# CONTRIBUTION OF OIL AND GAS UPSTREAM ACTIVITIES ON INFRASTRUCTURAL DEVELOPMENTS: A CASE OF HOIMA DISTRICT

**BY**

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**A RESEARCH REPORT SUBMITTED TO THE FACULTY OF BUSINESS ADMINISTRATION TOWARDS THE PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARDOF MASTER OF BUSINESS ADMINISTRATION IN OIL AND GAS MANAGEMENT AT THE INSTITUTE OF PETROLEUM STUDIES KAMPALA IN AFFILIATION TO UCU.**

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## DECLARATION

I, **Niibo Amon** hereby declare that this is my original work, is not plagiarized and has not been submitted to any other institution for any award.

**Niibo Amon**

Signature …….

Date: ……../……./……

## APPROVAL

This research report has been submitted for approval with my consent as a University Supervisor.

Signature …… Date …….

Supervisors Name: DR BRUNO YAWE

## DEDICATION

I dedicate this work to my family especially my dad; Kasharagate Livingstone, academic supervisors, relatives, and friends who inspired me to conduct this research. I thank them for their moral support and encouragement throughout the achievement of this thesis report. I pray that the almighty God rewards them abundantly.

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| | |
|---|---|
| AFD | African Development Bank |
| CAO | Chief Administrative Officer |
| HB | Hotel Buffalo |
| PEAP | Poverty Eradication Action Plan |
| PESTEL | Political, Economic, Social, Technological, Environmental and Legal |
| UK | United Kingdom |
| UN | United Nations |
| US | United States |
| USA | United States of America |

## ABSTRACT

This study was carried out to find out the contributions of the oil and gas industry to infrastructural developments. It was guided by 4 specific objectives which were; to establish the contribution of Oil and gas activities to the transportation and communication sector, to the Hospitality industry, to the development of energy and water resources and to the development of health services in Hoima District.

A descriptive research design was employed and involved both quantitative and qualitative methods. A sample size of 118 residents in Hoima was selected for quantitative methods and 15 for qualitative methods from the district. Questionnaires and Key Informant interview guides were used for data collection. Simple random sampling and snowball sampling techniques were used. SPSS version 20 was used for data analysis and qualitative data was presented in form of narratives.

Results from the study revealed that there has been improvement in the transport sector, improved access to safe water, Growth in the Hospitality sector, construction of hotels, guest houses, and improvement in Health facilities and electricity distribution in Hoima District. Roads have been constructed in from Hoima to other Districts and also in Hoima Town.

The study concluded that oil and gas activities have led to the development of Hoima District. The study recommends the infrastructure development be given to priority areas gifted by nature so as to benefit the local communities and also ease smooth operation of daily activities.

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background to the study

Infrastructure development remains a major public concern across the world and is key to the development of different continents across the globe (African Development Bank, 2021). Much different infrastructural developments listed by AFD were; housing, energy, transportation, information and communication technology, water and sanitation. With the emergence of oil and gas industry across the globe, more infrastructure developments are hoped to come up.

Uganda has about 5,398 kms of paved road networks across the entire country, 22.1% of the households in Uganda have access to electricity, 74.9% have access to safe water in Rural areas and 92.3% in urban areas (UBOS, 2020).

Oil and Gas has been reported to improve on foreign direct investment but in Uganda, there is limited development in the economy. In Uganda, oil and gas was explored in the Western Region. The region has become known for being the most natural resources endowed area in the country. It is located along the Albertine graben where marine resources can be found[1] (Annette, 2014). However, due to oil and gas activities, Uganda still lags behind in infrastructure developments compared to other oil producing nations with many challenges related to public investments (Mawejje & Munyambonera, 2017).

[1] Annet Kutesa (2014). LocaL communities and Oild Discoveries: A study in Uganda's Albertine graben Region

The infrastructure in Uganda has also been reported to be inadequate with roads being in a poor state by The Borgen Project (2020).

Activities along the Albertine graben have been reported to have positive impacts on infrastructure development such as; road infrastructure development, development of small towns, construction of buildings, schools, Hospitals Among others. Investors have also been attracted to the western districts were oil and gas activities are taking place such as in Buliisa District and Hoima[2] (Environmental Justice Atlas, 2015) but still not much has been generated and felt from these activities.

Activities of oil and gas exploration and production are likely to lead to growth of economic infrastructure in the District of Hoima and this will increase on the economic development of the district. Infrastructure and economic development of the region is also expected to bring about employment opportunities, improved access to health services, road construction and increased investments in the region such as construction of hotels and lodges[3] (Ministry of Education & Sports, 2019). The investment of the sector in improving infrastructure can lead to improved livelihoods of the local communities in the western Region.

In Uganda, Oil companies have so far developed infrastructure in various districts so as to help in the oil and gas processing to ease smooth flow such as construction of roads from Hoima to Butiabwa, Kaiso Tonya and even to Buliisa[4] (The infrastructure industry

[2] Oil exploitation conflict in Buliisa District, Uganda, 2015. https://ejatlas.org/conflict/land-acquisition-conflict-and-waste-dumping-in-buliisa-district

[3] Ministry of Education. Albert region Sustainable development project. http://www.education.go.ug/albertine-region-sustainable-development-project/

[4] The infrastructure industry news. (2015). Hoima-Kaiso-Tonya road completed.

news, 2015). Similarly other developments have been made in other districts such as construction of Health facilities in Buliisa District by Tullow Oil. The company has also constructed schools to boost the education sector[5] (The New Vision, 2012). However, few studies have highlighted some of the infrastructural developments in Hoima District hence the need to conduct this study to dig deeper in the infrastructure developments.

Oil and gas also comes with other supporting economic activities such as hotel and restaurant services, transport activities, road construction, telecommunication, and many more allied services[6] (Boohene & Peprah, 2012). Some of these facilities can also be accessible for use by the local people. The springing up of new hotels and restaurant services, for instance, can provide new fish markets and the construction of good roads provides easy access to market centers and these also improve the lives and living conditions of the communities. In Hoima District alone, since it is going to Haber the oil plant and pipeline, more developments are hoped to come in and the ongoing news now days is the construction of the Airfield in Buseruka and this airfield has also been as a result of oil activities in the region[7] (Atena, 2018).

According to the Hoima District Investment Profile (2019), due to the oil and gas activities in the region, it was reported that investment in Infrastructure would increase and that Hoima District was to become one of the cities in Uganda. And this could be the reason as to why it's now called Hoima City. However, many complaints have been

[5] The new vision (2012). Tullow Oil supports communities
[6] James Atta Peprah (2012). Correlates of Revenue among Small Scale Women Fish Processors in Coastal Ghana.
[7] Atena, P. (2018). Hoima International Airport To Be Ready In 2021. http://www.busiweek.com/hoima-international-airport-to-be-ready-in-2021/

reported from the local communities in the district because of poor infrastructure such as roads although the region is gifted with oil resources.

There is scarce literature and studies done to find out the impact of oil and gas activities on Infrastructure development in Hoima District. Previous studies done have only looked at the livelihood and welfare of the local communities.

### 1.2 Research Problem Statement

Many studies previously done have looked at the impact of oil and gas on welfare and livelihood of the local communities in Hoima district[8] (Kuteesa, 2014; Mugisa, 2016). Much has been written about the impact of oil, gas and other natural resources on the countries that produce them but these have only targeted the negative side of it [9] (Benghida, 2017).

Many people in Hoima District have been displaced from their homes, others have managed to raise infrastructure and also benefit from the activities taking place as a result of oil and gas (Mugisa, 2016). Much has been said on the media on the potential for the oil and gas industry on infrastructural development but few studies have been done in Hoima District and have only targeted welfare improvement (Mugisa, 2016). The oil and gas activities are expected to improve on the infrastructure of the

[8] Mugisa, s. (2016). Socio-economic effects of oil exploration among Hoima Municipality Communities, Uganda. A dissertation submited for a degree in Executive Master of Business Administration at the School of Business and Management, UTAMU, 1-107.

[9]Challenges of a Resource Boom: Review of the Literature', Working Papers (2011)

communities in Hoima District[10] (Environmental Justice Atlas, 2015) although there seems to be no study targeting infrastructure development in the district.

Previous studies done in Hoima District have only looked at the influence of oil and gas activities on welfare of the local communities such as one study by Mugisha (2016) which looked at socio-economic aspects and one by Miriam (2016). Infrastructural developments in those studies were not highlighted. Therefore there is a gap in literature regarding oil and gas activities and infrastructural development in Uganda. Therefore, this study opens the eyes of the local communities on the infrastructural developments done hence improved living of the local community.

### 1.3.0 Purpose/General Objective

To find out the various contributions of the oil and gas industry to infrastructural developments

### 1.3.1 Specific Objective(s)

i. To establish the contribution of Oil and gas activities to the transportation and communication sector in Hoima District
ii. To examine the contribution of Oil and gas activities to the Hospitality industry in Hoima District
iii. To establish the contribution of Oil and gas activities to the development of energy and water resources in Hoima District

[10] Oil exploitation conflict in Buliisa District, Uganda, 2015. https://ejatlas.org/conflict/land-acquisition-conflict-and-waste-dumping-in-buliisa-district

iv. To ascertain the various contributions of the oil and gas sector to the development of health services in Hoima District

### 1.3.2 Research Questions

i. What are the contributions of oil and gas activities to the development of transportation and communication sector?
ii. What are the contributions of oil and gas activities to the hospitality industry in Hoima District?
iii. What are the contributions of the oil and gas activities to the development of energy and water recourses in Hoima District?
iv. What are the contributions of oil and gas sector to the development of health services in Hoima District?

## 1.4 Justification

Oil and Gas activities are hoped to come with infrastructural developments in different areas were oil and gas activities take place. In Uganda, oil and gas activities have been there for long but most studies have looked at the impact of these activities on welfare of the local communities in the Region[11] but no study has looked at the infrastructural developments in Uganda as a result of oil and gas activities so far taking place in the area. The study by Mugisa (2016) in Hoima District studied only socio-economic effects on welfare but not infrastructure development. Therefore, this study was conducted in

[11] Mugisa Samuel (2016). Socio-economic effects of oil exploration

the District to explore the gap that exists in finding literature on infrastructural developments as a result of oil.

### 1.5 Significance of the study

This study explains the advantages of the oil sector and some of the ways in which oil activities can be managed efficiently. This study adds value to other researchers that have been conducted in the same industry and therefore, the findings that will be generated are hoped to help policy makers and implementers in making policies that favor both individual and government infrastructural developments in the districts will vast resources.

This study also acts as an eye opener for local communities to invest in activities that can be of income such as hotel industry, food industry and tourism industry to attract income from the oil and gas activities taking place in the entire western region.

This study will also act as a future research material to researchers and academicians/students who are interested in looking at the impacts of oil and gas activities on infrastructural development.

### 1.6 Scope of the study

This study was carried out to determine the impacts of oil and gas activities on infrastructural developments in Hoima District. The study looked at all process related to oil and gas that must be bringing about infrastructural developments in the District. The oil and gas activities such as exploration, processing and drilling are associated with small activities such as need for transport, accommodation, and other services which attract investment in various areas in the District.

The study was conducted among the people of Hoima District. This district is located in the Mid-western region of Uganda. The district shares borders with Masindi and Buliisa District. The district was selected because it is a neighbor to Buliisa district were oil and gas activities are taking place and that Hoima District has rapidly been developing and now it's called Hoima Municipality[12]. Its rapid development could be due to oil and gas activities in the region.

