities in Uganda's Oil and Gas Industry. Capacity building and industrial diversity is

essential if Uganda is to reap the benefits from huge endowments of oil and gas. The need for capacity building and private sector development is well in accordance with theories on industrial development and economic growth. A competitive, creative and expanding industrial base is a must for a country to prosper and an economy to generate sustainable national wealth (MEMD, 2011).

5.2 Conclusions

At the end of the analysis of the data, the researcher concluded that there are indeed exist employment opportunities in Uganda's oil and gas development stage. The research conducted shows that all respondents from the area of study acknowledged to this effect. The industry is getting into the development stage, which means there will be more demand for goods and services from Ugandans or any other supplier. It is generally estimated that the oil companies will spend about $15 billion during the development phase.

The findings also show that many companies have participated in the employment opportunities whereas few of them have been able to secure these opportunities due to low capacities. It should be noted that if a company has not built capacity, it is very difficult for it to have competitive advantage over other firms during the bidding process. It should also be noted that oil and gas companies like to work with companies that have a good track record of services offered because the oil and gas industry is highly risky.

The study also shows that the government of Uganda has done its mandate to enable local companies to take up employment opportunities in the oil and gas development stage. All respondents in the study acknowledged the fact that the government of Uganda has put in place not only various but also relevant laws that will enable Ugandans to take up employment opportunities in the oil and gas development stage.

5.3 Recommendations

Basing on the findings of the study, the following recommendations were made;

The researcher recommends that an oil and gas department is set up in each organisation that wishes to take up employment opportunities in the oil and gas development stage in order to be able to oversee activities in this sector which will help them identify opportunities as quickly as possible. It should be noted that the oil and gas department in the logistics firms helps with coordination with the oil and gas companies in terms of information flow as well as awareness of new opportunities that would give the logistics firm a competitive advantage over others.

The researcher also recommends that those Ugandans who are interested in taking up opportunities in the sector should endeavour to build their capacities in form of education about the sector as well as financial capacity because the oil and gas industry is known to be a capital-intensive industry that requires companies to have money that can enable them supply goods and services even before receiving any money from the oil companies.

The researcher also recommends that the government of Uganda should create more awareness to the public about the employment opportunities in the oil and gas development stage through better communication flow, it should also make sure that oil and gas companies exhibit fair and open bidding process, agitate for banking institutions to extend financial support to locals to enable them take up these opportunities.

5.4 Suggestions for further Research

The researcher suggests that further research should be carried out on other aspects of employment opportunities in the oil and gas industry. Areas such as the exploration stage, production stage, decommissioning among others.

The area of study in the research is a privately-owned organization, the researcher therefore suggests that further research should be carried out focusing on another privately-owned firm or government entity such as the Petroleum Authority of Uganda and the results be compared.

APPENDICES

APPENDIX 1: INTERVIEW GUIDE

Dear respondent,

This research paper is part of my partial fulfilment for the award of the degree of Master of

Business Administration at Uganda Christian University and it will also be of great importance to others for better knowledge on An Analysis of The Employment Opportunities that exist in Uganda's Oil and Gas Development Stage. I therefore kindly request for your assistance with my research to enable me to obtain sufficient data from your point of view based on the topic.

The information received will be handled with the utmost priority and confidentiality.

Your cooperation is highly appreciated.

James Abbey Mugerwa

Researcher.

A. RESPONDENTS' DATA

Name of Respondent (Optional)

.....

Department in Company

.....

Position in Company

.....

Gender of Respondent [1] Male ☐ [2] Female ☐

B. OPPORTUNITIES IN UGANDA'S OIL AND GAS DEVELOPMENT STAGE

1. Do employment opportunities exist in Uganda's Oil and Gas development stage?

2. If yes, what are some of these employment opportunities?

3. How do you propose Ugandan's should prepare themselves to take up these opportunities?

C. PARTICIPATION EXHIBITED BY UGANDAN ENTREPRENUERS IN IDENTIFYING AND TAKING UP THESE OPPORTUNITIES

1. Have Ugandans shown interest in Oil and Gas Opportunities?

2. How many Ugandan companies have participated in taking up of oil and gas opportunities?

3. How many Ugandan companies have taken up opportunities in the oil and gas industry?

4. How many Ugandan companies have registered with the National Supplier Database? Do u think that joining this database will help bridge the gap?

D. FACTORS THAT INFLUENCE THE ABSORPTION OF OPPORTUNITIES IN UGANDA'S OIL AND GAS INDUSTRY

1. Have Ugandans built their capacity to take up opportunities in the Oil and Gas Industry?

2. What kind of courses should Ugandans study to enjoy the vast employment opportunities in the Oil and gas industry?

3. Has government set up favourable laws to enable Ugandans take up opportunities in the sector? If so what are some of these laws?

4. What other incentives has the government put in place to enable Ugandans take up opportunities in the oil and gas sector?

5. Do the taxation policies in place enable local companies compete favourably with other companies?

6. What has the Association of Oil and Gas Service Providers done to enable local entrepreneurs take up opportunities in the Oil and Gas sector?

APPENDIX 2: INTRODUCTION LETTER

Institute of Petroleum Studies - Kampala

Association of Uganda Oil and Gas Suppliers

Plot 45, Bandali Rise, Bugolobi

P.O.BOX 29719

Kampala-Uganda

Dear Sir/Madam;

6th February 2018

RE: Mr. JAMES ABBEY MUGERWA

Greetings in the precious name of our Lord.

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

Mr. Mugerwa, registration number M17M47/010 is in the process of collecting data for his research project and he wishes to conduct research in your organization.

The title of his research is **"An analysis of the employment opportunities that exist in Uganda's Oil and Gas Development stage."**

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

Yours Sincerely;

06 FEB 2018

Ingrid Muhanguzi

Head of Academic Programs

Off Tank Hill Road YTK Zone, Muyenga, Plot 2349 Tel: +256 41 469 4619
P.O.Box 25477 Kampala - Uganda Email: info@ipsk.ac.ug Website: www.ipsk.ac.ug

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