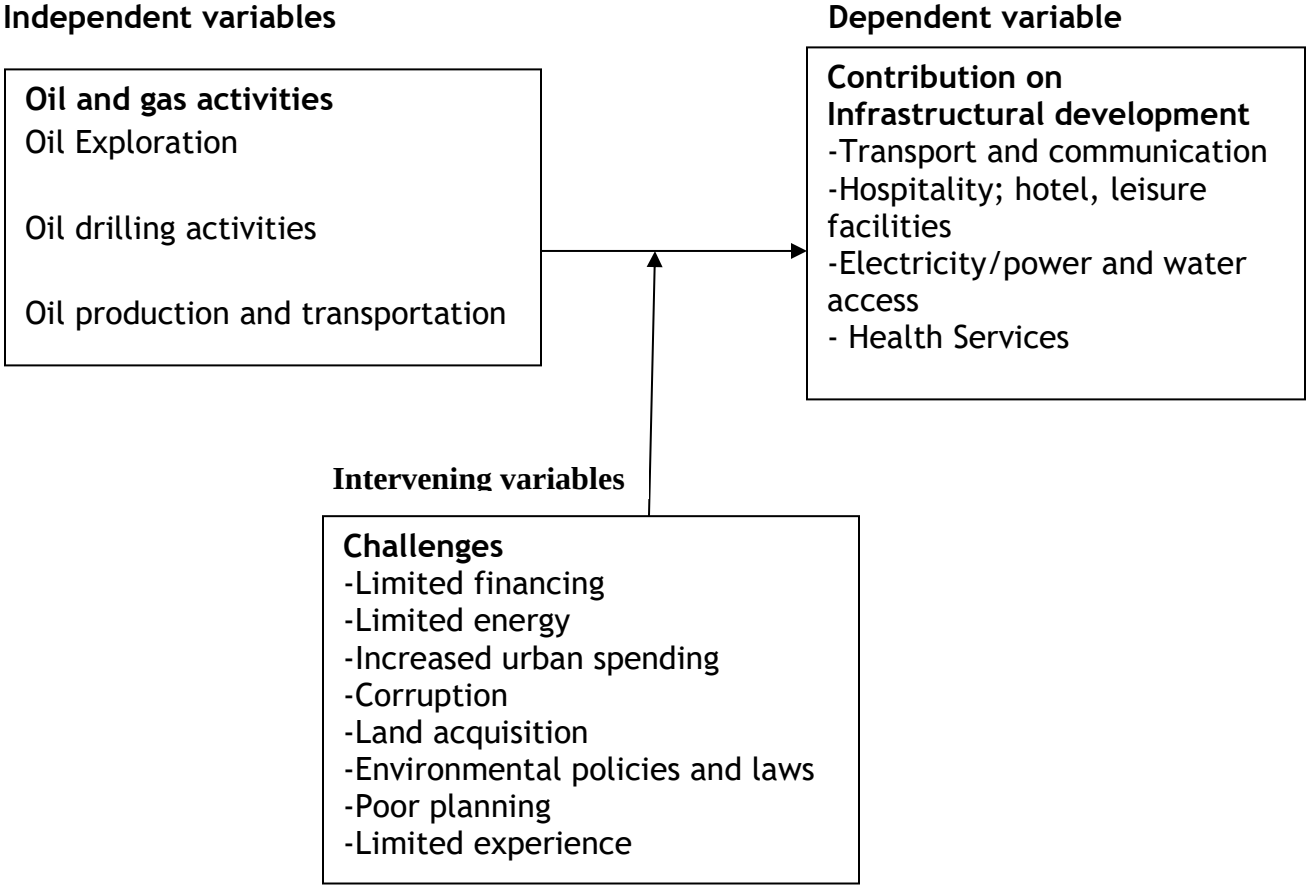
The study was conducted in 2021 and the data was collected in August 2021 and involved some of the secondary data that was available since the oil exploration began up to December 2021.

### 1.7 Conceptual Framework

This conceptual framework shows the link between the independent and dependent variables. The independent variable is oil and gas activities and the dependent variable is infrastructural development in Hoima District.

[12] Jonas Mbabazi and Phoebe Atukunda (2020). Creation of new cities in Uganda. Social Economic and Political Implications

**Figure 1: Conceptual Framework**




***Source:*** *Adopted from Mugisa (2016) and modified by the investigator*

Figure 1 above shows the link between the independent and the dependent variables. The independent variable has been divided into oil exploration, drilling and production stages. These are the activities mainly involved in oil and gas sector (Darko, 2014). The dependent variable is infrastructure development; Infrastructure development from oil could be as a result of communication, leisure activities such as hotels, water, energy, government services, improved education and health infrastructure, not forgetting

transportation. Oil and gas activities are associated with infrastructure development such as road construction, power generation and improved livelihoods (Boohene & Peprah, 2012).

Oil activities involve exploration of wells and oil drilling. These have already led to infrastructure developments in the district such as road construction, airfield construction and increased energy supply (Kisembo, 2009). All these activities can lead to more development of infrastructure in the District.

## Conclusion

This chapter looked at the introduction, background, objectives, problem statement, research questions, and significance of the study, scope and conceptual framework of this study. This chapter provided the synopsis of the study and also stated the advantages of this study to other scholars, policy makers and the government.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Introduction

This chapter discussed the critical review of the issues that have arose and studied by other scholars both theoretically and empirically on the impact of oil and gas activities on infrastructural developments. The literature includes both local and international or global studies that have been conducted in the oil and gas industry. This literature looks at secondary data from other scholars such as reports, journals, newspapers, and other articles related to the topic under study.

### 2.1.1 Theoretical reviews

This section looked at the literature on theories which the researcher has identified as being guiding principles of the study. It looks at how these theories have been used in other studies and how they are applied in the current study. The study employed the Historical materialism theory by Karl Marx (Croce, 1922).

Materialism is the basis of his sociological thought because, for Marx, material conditions or economic factors affect the structure and development of society. His theory is that material conditions essentially comprise technological means of production and human society is formed by the forces and relations of production. Later in this unit, and in the next unit you will learn about the meaning of the forces and relations of production. It is called historical because Marx has traced the evolution of human societies from one stage to another. It is called materialistic because Marx has

interpreted the evolution of societies in terms of their material or economic bases. Materialism simply means that it is matter or material reality, which is the basis for any change (Croce, 1922).

This theory was relevant in the study since it had been used before by Mamdani in 1976. The theory was used to analyze the relations between the people who lived in Kabaale in Hoima District and how they benefited from the Oil industry and its related projects in the whole region. However, it also looked at the negative sides of the oil and gas industry but not only to Kabaale Residents but also Uganda as a country and east Africa as a whole.

In the current study materialism means infrastructure development in Hoima District as a result of oil and gas activities. However according to Karl Marx explains it meant that "the ruling class controls the means of production and the state. And the state provides institutions for the regulation and controlling conflict between the ruling classes and the appropriated classes which include workers, peasants, on behalf of the ruling class" (Mamdani, 1976). This theory was used in this study to see how oil and gas activities have benefited Hoima district and its individuals in terms of infrastructure development not looking at the class of people it benefits either the ruling or non ruling and international organizations.

Several models and theories have been used to look at infrastructure development such as the Norwegian model which was developed to look at the performance and transparency in infrastructure development in the petroleum sector (Al-Kasim, 2006). The model is based on 10 points which makes sure that the energy resources are

exploited in favor of the benefits of the society and these 10 points have sometimes been referred to as the 10 commandments of the Norwegian oil activities (Ryggvik, 2010). Among the benefits in this model includes infrastructure development and that these developments are hoped to benefit the coming future generation (Doric & Dimovski, 2018).

## 2.2 Contribution of Oil and gas activities to the transportation and communication sector

The impacts of oil and gas activities include increased services and facilities such as transportation (Brake & Edward, 2014). Research has been done before in regions which have had oil and gas before and the impact of those activities on infrastructure development; literature below shows the impact of oil and gas activities on infrastructure development across the globe, in Asia, Africa and different continents.

A study by Chindo (2011) assessed the impacts of oil and gas activities in Nigeria and found out that Oil and gas activities contribute to national economic growth and global energy security. It was also found out that the royalties and taxes gained by government from the companies in the oil and gas sector was utilized to support construction of roads and other infrastructural developments. Another study done in Nigeria also showed that shell had contributed a lot to the development of Nigeria as it had led to construction of infrastructure such as roads (Tuodolo, 2009).

Byakagaba et al. (2019) also made a study on socio-economic and environmental implications of oil and gas exploration in Uganda and found out that oil and gas exploration had a direct link with construction of roads and increase in business

ventures[13]. Another study done by Nnakayima (2018) along the Albertine graben to find out the Impacts of upstream oil and gas activities on environment, well-being and tourism found out that oil and gas activities led to the increase in business opportunities specifically land market, market for agricultural goods and rental houses. More findings from the study showed that there was construction Roads were constructed as a result of drilling crews and promoted increase in tourism activities. For oil and gas activities to be smoothly run, there is need for better roads and communication so as to ease the flow of goods and information.

A study done in the Taranaki region showed that there was enhancement of community relationships among the oil companies with the communities inform of education and investment plans and these have led to the development of Taranaki community. For example, there has been the construction of the raceway in Plymouth which was sponsored by Todd Energy. Similar contributions have also been identified from companies from the oil and gas supply chain. In addition to their community investments, the oil and gas industry has made contributions in the education and health sector in the region[14]. Similarly another study by Fallet (2010) done in Sudan showed that there were construction of roads in the country as a result of oil and gas activities.

[13]Byakagaba, P., Mugagga, F., & Nnakayima, D. (2019). The socio-economic and environmental implications of oil and gas exploration: Perspectives at the micro level in the Albertine region of Uganda. The Extractive Industries and Society, 6. doi: 10.1016/j.exis.2019.01.006

[14] Jane Matthews (2020). New Plymouth's $3.5 million new St John hub officially opened. https://www.stuff.co.nz/taranaki-daily-news/news/300164825/new-plymouths-35-million-new-st-john-hub-officially-opened

Peprah (2011) in a study done in Ghana also asserted that Oil and gas production came with development of other infrastructure in different sectors such other supporting economic activities in transportation and telecommunication. Similarly in the United states, due to discovery of oil, roads transport network was upgrades so as to ease the smooth flow of the activities of the oil companies (Stanford University, 1954).

### 2.3 Contribution of Oil and gas activities to the Hospitality industry

The impacts of oil and gas activities include increased services and facilities such as accommodation, entertainment and leisure activities (Brake & Edward, 2014). A study done in Ghana by Peprah (2011) showed that Oil and gas production came with development of other infrastructure in different sectors such other supporting economic activities such as construction of hotel and restaurant services, and these were among the benefits people gained from oil rich areas and the country.

A study done in Ghana which was qualitative in nature by Obiri et al. (2019) showed that oil and gas activities in the country brought development in the country and among the major developments were improvement in hotels, construction of leisure centers and guest houses. Therefore oil and gas activities can bring about changes in physical infrastructure.

A study done by Jin and Zhang (2018) to find out the role of oil and gas industry on social infrastructure development in Azerbaijan revealed that oil and gas funds has been used in the increment of different infrastructure in the development of the economy. It was also found out that the oil industry had led to cultural development.

Brasier et al., (2011) also found out that in the United states, there was increase in services which were retail such as bars and hotels as a result of oil and gas activities. Therefore, oil and gas industry has attracted increased investment activities in the hospitality and leisure industry.

A study by Chindo (2011) assessed the impacts of oil and gas activities in Nigeria and found out that Oil and gas activities contribute to national economic growth and global energy security. It was also found out that the royalties and taxes gained by government from the companies in the oil and gas sector was utilized to support housing and hotel developments (Chindo, 2011).

Another study done by Nnakayima (2018) along the Albertine graben to find out the Impacts of upstream oil and gas activities on environment, well-being and tourism found out that oil and gas activities led to the increase rental houses. More findings from the study showed that there was improved housing, better accommodation as a result of drilling crews and promoted increase in tourism activities.

### 2.4 Contribution of Oil and gas activities to the development of energy and water resources

In Uganda, the Poverty Eradication Action Plan (PEAP) reveals that modernization of Agriculture can drive to industrialization and oil and gas activities are expected to contribute mainly to the development in agricultural infrastructure as the country plans to invest in infrastructure, generation of power which all are a result of oil and gas activities (Kashambuzi, 2011). As a result of oil, more power stations were planned such

as Nzizi Power station[15]. Therefore oil and gas activities lead to power generation and electricity distribution to rural areas.

Public enterprises' environment; Antoinette (2014) also emphasized that for infrastructure development, there should be sectors that are active such as electricity and water so as to facilitate a sound operation. For most instances in Africa, it has been found out that most of the Utility companies are state owned which brings in monopoly issues. These tend to lack investment funds and provide unstable services, contribute low revenue because they are government owned and provide services at low prices. Therefore, there is need to strengthen the performance of these companies and improve the regulatory environment (Antoinette, 2014). This will allow public enterprises to deliver better services, and may even catalyze interest from private investors to support their investment efforts.

The oil and gas sector has also been reported to contribute much to the energy sector as it also a source of energy. Since the mid 1950's oil and gas has been a source of energy to the United Kingdom and has led to the increased power generation. The oil and gas sector also brought about improved energy sources in the United Kingdom (UK Oil & Gas PLC, 2021).

In one of the studies by Byakagaba et al. (2019) in Uganda, it was also revealed that oil and gas exploration activities had a direct link with infrastructural developments such

[15] Downstream. "Uganda to Build Petroleum Distribution Terminal and Two New Pipelines". Oil Review Africa. 27 May 2013. Web. 2 January 2015

as powered generation and improved water access[16]. Another study done by Nnakayima (2018) along the Albertine graben to find out the Impacts of upstream oil and gas activities on environment revealed that there was construction of bore holes by Tullow oil to fulfill their corporate Social Responsibility initiatives. Water access was also provided and all these were promoted by drilling crews and oil activities taking place in the Albertine Region.

Brasier et al., (2011) also conducted a study to find out the impact of oil and gas activities in the United States and found out that there was an increase in services related to energy stations/fuel stations in the state because of the love for the people to invest in the oil and gas sector. Therefore, oil and gas industry has attracted increased investment activities in the energy sector in the US.

A study by Chindo (2011) assessed the impacts of oil and gas activities in Nigeria and found out that Oil and gas activities contribute to national economic growth and global energy security. It was also found out that the revenue generated from oil and gas was utilized to support energy generation.

### 2.5 Contributions of the oil and gas sector to the development of health services

In Buliisa District alone, reports have showed that due to the ongoing oil and gas activities in Uganda, the District has realized development and construction of more health facilities [17](The New Vision, 2012) in support by the oil companies. This was done

[16]Byakagaba, P., Mugagga, F., & Nnakayima, D. (2019). The socio-economic and environmental implications of oil and gas exploration: Perspectives at the micro level in the Albertine region of Uganda. The Extractive Industries and Society, 6. doi: 10.1016/j.exis.2019.01.006

[17] The new vision (2012). Tullow Oil supports communities

to help the public were the oil and gas activities are taking place to access better health care.

Similarly according to a study done in USA, it was found out that oil and gas activities increased in the number of retail medical facilities in the region and led to improvement in medical facilities (Agerton et al., 2017).

A study by Chindo (2011) assessed the impacts of oil and gas activities in Nigeria and found out that Oil and gas activities contribute to infrastructure development. It was also found out that the taxes collected by government were utilized to support health care services. Another study done in Nigeria also showed that shell had contributed a lot to the development of Nigeria as it had led to development of health services (Tuodolo, 2009).

Another study done by Nnakayima (2018) along the Albertine graben to find out the Impacts of upstream oil and gas activities on environment, well-being and tourism found out that oil and gas activities led to construction of Kyehoro Health Center to fulfill their corporate Social Responsibility initiatives. Similarly another Un published study done along the Albertine region in Buliisa, Uganda by Mugisha (2021) also showed that oil and gas activities had led to improvement of health services as it led to construction and development of health services.

Similarly another study was conducted and based on secondary material from oil rich countries of Nigeria, Angola, Chad and Sudan and results showed that It has become popular for the corporate sector to be engaged in a number of health actions covering a range of public health endeavors by the oil companies in support, such as: supporting

global or regional health initiatives, sponsoring biomedical research, sponsoring non-governmental organizations or, more directly, financing local health projects (Calain, 2008). For example, the case of Exxon Mobil illustrates the diversity of such contributions through its involvement in malaria control (Exxon Mobil, 2020). Obviously, health systems are not value neutral. What defines a health system is much more than the sum of all contributions (financial, material, human) to health services. Values, operating principles, legitimacy and governance are especially important to examine here. These issues will be reviewed respectively through the concepts of: corporate social responsibility, social license to operate and international norms.

### 2.6 Challenges facing infrastructural developments

According to Wagner and Armstrong (2010), it was found out that some Social issues which are spread every were in Africa have a huge impact on the development of infrastructure. The issues raised were violation of human rights, insecurity, and poor management of revenue, poor governance and corruption in the sectors. The scholars also mentioned that poverty, and limited networking affect infrastructure development. All the mentioned issues create long term effects on development of infrastructure across many regions in the world (Wagner & Armstrong, 2010).

According also to the economic and social council meeting health in 2017, it was found out that the major problems and obstacles to infrastructural development in developing countries and Sub-Saharan Africa were; increased poverty levels, poor transport network, limited financing, limited technology, unfavorable policies, limited productive capacities and declining value added in manufacturing and agriculture,

landlocked countries suffering from geographical disadvantages, with infrastructure deficiencies and poor trade facilitation (UN, 2017).

A study done in Nigeria identified many different challenges associated to infrastructural developments and among them were; dearth of Visionary leaders, poor performance of leaders. The analyst also utilized the PESTELs analysis where by the challenges were both political, economic, social, technological, legal, environmental and safety issues. It was also found out that all infrastructure developments in the country of Nigeria suffered from capital flight, sink and stagnancy were by a lot of equipment was got from other countries and led to corruption in turn (Olufemi Oyedele, 2012a).

Poor Project Management has also been looked at as a challenge in infrastructural developments for example the projects in the late 50s in the United States of America (USA) suffered from this challenge were all the projects were under the American Army. Therefore, its only proper project management that can lead to the success of different projects (OA Oyedele, 2012b). Corruption has also been said to lead to project failure and it has not only led to increase in infrastructure price but had also reduced the quality, economic returns and infrastructure investment. The rate of corruption in Nigeria has been reported to be very high and not bearable for infrastructure development (Olufemi Oyedele, 2012a). Similarly in Uganda, corruption has been very high and still stands; this has also led to freezing of infrastructure development and decline in some infrastructure developments (Sobják, 2018).

Loss of natural resources or ecosystem services, pollution, minimal local benefits in terms of infrastructure services or job creation and reduced local access to resources are creating social conflicts which destruct infrastructure development. Coupled with deficient planning, inadequate consultation, and poor levels of transparency, conflict is leading to infrastructure project delays, cost overruns, and reputational damage for governments, financiers, and the private sector (Watkins et al., 2017). Meeting the demand for future infrastructure plays against the potential negative environmental and social externalities that might ensue from these projects; this is a source of growing dispute between local communities and project sponsors. The increasing power of civil society and social connectivity through technologies adds to the complexity of delivering infrastructure projects (Valenzuela et al., 2016).

**Literature gap**

The literature above explains the contributions of oil and gas activities to infrastructure development. The literature above has showed the existence of the knowledge gap on Uganda's aspect. Most of the literature has been got from other countries and Uganda presents few research materials and it being that this is a new field in the economy of the country. No much attention has been paid to the contribution of oil and gas activities on infrastructure development. Other studies the negative impacts of the oil and gas industry on welfare, on the environment hence forgetting the contribution of the industry on the infrastructure development.

## Conclusion

This chapter looked at the literature from other scholars relating to study topic on the contribution of oil and gas activities to the development of different infrastructure. The literature was arranged according to the specific objectives. Global, regional and local literature materials have been used in this study.

# CHAPTER THREE

# METHODOLOGY

## 3.1 Introduction

This chapter presents the research methodology that was used in this study. This section is based on previous methodologies used in other studies. Research methodology is of great essence as it gives a clear description of the procedures to be followed in conducting a study. This chapter presents the research design, study population, sample size determination, sampling technique, data collection methods, data collection instruments, validity and reliability of the study tools, data collection procedure, data analysis and presentation, ethical considerations and study limitations.

## 3.1 Research design

This study was descriptive cross sectional in nature. Both quantitative and qualitative study methods were used. This method allows for exploration into intentions, values and creates meaning[18](Clifford et al., 2010). Descriptive research was preferred because it is a powerful research tool that permits a researcher to collect data and describe the demographics of the same with the help of statistical analysis.

A study by Miriam was qualitative in Nature which could have been limited. Since this study is to understand the nature of infrastructure developments as a result of oil and

[18] Clifford Nick, French Shaun, Valentine (2010). Getting started in geographical research: how this book can help.http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.596.6417&rep=rep1&type=pdf

gas activities, it requires the mixed methods because they help in generalization of findings as the qualitative findings provide supporting ground for quantitative findings.

### 3.2 Area of study

The study was conducted in Hoima District. Hoima District which is found in Bunyoro sub-region in South-Western Uganda, of Uganda is bordered by districts of Buliisa the north, Masindi to the northeast, Kyankwanzi in the east, Kibaale District to the south, Ntoroko District to the southwest and the Democratic Republic of the Congo across Lake Albert to the west. The location of the district headquarters is located approximately 230 kilometers (140 miles), by road, northwest of Kampala, the capital of Uganda. Five Districts-Hoima District, Buliisa, Kibaale, Kiryandongo and Masindi - constitute the Kingdom of Bunyoro (Bunyoro sub region).

The population of Hoima District is estimated at 617,600 people. Though the district is mostly occupied by the native Banyoro, the discovery of oil has attracted various ethnic groups especially the Baganda, Banyankole, Bakiga and Lugbara (UNDP, 2019).

During the first 20 years of the 2000s, a considerable amount of crude oil deposits have been discovered in the Neighboring district of Buliisa. The Ugandan Government is in the final stages of preparing to start extracting the oil discovered in Buliisa and the neighboring districts of Hoima and this is why the district was selected for the study because of the oil and gas activities and the effects on infrastructure development which are taking place in the District. Some of the largest oil fields are in the Kaiso-Tonya area in Hoima District. This area has been selected for Uganda's only oil refinery.

This study was conducted in Hoima Municipality were the headquarters of the District are located and were all planning activities related to oil and gas take place.

### 3.3 Sources of information

The sources of information were both from secondary and primary sources. Primary sources were through the use of Questionnaire method. This means that primary information was got directly from participants in this study.

Data was also obtained from secondary sources such as online articles, reports available in different offices relating to oil and gas, newspapers, from important sources of information such as Ministry of Energy, District offices, magazines and reports and any other already written material.

### 3.4 Population and sampling Techniques

The target population of the study was 185 respondents (community members) which was drawn from 2 divisions in Hoima District. One will be selected from the urban and another from a rural setting so as to balance and see the infrastructure so far attained in the District. Data was collected from Hoima Municipality (Urban) and Kigorobya (Rural). The study also targeted 5 leaders and 10 district officials.

A sample size is defined as a subject or a sub-group of the population (Sakaran, 2003). It is difficult to ascertain the total targeted population, so it's prudent to decide on a sampled population and use a subset.

The sample size for quantitative study was determined using the sample size distribution table by Kregcie and Morgan (1970) and for qualitative data, Creswell (1998) recommendation for sample size of 5 to 25 was utilized. According to Krejcie and Morgan (1970) sample table, for a population of 170 for quantitative data, a sample size of 118 respondents is appropriate for the study. For qualitative data, the researcher involved 15 respondents as recommended by Creswell (1998).

**Table 1: Sample size distribution**

| **Nature of respondent** | **Target** | **Sample size** | **Computation used** | **Sampling method** |
|---|---|---|---|---|
| Community members | 170 | 118 | Krejcie and Morgan (1970) | Simple random sampling |
| Leaders | 5 | 5 | Creswell (1998) | Snowball sampling |
| District officials | 10 | 10 | Creswell (1998) | Snowball sampling |
| **Total** | **185** | **133** | | |

The study employed snowball sampling and simple random sampling techniques to select samples meant for the study[19] as used by Mugisa (2016). This is a sampling technique, in which existing subjects provide referrals to recruit samples required for a research study. Snowball sampling technique was used to select the key

[19] Mugisa Samuel (2016). Socio-economic effects of oil exploration

leaders/political leaders of Hoima District and district officials. Simple random sampling was employed to recruit residents of Hoima District leaving in Hoima Municipality and Kigorobya.

### 3.5 Variables and indicators

The variables under study were;

**Dependent variable**; the dependent variable of the study was infrastructure development. The indicators of infrastructure development in this study were; improvement in transport and communication, increased hospitality and leisure activities, increased supply of electricity and water and also in terms of health service delivery as can be seen in the conceptual framework. The independent variables of the study were; oil and gas activities which include; activities of oil exploration, drilling and potential for production and transportation. All these activities have come with developments in infrastructure.

Infrastructure development was measured in 4 different ways; in terms of transportation and communication improvement. This looked at the number of roads constructed, the development in the airport, and improved communication. Improvement in the hotel and hospitality sector was measured by looking at the developments done in Hoima district such as restaurants, hotels, guest houses, good residential homes among others not forgetting clubs and refreshment sites.

Water, Electricity and energy distribution was assessed in terms of power/electricity extension to rural areas, better access to clean cooking methods such as use of gas cylinders, access to clean water (NWSC) and use of bore holes among others.

Health service improvement was measured by looking at the developments done in Hoima district within the era of oil exploration and drilling, the campaigns run by oil companies, the health facilities constructed by oil companies and the sponsorships in the health sector from the oil and gas services.

### 3.6 Procedure/protocols for data collection

After the proposal was approved by the research committee UCU, an introduction letter from UCU introducing the Investigator to Hoima District was secured. This was presented to the CAO Hoima district who granted permission to the researcher after explaining the purpose of the study. The Investigator sought for permission from Hoima District CAO and Kigorobya to carry out the study. The Investigator was then introduced to the respective leaders at district level and district officials on a snowball method. The Investigator was then introduced by the respective village heads/LCs to the study participants and the purpose of the study was explained to the study participant.

The Investigator involved 2 research assistants well conversant with in the District to guide and help in data collection and these were trained prior to being engaged in data collection. This enabled to gather and collect data from a larger population in the shortest time possible.

The Investigator sought for consent from the study participants before the actual data collection takes place. The Investigator then proceeded to collect data and interview respondents as the responses were filled into the questionnaire.

### 3.7 Data collection instruments and equipment

This section looks at the study instruments that were used to collect data. This study utilized Key informant interview guides and questionnaires to collect data as explained below.

#### Key informant Interview guide

Key informant interviews are qualitative in-depth interviews with people who know what is going on in the community. The Investigator used a Key informant interview guide for District leaders and district officials. These interviews were face-to-face interviews (Ragin, 2007). The interview guide was arranged according to the specific objectives of the study. The questions were designed to generate information from respondents in a shortest time possible. The interviews normally took about 20 to 30 minutes and all the responses given were noted down on paper.

#### Questionnaire

Questionnaires were used to collect data from community members in Hoima District, Hoima Municipality. This method was used because it's the best data collection tool that can be used to collect data from many respondents in the shortest time possible. The questionnaire was arranged in section according to the objectives of the study. The questions in the questionnaire were direct and helped the research assistants to collect

information from respondents' in the shortest time possible. The questions were designed in English language since it is the language that has been used in all primary schools and education in Uganda. Were need be the questionnaire was translated into the local language verbally as in the form of an interview by the research assistants recruited from Hoima District and these were banyoro.

The questionnaire explained the purpose of the study to the respondents. This instrument was preferred for this category of respondents because it can be used to collect data from a larger population in a short period of time.

### 3.8 Quality/Error control

Validity of the questionnaire was ascertained by carrying a pre-test on 12 people in Hoima District (10 Community members and 2 leaders). A pilot study report was made. The errors found were rectified in the questionnaire and the questioning was aligned to suit the questions.

Quality control measures were taken to ensure that findings of the study meet the acceptable standard. The questionnaire was also reviewed by one of the district officials before the actual data collection. The tools were also reviewed by a penal of experts of supervisors from UCU before the actual data collection.

The Cronbach's alpha reliability test was done in SPSS so as to ascertain or measure the reliability of the study instruments. Upon performing the test, the value found was 0.701 which was greater than 0.7. This meant that the items were reliable.

Training of the research assistants was held so as to equip them with skills and knowledge on how to collect data and record the findings. Research assistants were trained for a period of 1 day during the pretesting period and this helped them get used to the data collection tool and also understand the purpose of the study.

Trustworthiness was ensured in data collection from the process of approval of the research to data collection. Credibility was ensured at all times so as the study findings identified are applicable to other contexts.

### 3.9 Strategy for data processing and analysis

This section discussed how data was analyzed both quantitatively and qualitatively and also the way in which the results were presented.

**Quantitative data analysis**

Quantitative data was entered and analyzed using Statistical Package for Social Sciences (SPSS) version 20. After data entry, it was cleaned for errors. Data analysis was in the form of descriptive statistics such as charts, tables, measures of central tendency. Since the data collected was of linkert style, the mean and median were used to draw conclusion and interpret the study findings.

**Qualitative data analysis**

After data collection, recorded data from interviews was transcribed, after checking for completeness and consistency as well as for various omissions, incomplete or otherwise unusual responses. Qualitative data was presented in the form of statements and narratives to support the findings from quantitative study.

### 3.10 Ethical considerations

For this study to be successful, the Investigator got an introduction letter from the Institute of Petroleum Studies that introduced the Investigator to the Leadership of Hoima District. Permission to conduct the study was sought from Hoima District Local Government. The purpose of this study was explained to the study participants and the right to withdraw from the study was given to the study participants since the study was voluntarily in nature. Consent was sought from the study participants and the respective district leaders. This means that the study only involved study participants who had consented. Lastly, the information obtained from the field was kept confidential and private only accessed by the Investigator and the research assistants who helped in data collection and report writing.

### 3.11 Methodological constraints

The study was both qualitative and quantitative in nature and using both of these approaches broadens the area of study which might take a lot of time for the Investigator to gather information from respondents on a limited time. However, the Investigator employed research assistants to help in collection of data from community members.

Ethical clearance was difficult to attain that is to say, having access to people, organizations, data and for whatever reason, access was not easy it being that it was my first time to access the district. The management had denied signing on the institute letter because it was “to whom it may concern”. However, after convincing them and

explained the purpose of the study, it was signed. But with the Help of the research assistants, every process went on well.

High expenditure coupled with geographical uncertainties. It was difficult to move and find locations of different managements of Hoima and Kigorobya since it was the first time to reach these area. The investigator would sometimes get lost but managed to get someone to move with to these areas by the help of the research assistants.

## Conclusion

This chapter highlighted the methods used in the study. The study was mainly descriptive cross-sectional study. The study included local residents of Hoima District, district leaders and district officials. Data was collected using questionnaires and Key informant interview guides. All the process of data collection followed ethical principles of research.

# CHAPTER FOUR

# DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

## 4.0 Introduction

This chapter presents the results/findings from a study which was conducted in Hoima District. The study was carried out to find out the contribution of oil and gas upstream activities on infrastructure development in Hoima District. The findings have been presented in form of figures, graphs and tables presented in frequencies and percentages. The descriptive statistics have also been presented in the form of mean and standard deviation. The study involved 118 local community members from Hoima District, 5 leaders who were 2 Local council chairpersons; 2 sub county chiefs and 1 representative for the mayor got from the mayor's office.

The findings below represent the results and data obtained from the field.

**Table 4.1: Socio Demographic characteristics of community members**

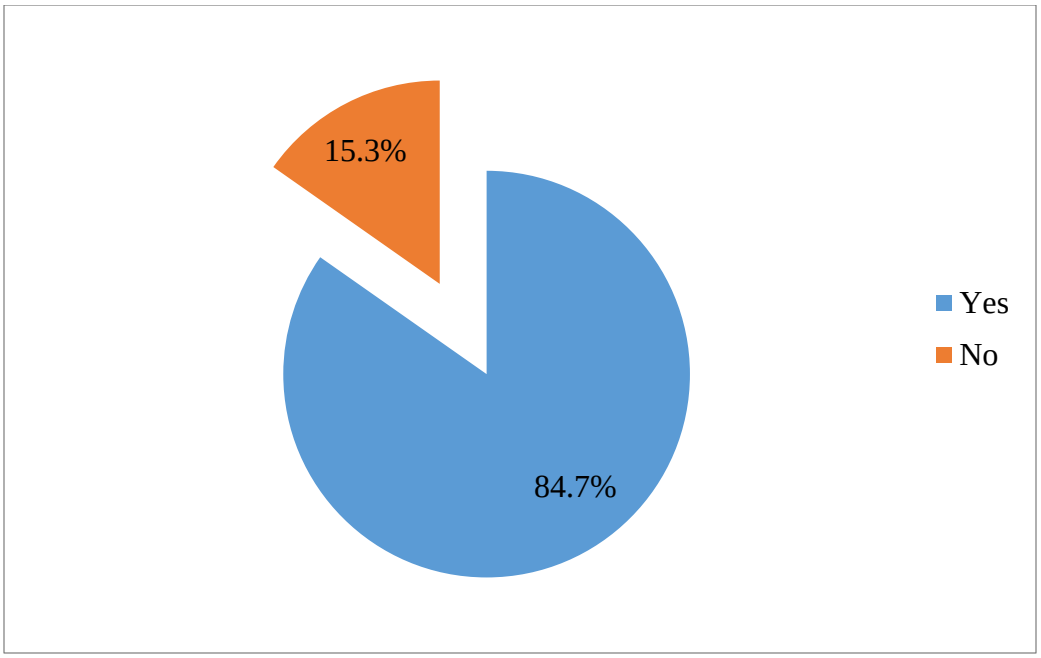
| Variables | Frequency (n=118) | Percentages (%) |
|---|---|---|
| **Locality** | | |
| Hoima Municipality | 63 | 53.4 |
| Kigorobya | 55 | 46.6 |
| **Age (years) (mean-40.6)** | | |
| 18-26 | 12 | 10.2 |
| 27-33 | 48 | 40.7 |
| 34-42 | 8 | 6.8 |
| 43-51 | 15 | 12.7 |
| Above 51 | 35 | 29.7 |
| **Gender** | | |
| Male | 58 | 49.2 |
| Female | 60 | 50.8 |
| **People living with at home (mean-3.22)** | | |
| 0-3 | 77 | 65.2 |
| 4-6 | 35 | 29.7 |
| More than 6 | 6 | 5.1 |
| **Religion** | | |
| Catholic | 25 | 21.2 |
| Protestant | 43 | 36.4 |
| Muslim | 14 | 11.9 |
| Born again | 21 | 17.8 |
| Seventh day Adventist | 8 | 6.8 |
| Byakisaka | 7 | 5.9 |
| **Education level** | | |
| None | 2 | 1.7 |
| Primary | 24 | 20.3 |
| Secondary | 27 | 22.9 |
| University/tertiary | 65 | 55.1 |
| **Employment status** | | |
| Employed | 80 | 67.8 |
| Un employed | 38 | 32.2 |
| **Income earned per month (Uganda shillings)** | | |
| less than 300,000 | 21 | 26.2 |
| 300,000 to 600,000 | 27 | 33.8 |
| 700,000 to 1,500,000 | 12 | 15.0 |
| More than 1,500,000 | 20 | 25.0 |

Statistics in table 4.1 show the demographic characteristics of respondents. It can be seen that majority of the participants were aged between 27 to 33 years (40.7%), majority of the participants were females (50.8%) and males were 49.2%. This showed that there was at least a gender balance in participation in the study. Majority (65.2%) of the participants lived with 0 to 3 people at their homes, 36.4% were protestants, 21.2% Catholics, Banyoro (31.4%) and the Bagungu (27.1%) are the most dominant in the district, majority (55.1%) had university/tertiary education level, Majority (67.8%) were employed and majority of these (33.8%) earned income between 300,000 to 600,000.

### 4.1 Contribution of oil and gas activities to the transportation and communication sector in Hoima District

The first objective of the study was to find out the various contributions of the oil and gas activities to the development transport and communication industry in Hoima District. Results from quantitative study are presented in this section.

**Figure 4. 1: Witnesses to road construction developments in Hoima District.**




Findings in figure 4.1 show that 84.7% of the participants in the study had witnessed road infrastructure developments in the district. 15.3% reported that they have never witnessed any road construction developments in their area. This shows that there has been construction of roads in Hoima District. Those who said that roads have been constructed went ahead and listed some of the roads and these have been presented below;

**Table 4.2: Roads constructed in the District as a result of oil and gas activities.**

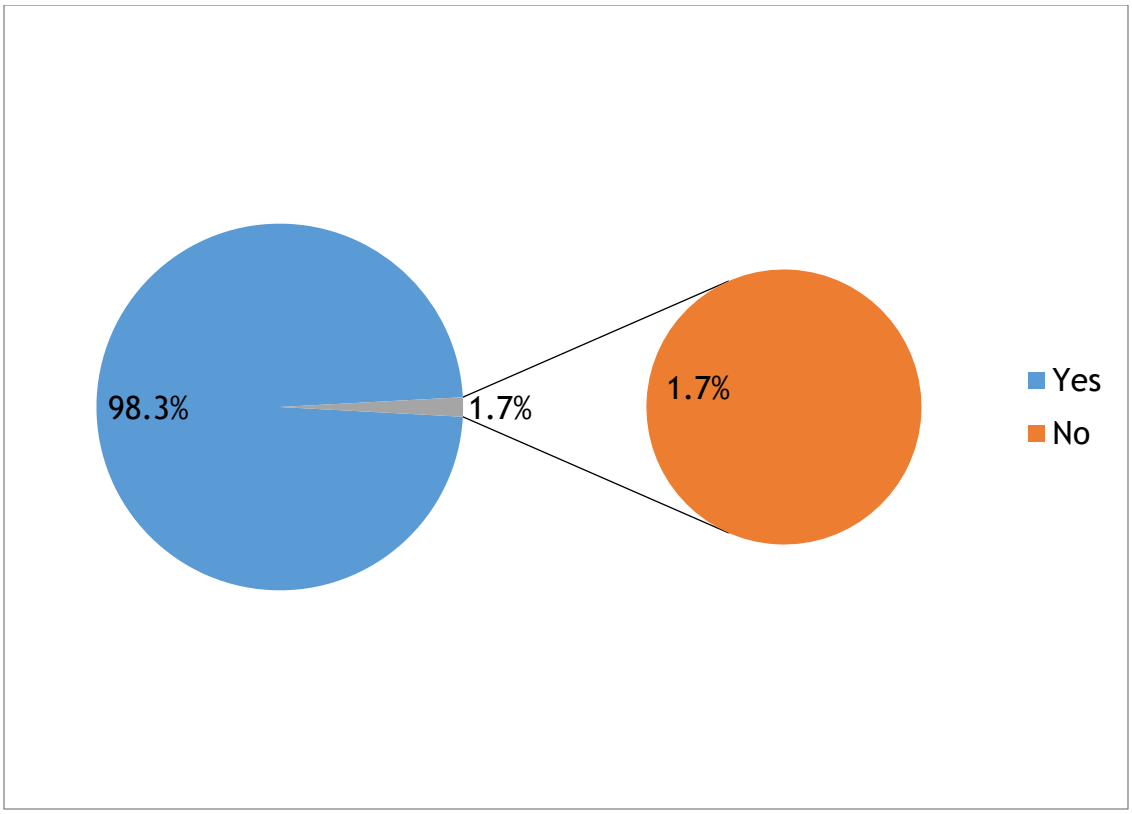
| Roads | Frequency | Percent (%) |
|---|---|---|
| Hoima to Buliisa | 26 | 26.0 |
| Hoima to Kaiso | 28 | 28.0 |
| Hoima to Kikuube | 13 | 13.0 |
| Hoima to Masindi | 7 | 7.0 |
| Town roads/municipality | 26 | 26.0 |
| **Total** | **100** | **100.0** |

Results in table 4.2 show the roads that have developed in Hoima District as a result of oil and gas activities taking place in the region. However, the roads mainly listed were Hoima to Kaiso road via Buseruka (28.0%), Hoima to Buliisa Road and even butiabwa (26.0%), Roads in Hoima Town alone were mentioned such as Main Street (26.0%), Hoima to kikuube which links to fort portal (13.0%) and Hoima to Masindi road (7%). According to responses it can be seen that the roads exiting hoima city that all have been constructed as a result of oil and gas activities. Roads that exit Hoima to Masindi, to Kaiso, to Buliisa, to Kikuube are all newly constructed and have been turmacked.

All these roads are believed to have been constructed due to the influence of oil and gas activities in the region.

In Uganda road transport remains the highly used means of transport Road and also most commonly used mode of international arrivals in Uganda. According to UBOS (2020) statistics, Out of the 657,000 visitor arrivals in 2019, about 60% used road transport and the remaining 40% came in through Entebbe International Airport. This also calls for the reconstruction of roads in areas that lead to tourism sites in Hoima and areas outside Hoima City.

**Figure 4.2: state of air transport in Hoima District**




Results from quantitative findings showed that 98.3% of the local community members have heard of developments in air transport in the district. 1.7% said they have never seen any development in the district in terms of air transport. Whoever those who mentioned about the development of air transport, majority supported their answers saying that it had been communicated by politicians, leaders, on media about the construction of the airfield in Hoima District in Buseruka so as to ease in the smooth operations oil and gas activities. Most of the local community member's believed that oil and gas has led to the construction of this airfield in Buseruka.

According to the Uganda Investment Authority, the Ugandan road network includes the national road network, city road network, as well as district, urban and community access roads. In line with the Government's target of starting commercial oil production by 2020, physical works on three oil roads equivalent to 363km out of 600km have been

constructed. This was hoped to help the development of oil and gas industrial park in western Uganda and the promotion of business start-ups.

### 4.2 Contribution of oil and gas activities to the Hospitality industry

The second objective of the study was to find out the contribution of oil and gas industry to the hospitality industry. The questions were asked to the local community members and the results are presented in table 4.3 below;

**Table 4. 3: Contribution of oil and gas activities to the Hospitality industry**

| SA: Strongly Agree, A-Agree, N-Neutral, D-Disagree and SD-Strongly Disagree | | | | | | | Measure of central tendency | | |
|---|---|---|---|---|---|---|---|---|---|
| **No.** | **Statement** | **SA** | **A** | **N** | **D** | **SD** | **Mean** | **Standard Deviation** | **Interpretation** |
| **i.** | There has been increased development of Hotels and guest houses as a result of oil activities | 57 (48.3) | 39(33.1) | 14(11.9) | 8(6.8) | - | 1.77 | 0.91 | Majority Strongly agree |
| **ii.** | There has been increase in leisure centres which could be as a result of oil activities | 67(56.8) | 25(21.2) | 2(1.7) | 17(14.4) | 7 (5.9) | 1.92 | 1.30 | Majority agreed |
| **iii.** | The entertainment industry has grown in the district as a result of oil and gas | 61(51.7) | 9 (7.6) | 19(16.1) | 16(13.6) | 13 (11.0) | 2.25 | 1.47 | Majority agreed |
| **iv.** | We see many tourists in the region and on the streets in tourism vans | 62(52.5) | 34 (28.9) | 22 (18.6) | - | - | 1.66 | 0.78 | Majority strongly agreed |
| **v.** | There has been increase in accommodation facilities, and residential houses in the district | 116 (98.3) | 2 (1.7) | - | - | - | 1.02 | 0.13 | Majority strongly agreed |

The five point linkert scale data is considered an interval scale. The mean and standard deviation are very significant here in linkert scale data. For mean, from 1 to 1.8 it means strongly agree, from 1.81 to 2.60 means agree, from 2.61 to 3.40 it means undecided, from 3.41 to 4.20 it means disagree and from 4.21 to 5 it means strongly disagree. These have been computed using the interval length of 0.8 on a 5 point linkert scale. In table 4.3 it can be seen that majority strongly agreed that there has been increased development of Hotels and guest houses in Hoima District as a result of oil activities with 48.3% of the local community members strongly agreeing with this.

The study also showed that majority of the community members agreed that leisure centers in Hoima District have increased due to the oil and gas activities taking place in the region. From qualitative findings the leisure centers that have developed are; Garden of Eden, Hotel HB which has been constructed by and investor in Hoima District, Glory summit, Arrow bar, restaurant and gardens and many more leisure centers. By observation, 3 new hotels had been constructed; glory summit, HB hotel and Eka Hotel in the heart of Kijungu Hill.

Majority also agreed that the entertainment industry in Hoima has grown as a result of oil and gas industries. The various campaigns that are promoted by the oil and gas activities such as health campaigns have benefited also the musicians who customize the music to suit the funder's message. Tourism has also grown in the region and many community members strongly agreed to this (52.5%). In the findings, majority (98.3%) strongly agreed that there has been increase in accommodation facilities, and residential houses in the district.

**4.3: Contribution of Oil and gas activities to the development of energy and water resources in Hoima District**

This objective looked at the various contributions of the oil and gas sector to the development of energy and water infrastructure in Hoima District. It looked at presence of boreholes, creation of water access points, electricity distribution and promotion of better cooking methods. Results from the study are shown below in table 4.4.

**Table 4. 4: Contribution of Oil and gas activities to the development of energy and water resources in Hoima District**

| SA: Strongly Agree, A-Agree, N-Neutral, D-Disagree and SD-Strongly Disagree | | | | | | | Measure of central tendency | | |
|---|---|---|---|---|---|---|---|---|---|
| **No.** | **Statement** | **SA** | **A** | **N** | **D** | **SD** | **Mean** | **Standard Deviation** | **Interpretation** |
| **i.** | There has been construction of boreholes | 14 (11.9) | 2 (1.7) | 27 (22.9) | 14(11.9) | 61 (51.7) | 3.90 | 1.37 | Majority disagreed |
| **ii.** | Water access points have been created in the district | 66 (55.9) | 39 (33.1) | | - | 13(11.0) | 1.77 | 1.23 | Majority strongly agreed |
| **iii.** | Electricity has been distributed as a result of oil activities | 116 (98.3) | 2 (1.7) | - | - | - | 1.01 | 1.13 | Majority Strongly agreed |
| **iv.** | There has been promotion of better cooking methods e.g. use of gas | 45(38.1) | | 18(15.3) | 8(6.8) | 47 (39.8) | 3.48 | 1.35 | Majority disagreed |

The five point linkert scale data is considered an interval scale. The mean and standard deviation are very significant here. For mean, from 1 to 1.8 it means strongly agree, from 1.81 to 2.60 means agree, from 2.61 to 3.40 it means undecided, from 3.41 to 4.20 it means disagree and from 4.21 to 5 it means strongly disagree. These have been computed using the interval length of 0.8 on a 5 point linkert scale.

Results showed that majority of the local community members in Hoima have not experienced any construction of boreholes in the district as a result of oil and gas with 51.7% of the community members strongly disagreeing. The various contributions to the district as a result of oil are; creation of more water access points, increased electricity distribution to rural areas. Results showed that Majority strongly agreed that water access points have been created (55.9%), majority also strongly agreed that electricity has been distributed as a result of oil and gas (98.3%) and majority reported that there has been no promotion of better cooking methods such as the use of gas in the district (39.8%).

A qualitative interview with some of the district officials from Hoima Works, it was found out that the district has improved in water supply with many of the homesteads in the Municipality at least having water in their neighborhood.

> *"In Kabaale, in Hoima here, a number of boreholes have been constructed. Boreholes have been constructed in Nyahaira in Kabaale with the help of SBC Uganda Limited so as to fulfill the social responsibility role and in some of our reports and even the secretary can share with you some of the pictures of the boreholes made for the people in Kabaale" (KI 5, District official)*

> *"We have now enough water supplies in Hoima District not like before, we also see some of the areas in Kampala Lack water but here we have plenty and the distribution of water is continuing and construction of wells and boreholes." (KI 9, District leader)*

*"Boreholes have been constructed in the rural areas to enable the rural people have access to clean drinking water, wells have also been upgraded and the community has been urged to maintain the water access points." (KI 15, District official)*

Results from also qualitative study showed that many people have managed to receive electricity in Hoima district. The Buseruka electricity project was the first of the type to make sure that people around the region are served with power. According to the district officials, it was found out that power is not a major problem in Hoima now days though load shedding still exists in some parts of the district.

*"Power was supplied to Hoima residents. Most of them got the power from a project of Museveni whereby they would pay 20,000 ugx and they connect them. However, the project failed in 2020 as many of them were not connected. We believe that this invention was to enable supply of power to rural areas in the region. Water supply has been made easy and many people now have access to clean water. We also have shell, total and gas which provide clean cooking methods to individuals. They sell gas to Hoima residents at a fair price at about 50,000 Ushs. With the coming up of oil and gas we see that people may shift to clean cooking methods such as use of gas since gas will be cheaper to refill." (KI 1, District official)*

*"Hoima is now a lighting city; you cannot have oil and fail to enjoy the benefits. In Lunyoro we have a saying "ainaho ayongerwa" which means that if you have, you will be added". so we had oil and now they decided to*

*distribute power to rural areas to promote economic growth in the region" (KI 2, District official)*

*"In terms of power generation, we have seen many areas get electricity even those areas that never had electricity in the region such as Buseruka and kabaale now days have electricity and those areas a developing into important trading centers. They used to have solar and generators but now electricity has reached their door steps. We give thanks to the oil which has seen us make changes in the general economy." (KI 8, District official)*

The developments of key activities that are hoped to change the economy of course come with also good infrastructure. Hoima District being one of the gifted districts in the western region near Lake Albert or Albertine graben has been gifted with oil which has also led to the extension of power supply to rural areas which never used to have power. For example, Buseruka and Kabaale have been supplied power and these are on the newly constructed roads that leads to Kaiso Tonya were the oil and gas activities are taking place.

### 4.4: Contributions of the oil and gas sector to the development of health services in Hoima District

This section looked at the contributions from oil and gas to the development of health services. It look at the improvement in health services, promotion of health campaigns, construction of health facilities, awarding of scholarships to medical students, and promotion of health sports activities.

**Table 4. 5: Contributions of the oil and gas sector to the development of health services in Hoima District**

| SA: Strongly Agree, A-Agree, N-Neutral, D-Disagree and SD-Strongly Disagree | | | | | | | Measure of central tendency | | |
|---|---|---|---|---|---|---|---|---|---|
| **No.** | **Statement** | **SA** | **A** | **N** | **D** | **SD** | **Mean** | **Standard Deviation** | **Interpretation** |
| **i.** | There has been improvement in health services | 49 (41.5) | 41 (34.7) | 7 (5.9) | 21 (17.8) | - | 2.00 | 1.09 | Majority agreed |
| **ii.** | More health facilities have been constructed by oil companies | 32 (27.1) | 34 (28.8) | 16(13.6) | 22(18.6) | 14(11.9) | 2.59 | 1.37 | Majority agreed |
| **iii.** | Oil and gas companies have sponsored health programs such as awareness campaigns | 51 (43.2) | 29 (24.6) | 14(11.9) | 16(13.6) | 8(6.8) | 2.16 | 1.30 | Majority agreed |
| **iv.** | Scholarships have been awarded to Students in the field of Health | 48 (40.7) | 30 (25.4) | 1 (0.8) | 7 (5.9) | 32 (27.1) | 2.53 | 1.68 | Majority were undecided |
| **v.** | Health sports activities in the district are supported by some of the oil companies | 44 (37.3) | 15 (12.7) | 8 (6.8) | 23 (19.5) | 28 (23.7) | 2.80 | 1.66 | Majority were undecided |

The five point linkert scale data is considered an interval scale. The mean and standard deviation are very significant here. For mean, from 1 to 1.8 it means strongly agree, from 1.81 to 2.60 means agree, from 2.61 to 3.40 it means undecided, from 3.41 to 4.20 it means disagree and from 4.21 to 5 it means strongly disagree. These have been computed using the interval length of 0.8 on a 5 point linkert scale.

From the findings in table 4.5, we see that there has been improvement in health services, construction of health facilities, sponsoring of health programs by the oil companies and also in some of the health sports activities such as Kitara Football Club in Hoima which was receiving some help from the oil companies. The oil companies were also reported to promote corporate football activities which are played on Hoima booma grounds. These promote also better health and do also make awareness campaigns in HIV/STIs with safe male circumcision.

In Hoima District, health services have been beefed up so as to provide conducive services to all the residents in Hoima. This led to the reconstruction of Hoima Regional referral Hospital and also building of the staff quarters for the Hospital. Many health facilities have been constructed in the district as a result of the developments in Hoima such as City Medicals which is along Butiaba Road, and lancet laboratories. These have been brought nearer to handle the health services in the region since they serve the insured.

## Conclusion

This chapter four covered the results and presentation of findings for the study which was conducted in Hoima District. The results in here are a representation from the communities and not own work from the researcher. The results were presented in tables, figures and with percentages. The chapter was also arranged according to specific objectives of the study.

# CHAPTER FIVE

# DISCUSSION OF RESULTS

## 5.0 Introduction

This chapter shows the discussion of results, conclusion and recommendations arising from the study conducted to assess the contribution of oil and gas upstream activities on infrastructure development in Hoima District.

## 5.1 Discussion

### The contribution of Oil and gas activities to the transportation and communication sector in Hoima District

The first objective of the study was to find out the various contributions of the oil and gas activities to the development transport and communication industry in Hoima District. Results from both quantitative and qualitative findings showed that there has been construction of roads in Hoima District. The roads that were mentioned were Hoima to Kaiso-tonya, Hoima to Buliisa were oil was found, Hoima to Kikuube, Hoima to Masindi and the completion of the roads in Hoima Town/Municipality. On observation, it's strictly evidenced that the roads in Hoima District are still in a new state with also new road signs. The Kaiso Tonya road is a road which is in a smooth state. The Hoima to Buliisa Road which is also in a good state via Kigorobya. Similarly Brake and Edward (2014) found out that oil and gas activities have an influence on transportation. Another study also by Chindo (2011) also found out that Oil and gas activities contribute to royalties and taxes which are utilized to support construction

of roads and other infrastructural developments. Similarly in Nigeria, road developments have been as a result of oil and gas activities in the country (Tuodolo, 2009).

Another study done by Nnakayima (2018) along the Albertine graben to find out the Impacts of upstream oil and gas activities on environment, well-being and tourism found out that oil and gas activities led to the increase in business opportunities specifically land market, market for agricultural goods and rental houses. More findings from the study showed that there was construction Roads were constructed as a result of drilling crews and promoted increase in tourism activities.

Findings also showed that the future of air transport in Hoima District is clear as the district will receive the first air transport in the region. The airfield is still under construction in Buseruka in Kabaale along Hoima-Kaiso Tonya road which is the newly constructed. This will aid the smooth flow of operations of oil and gas activities. This will also lead to the development of transport networks in Hoima District. Findings also showed that there has been improvement in investment in the transport sector as many investors also want to invest in road transport such as heavy trucks such as sino-trucks, passenger vehicles which are a source of income to some of the individuals in Hoima District. The heavy trucks have been hired by Chinese companies and road agencies from the local community members in Hoima to support in the construction activities of roads. Bus terminals have also been created in the district such as Link Buses and now it has extended its activities on the newly constructed roads such as from Hoima to Buliisa and to Tonya.

The development of air transport in Hoima District has been all over media and Television stations. This has also been a story from the mouth of politicians, leaders and community members all over the district and the country at large. Many scholars have upholded the infleunce of oil and gas in transport (Jane, 2020) and Peprah (2011).

**The contribution of Oil and gas activities to the Hospitality industry in Hoima District**

Findings from this study showed that majority of the community members agreed with the development of Hotels and Guest Houses in Hoima District as a result of oil and gas activities. Many hotels have been constructed in a short spell although those that existed in the district have also been improved and reconstructed to meet the competition in the market. Newly constructed hotels in the district are; HB hotel, Glory summit Hotel, IKA hotel, others which have been improved include resort hotel, Riviera hotel. All these hotels have targets to achieve from the activities of oil and gas as they provide accommodation, foods and beverages to also the investors in Hoima District. Brake and Edward (2014) lead to increased services and facilities such as accommodation. Peprah (2011) also found out that Oil and gas production came with development of other infrastructure such as construction of hotel and restaurant services.

The study also showed that there has been increase in the number of leisure centers in Hoima District and this is due to the oil and gas activities taking place in the region. Many leisure areas such as Garden of Eden, Arrow bar and restaurant, restaurant, club magic, Mika Gardens and many more leisure centers have emerged in Hoima District since it's a potential for income generation from the investors. Therefore, the oil and gas activities in Hoima District have led to construction of leisure centers. A Similar

study done in Ghana by Obiri et al. (2019) also showed that oil and gas activities brought development in the country such as construction of leisure centers and guest houses. Majority also agreed that the entertainment industry in Hoima has grown as a result of oil and gas industries. The various campaigns that are promoted by the oil and gas activities such as health campaigns have benefited also the musicians who customized the music to suit the funder's message. There has also been boosting of radio stations in the district as they get some adverts from the oil companies and also get news to detail. Television stations have been made in Hoima Such as the Bunyoro Television (BTV) which has provided entertainment services in the greater Bunyoro region and other districts.

There has also been growth in the tourism industry in Hoima district. Findings showed that many tourists' center and camp in Hoima district were they visit many areas such as the Bunyoro Kingdom "Ekiikali Kya omukama" which means the King's palace. A Hoima district connects also to the most re-known Uganda's national parks such as Murchison falls and Kibale National Park. The construction of Hoima to masindi road now eases tourist movements to Mparo Tombs in Hoima and Lake Albert were oil and gas activities are taking place. A study done by Jin and Zhang (2018) also found out that oil and gas funds has been used in the increment of different infrastructure in the development of the economy such as cultural development and these have increased tourism activities.

With the discovery of oil and gas in Hoima District, many people have managed to construct permanent houses which are both commercial and residential. In this study

majority of the community members agreed to this. To some of the communities in Hoima District such as those who were in kabaale in Buseruka were compensated and some of them have moved to towns and constructed accommodation facilities and good residential homes. These have led to the development of Hoima district at large. Many people have also migrated from other districts to Hoima district and have constructed buildings in the district and these have future hope of benefiting from the oil and gas activities in the region.

**The contribution of Oil and gas activities to the development of energy and water resources in Hoima District**

This study showed that majority of the local community members have not benefited from the borehole projects. However, findings from key informants showed that boreholes have been constructed for residents in Buseruka. The limited distribution of boreholes could be due to the increased supply of piped water to homesteads in the district, creation of more water access points and increased electricity distribution to rural areas. Results also showed that oil and gas has led to distribution of power to the rural areas. In order to carry oil the drilling, exploration and other activities, related to gas, there was need for power generation and extensions. To this power was extended to also local community members for example in Buseruka, Kaiso and Tonya. The oil and gas sector has also been reported to contribute much to the energy sector as it also a source of energy. According to the UK Oil & Gas PLC (2021), it was reported that oil and gas had led to the improvement in the energy sources in the United Kingdom. Therefore, oil and gas comes with development of energy resources.

In one of the studies by Byakagaba et al. (2019) in Uganda, it was also revealed that oil and gas exploration activities had a direct link with infrastructural developments such as powered generation and improved water access[20]. Another study done by Nnakayima (2018) along the Albertine graben to find out the Impacts of upstream oil and gas activities on environment revealed that there was construction of bore holes by Tullow oil to fulfill their corporate Social Responsibility initiatives. Water access was also provided and all these were promoted by drilling crews and oil activities taking place in the Albertine Region.

Results also showed that there is small scale use of clean cooking methods such as use of gas which are always available on shell, total and gaz fuel stations. The community looks at this method as wastage of resources and they prefer to use charcoal cooking stoves to cook food. This has led to pollution of air and depletion of forests in the region.

**The contributions of the oil and gas sector to the development of health services in Hoima District**

In this study, findings showed that there has been improvement in health services in Hoima District and this was due to the increase in the budget allocation to the district.

[20]Byakagaba, P., Mugagga, F., & Nnakayima, D. (2019). The socio-economic and environmental implications of oil and gas exploration: Perspectives at the micro level in the Albertine region of Uganda. The Extractive Industries and Society, 6. doi: 10.1016/j.exis.2019.01.006

The improvement in health services was meant to meet the standards of the stakeholders and the local communities were oil and gas has been found. The health facilities were also to provide health services to the expected influx of people who are meant to be working; both directly and indirectly on the pipeline. In Buliisa District alone, reports have showed that there has been construction of health facilities supported by the oil companies [21](The New Vision, 2012). This was done to help the public were the oil and gas activities are taking place to access better health care.

This study also found out that Hoima Regional Referral Hospital had been reconstructed and the staff quarters were also built to promote better service delivery for the local community members. From the interviews conducted, it was also found out that more health facilities which are private have come up in Hoima Town and these have been developed as a result of oil and gas activities in search for income. From the statement of one of the leaders in Hoima District, the hospital took about 2 billion Uganda shillings to complete the reconstruction process. The hospital is located in Hoima Town opposite boma grounds and near Hoima Central Police station. Similarly in USA, Many medical retail health facilities have been put up as a result of oil and gas activities (Agerton et al., 2017).

Also in Nigeria a study by Chindo (2011) revealed that revenue and tax collected from oil and gas was used to improve health service delivery and in another study also done in Nigeria, it was found out that oil and gas led to development of more health facilities (Tuodolo, 2009).

[21] The new vision (2012). Tullow Oil supports communities

Sponsoring of health programs by the oil companies has also been done in the district by CNOOC. The campaigns have been mainly on HIV/AIDs so as to provide the communities with knowledge on HIV prevention and control. Football matches have been utilized to gather up people so as to provide awareness and that is why some of the oil companies have come in to sponsor the health sports activities in Hoima District. This study also showed that the oil and gas sector has sponsored many students in the field of health and those in the oil and gas. Many medical students have got scholarships and this was done to fulfill the socio responsibility role for the community.

### Conclusion

This chapter presented the discussion of the results got from the study. This was accompanied with supporting literature from other related studies made by other authors and scholars. Other scholar's findings related to the topic were used to support the current study findings.

## CHAPTER SIX

## CONCLUSION AND RECOMMENDATIONS

### 6.1 Conclusion

In conclusion, this study was carried out to find out the contribution of oil and gas upstream activities on infrastructure development in Hoima District. The study finally

found out that oil and gas activities have led to improvement in transport since it has led to the construction of roads, increased investment in the transport sector, improved network such as MTN and Airtel and the construction of the airport in Buseruka.

There has also been construction of hotels, guest houses, residential, leisure centers, and improvement in the entertainment industry as TVs have been made with great supply of decoders in the district such as DSTV, GOTV, ZUKU, star times and many more. The study also found out that there has been increased water supply, access to clean water in homesteads, increased electricity distribution to rural areas, and small scale promotion of better cooking methods.

Health services in the district have also improved with the reconstruction of Hoima Regional Referral Hospital, promotion of health awareness campaigns, sponsorship of medical students, construction of health centers in the district by oil companies and also the sponsorship of health sports activities in the district. Therefore, although oil and gas has some negative effects, it leads to infrastructure development which helps in improvement of welfare and livelihood of people.

### 6.2 Recommendations

It is from the findings of this study that the following recommendations are made;

**To the government of Uganda**

It is clear from the Key informant interviews conducted, the Bunyoro leaders and the district officials demand for the biggest percentage share from the oil and gas revenue to be given to the districts in Bunyoro district to benefit and support them in

infrastructure development. There is need for government intervention and on a round table discussion with the kingdom, officials and leaders of the greater Bunyoro region to come together and agree on table on the future benefits from oil and gas to reduce on the potential conflicts that may arise in the near future.

The government needs to promote awareness among the local communities on oil and gas as a source of better cooking methods such as use of gas cylinders to cook food so as to reduce on the depletion of green vegetation and air pollution.

**To the leaders and district officials in Hoima District**

There also need for the local leaders and district officials to make proper planning for Hoima district so as to boost infrastructure development in the district. Proper planning could come in the form of physical planning. Roads in Hoima district also need a better maintenance strategy to avoid them getting in a poor state.

There is also need for unity among the leaders with the local community members to reduce on the issues of land grabbing which are happening in oil rich areas. These have been accompanied with corruption among government officials to steal from the poor. Leaders need to provide supervision to make sure all the infrastructural projects are approved and are moving as planned. This will promote smooth flow of infrastructural development activities.

**To the community members in Hoima District**

There is need for continued community participation in the development of infrastructure projects in the district such as road construction projects so as to make

sure that roads are constructed according to the will of the community members to which they serve. Monitoring and evaluation of the road projects is also needed to involve the community members.

The community needs to take oil and gas as a serious project to income generation and development. Therefore, the community members are encouraged to invest in long term income generating activities such as hotels, guest houses, housing and other small scale businesses so as to generate revenue for their homesteads.

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## APPENDICES

### APPENDIX 1: CONSENT FORM

**TITLE OF STUDY:** CONTRIBUTION OF OIL AND GAS UPSTREAM ACTIVITIES ON INFRASTRUCTURAL DEVELOPMENTS: A CASE OF HOIMA DISTRICT

**Institutional/ Investigator Identity**

I am called Niibo Amon a Master student with Uganda Christian University Uganda; am studying for an award of a master's in business administration of Oil and Gas Management.

**Purpose of study**

To find out the various contributions of the oil and gas industry to infrastructural developments

**Specific Objective(s)**

I. To establish the contribution of Oil and gas activities to the transportation and communication sector in Hoima District
II. To examine the contribution of Oil and gas activities to the Hospitality industry in Hoima District
III. To ascertain the contribution of Oil and gas activities to the development of energy and water resources in Hoima District
IV. To establish the various contributions of the oil and gas sector to the development of health services in Hoima District

**Alternative:**

You will not be penalized for your refusal to participate in the study since this study is voluntarily and without any bias. We will do what we can to respect your rights as research participants.

**Risks:**

Respondents may find it hard to answer some of the questions in fear of the information being leaked out or experience psychological distress. This will be minimized by making appointments with them and assuring them that this information will be kept confidential. Participants may choose to participate or not. Otherwise, the study is of minimal risk, no risks are anticipated with participating in this study.

**Benefit**

Your participation will help in improvement of infrastructure in your district and this will also guide on development of policies designed to benefit the local community members.

**Confidentiality**

Your responses to this research will be anonymous. Please do not write any identifying information on any questionnaire provided. Every effort will be made by the Investigator to preserve your confidentiality.

**Voluntary participation**

Your participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. If you decide to take part in this study, you will be asked to sign a consent form.

Compensation for time, effort and inconvenience

**You will be provided with a bottle of soda as an appreciation for your time in this study**

In case you have any further questions concern the study, please contact:

Niibo Amon

The investigator

Tel: 0704323153

**Statement of Consent.**

I confirm that I have read and understood the Participant Information Sheet

▪I have had the opportunity to ask questions and had them answered

▪I understand that all personal information will remain confidential and that all efforts will be made to ensure I cannot be identified (except as might be required by law)

▪I agree that data gathered in this study may be stored anonymously and securely, and may be used for future research

▪I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason.

▪I agree to take part in this study

Literate Participant

Date _____ & Signature _____

Illiterate participants;

Thumb print

Investigator/research assistant

Name _____ Date _____ & Signature

## APPENDIX 2: QUESTIONAIRE

Good morning/Afternoon. I am Niibo Amon, a master's student of Business Administration from Uganda Christina University, Uganda. You are kindly invited to participate in this study. Your participation in this study is voluntary. You are free to refuse to answer any of the questions I may ask. Any information you will provide will remain confidential. If you do not understand any of the questions, you can ask me for clarification.

**Instructions**

Kindly select the best answer for your choice and were space is provided, fill in the appropriate answer of your choice depending on your feeling.

**Questionnaire number**

**Sub-county: ……**

**SECTION A: DEMOGRAPHIC CHARACTERISTIC**

| S.No | Question | Choice |
|---|---|---|
| **1** | What is your age (in years)? | ----------yrs. |
| **2** | Gender | 1. Male<br>2. Female |
| **3** | Household size (how many people do you live with?) | …… |
| 4 | Religion | 1. Catholic<br>2. Protestant<br>3. Muslim |

| | | |
|---|---|---|
| | | 4. Born again<br>5. Seventh day Adventist<br>6. Others (specify) …… |
| 5 | Tribe | ……. |
| **6** | What is your education level? | 1. None<br>2. Primary<br>3. Secondary<br>4. University/tertiary |
| **7** | Are you employed? | 1. Yes<br>2. No |
| **8** | How much is your income per month | …….. Uganda shs |
| **Contribution of Oil and gas activities to the transportation and communication sector** | | |
| **9** | Have you witnessed any developments in terms of road construction in your area? | 1. Yes<br>2. No |

| | | |
|---|---|---|
| **10** | If yes, which road has been constructed as a result of oil and gas activities? | ….…… |
| **11** | Has there been any improvement in Air transport? | a) Yes<br>b) No |
| **12** | If yes above give reason for your answer? | …….<br>…….. |

**Contribution of Oil and gas activities to the Hospitality industry**

**SA: Strongly Agree, A-Agree, N-Neutral, D-Disagree and SD-Strongly Disagree**

| **No.** | **Statement** | **SA** | **A** | **N** | **D** | **SD** |
|---|---|---|---|---|---|---|
| **13** | There has been development of Hotels and guest houses as a result of oil activities | | | | | |
| **14** | There has been construction of leisure centers in the district. | | | | | |
| **15** | The entertainment industry has grown in the | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | district as a result of oil and gas | | | | | |
| **16** | Tourism in the district has grown | | | | | |
| **17** | Changes in accommodation facilities, residential houses have been felt | | | | | |
| **Contribution of Oil and gas activities to the development of energy and water resources**<br>**SA: Strongly Agree, A-Agree, N-Neutral, D-Disagree and SD-Strongly Disagree** | | | | | | |
| **18** | There has been construction of boreholes | | | | | |
| **19** | Water access points have been created in the district | | | | | |
| **20** | Electricity has been distributed as a result of oil activities | | | | | |
| **21** | There has been promotion of better | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | cooking methods e.g. use of gas | | | | | |
| **Contributions of the oil and gas sector to the development of health services**<br>**SA: Strongly Agree, A-Agree, N-Neutral, D-Disagree and SD-Strongly Disagree** | | | | | | |
| **22** | There has been improvement in health services | | | | | |
| **23** | More health facilities have been constructed by oil companies | | | | | |
| **24** | Oil and gas companies have sponsored health programs such as awareness campaigns | | | | | |
| **25** | Scholarships have been awarded to Students in the field of Health | | | | | |
| **26** | Health sports activities in the district are supported by some of the oil companies | | | | | |

**END**

**THANK YOU FOR YOUR CONTRIBUTION**

## APPENDIX 3: KEY INFORMAT INTERVIEW GUIDE

Good morning/Afternoon. I am Niibo Amon, a master's student of Business Administration from Uganda Christina University, Uganda. You are kindly invited to participate in this study. Your participation in this study is voluntary. You are free to refuse to answer any of the questions I may ask. Any information you will provide will remain confidential. If you do not understand any of the questions, you can ask me for clarification.

**Title of the respondent: ……**

**Questions**

**Contribution of Oil and gas activities to the transportation and communication sector**

a. How do you rank the road infrastructural developments in your district?
b. What developments have you seen in the transportation sector and communication as a result of oil and gas activities in this region?
c. Have there been any developments witnessed in the transportation industry and what developments are those?

**Contribution of Oil and gas activities to the Hospitality industry**

d. What changes have you seen in the hospitality industry in your district as a result of oil and gas activities? Hotels, guest houses, leisure centers, restaurants?
e. What has been the contribution of the oil and gas sector to the development of the hospitality industry in Hoima District?

**Contribution of Oil and gas activities to the development of energy and water resources**

f. Are there any developments in the district related to oil and gas activities that have led to improvement in water access?
g. Has the oil and gas activities in the region made progress in the improvement of energy/electricity distribution?

h. Has there been promotion in the district to utilize the clean cooking method such as use of Gas cylinders? By which company

**Contributions of the oil and gas sector to the development of health services**

i) What has been the contribution of the oil and gas activities in the development of health services?

j) Have there been any awareness campaigns on health supported by some of the activities and companies in the oil and gas sector? Which ones are those?

k) What do you think should be done to improve in infrastructure developments in Hoima District?

**End**

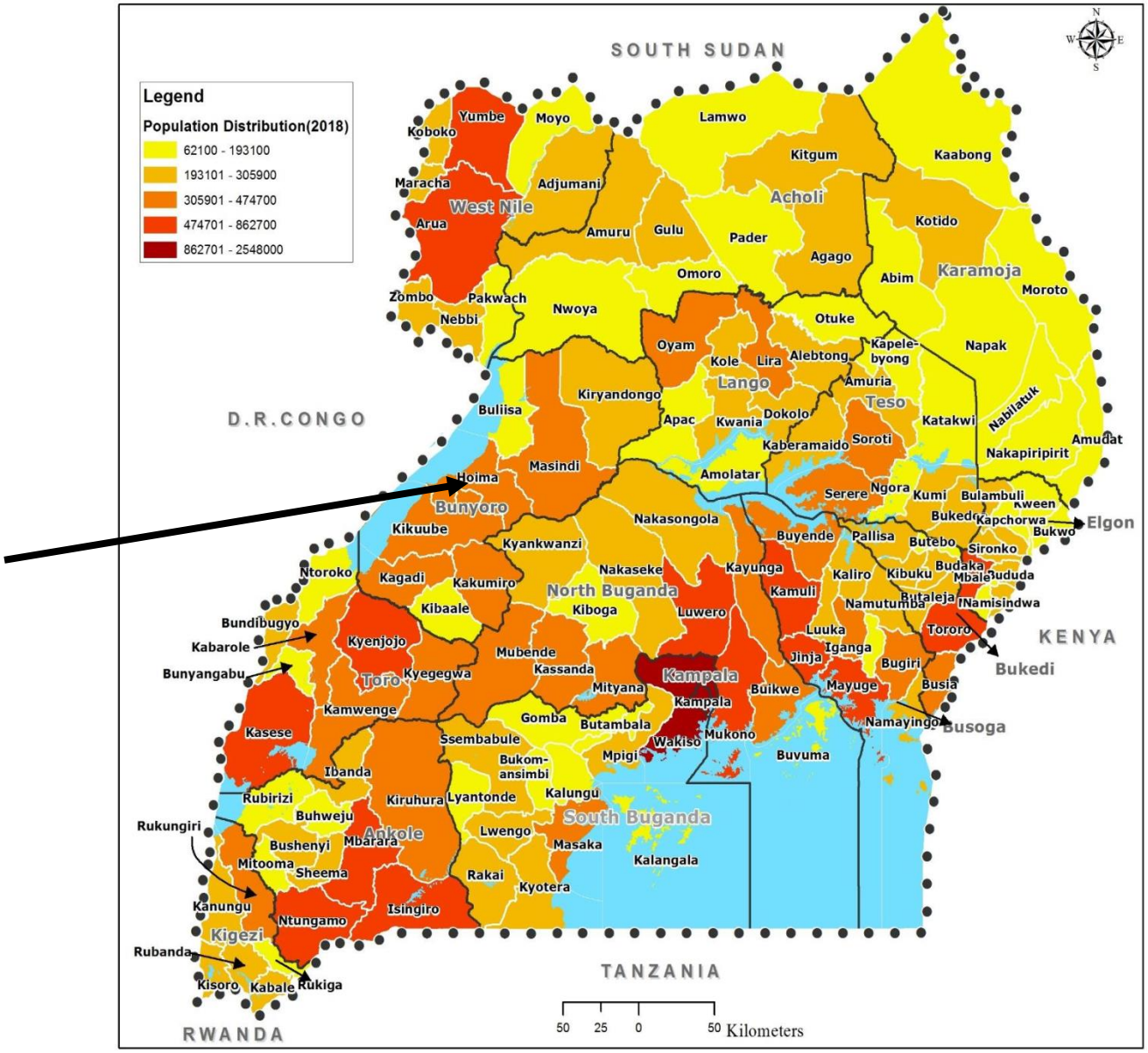
**APPENDIX 4: WORK PLAN**

| | | 2021 | | | | | | 2022 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **S/N** | **Activity** | **JUN** | **JUL** | **AUG** | **SEP** | **OCT** | **NOV** | **JAN** | **MAR** | **Responsible person** |
| 1 | Proposal defense and proposal submission | | | | | | | | | Investigator |
| 2 | Data collection and analysis | | | | | | | | | Investigator, statistician and research assistants |
| 3. | Submission of dissertations | | | | | | | | | Investigator |
| 4. | Internal examination | | | | | | | | | Internal examiner |
| 5. | External examination | | | | | | | | | External examiner |
| 6. | Submission to the Viva committee | | | | | | | | | Investigator |
| 7. | Viva | | | | | | | | | Investigator |
| 8. | Presentation of results to senate | | | | | | | | | Investigator |
| 9. | Graduation | | | | | | | | | Investigator |

## APPENDIX 5: BUDGET

| **1** | **Stationary** | **Quantity** | **Unit** | **Total Cost** |
|---|---|---|---|---|
| A | Photocopying Paper | 2 Reams | 15,000 | 30,000 |
| B | File Folders | 3 Pcs | 1000 | 3,000 |
| C | Pens | 4 | 1000 | 4,000 |
| D | Flash Disk | 2 GB | 30,000 | 30,000 |
| **2** | **Literature Search(Libraries, internet, primary data)** | | | **50,000** |
| 3 | Typing services | | | |
| a | Questionnaire | 50 | 500 | 25,000 |
| | Proposal | 3 Copies | 20,000 | 60,000 |
| c | Report | 3 Copies | 50,000 | 200,000 |
| **4** | **Data Collection** | | | |
| a | Transport | | 70,000 | 70,000 |
| b | Meals | 5 Days | 10,000 | 50,000 |
| c | Sodas for appreciation | 1 | 250,000 | 250,000 |
| **5** | **Personnel** | | | |
| a | Data analyst/statistician | 1 | | 800,000 |
| c | Research assistant | 1 | | 500,000 |
| e | Typist/secretary | 1 | | 300,000 |
| | | | | |
| | **GRAND TOTAL** | | | **2,392,000** |

## APPENDIX 6: MAP OF UGANDA SHOWING LOCATION OF HOIMA DISTRICT




**KEY**

→ Hoima District

## APPENDIX 7: PERMISSION TO CONDUCT THE STUDY

Permission granted but SOPs Must Strictly Observed 02/09/2021

For CHIEF ADMINISTRATIVE OFFICER 02 SEP 2021 HOIMA DISTRICT LOCAL GOVERNMENT

Institute of Petroleum Studies - Kampala

23rd August, 2021

**TO WHOM IT MAY CONCERN**

Dear Sir/ Madam,

**RE: INTRODUCTION FOR MR NIIBO AMON TO CONDUCT RESEARCH IN YOUR ORGANIZATION**

Greetings in the precious name of our Lord.

I wish to introduce to you the above-named person, who is a master's student pursuing a Master of Business Administration in Oil & Gas Management, of Uganda Christian University in affiliation with the Institute of Petroleum Studies – Kampala (IPSK).

His proposal has been approved by our vetting committee and is in the process of collecting data. Mr. Niibo would wish to conduct research in your organization.

The title of his research is "CONTRIBUTION OF OIL & GAS UPSTREAM ACTIVITIES ON INFRASTRUCTURAL DEVELOPMENTS: A CASE OF HOIMA DISTRICT."

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,

PP

James Mugerwa

**DEAN OF STUDIES**

INSTITUTE OF PETROLEUM STUDIES KAMPALA 02 SEP 2021 DEAN OF STUDIES TEL 0776 350 927

SUB-COUNTY CHIEF 02 SEP 2021 KIGOROBYA SUB-COUNTY P.O. BOX

Plot 6207 Rose Lane, Off tankhill road Muyenga Kampala - Uganda
Tel: 0414695610 Email: info@ipsk.ac.ug Website: www.ipsk.ac.ug

## APPENDIX 8: A BOREHOLE CONSTRUCTED IN KABAALE, BUSERUKA IN HOIMA

## APPENDIX 9: ONGOING CONSTRUCTION OF AIRPORT IN HOIMA DISTRICT IN BUSERUKA


## APPENDIX 10: TOURIST SITE IN HOIMA (MPARO TOMBS)

## APPENDIX 11: RE-CONSTRUCTED HOIMA REGIONAL REFERRAL HOSPITAL


## APPENDIX 12: ROAD DEVELOPMENTS IN HOIMA DISTRICT

*Road from Hoima to Kigorobya*

*Hoima Kaiso Tonya road*

## APPENDIX 13: HOTELS DEVELOPED IN HOIMA DISTRICT

*Hoima resort Hotel*


*HB hotel (Hoima Buffalo Hotel)*